

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

Transcript of Hearing

Case No. 313

October 23, 1951.

BEFORE The
OIL CONSERVATION COMMISSION

IN THE MATTER OF:)	
the application of the Oil)	
Conservation Commission upon)	Case
its own motion for an order amending)	No. <u>313</u>
Rule 505, Oil Proration, with)	
particular reference to Paragraph 2:)	
Proportional Factors for Deep wells)	
Under Various Spacing Patterns.)	
)	

TRANSCRIPT OF HEARING

October 23, 1951

(Register of Attendance can be found in the transcript
for the Allowable Hearing.)

(Mr. Kellahin reads the Notice of Publication.)

MR. SPURRIER: Now here again, Judge Foster, to try to clarify this thing for you and all the rest of these people, there is some connection in the thinking of the Commission between this case and the other three. However, we had rather separated the two problems. I mean, 80-acre spacing and the consideration of pressure maintenance, separate that from the allowable proposition. Now, we understand that some propositions on the allowable will be set forth here today and we are not here to adopt any one set of propositions. We are here to consider the allowable on our 80-acre pools, not however, pool by pool. As you all know automatically, a well above 5,000 feet on a 40-acre unit gets a certain allowable. There is no question about it. Then a well of a certain depth on 40 acres gets a certain allowable. There is no question about that. Now, we come to these 80-acre pools and we find that a graph of the production against the allowable shows some of them are not capable of producing the allowable which is assigned. Therefore, we have brought up on our own motion case 313.

MR. BRALY: My name is Burney Braly. I represent Continental Oil Company in Houston. Continental recognizes the problem that Mr. Spurrier has stated. And it has a method to propose on these 80-acre well allowables, which we merely propose and tender here for your consideration and that of the industry. But it is a method which we believe will solve the problem that has been stated, at least to a great extent, and probably will avoid the

necessity of hearings on particular fields, at least a great many of such hearings, and will result we think in a uniformity and in a fair and equitable sharing of the state-wide production as between the 80-acre fields themselves, and as between those fields and the 40-acre fields.

Now, the particular method has been evolved and worked out by one of our engineers, Mr. Colliston, and he is prepared to state it and explain it so that the Commission and the industry may have it for their consideration at this hearing and any postponed hearing on this matter. I would like to introduce Mr. Colliston. I understand he has probably never testified before the Commission. If you desire to have him sworn and qualified I will do that and then let him make a statement himself.

(Mr. Colliston sworn.)

MR. BRALY: Mr. Colliston, will you first review your scholastic training and personal experience, stating the degrees and so forth you have and the nature of your service for Continental Oil Company and any other producing company that you may have been employed by in the past. Just go into it quite thoroughly but as briefly as you can.

MR. COLLISTON: My name is Paul N. Colliston. I am employed by Continental Oil Company as regional proration engineer. My home is in Houston, Texas. I am a graduate of the New Mexico School of Mines in Geological Engineering in 1933. Since that time, with the exception of 5 years in the

Armed Forces, I have been employed by Continental Oil Company in the capacity of Petroleum Engineer and by Phillips Petroleum Company in the capacity of Geologist and again by the Continental Oil Company as Petroleum Engineer.

MR. BRALY: If those qualifications as an expert are acceptable, I will just let him testify.

MR. SPURRIER: Certainly.

MR. COLLISTON: In response to the call of the Commission in Case 313 for an order amending Rule 505, with particular reference to Paragraph 2, Proportional Factors for Deep Wells Under Various Spacing Patterns, Continental Oil Company wishes to propose an amendment. This proposed amendment would provide for an 80-acre deep well proportional factor which would place the calculation of 80-acre deep well allowable on a comparable basis with the present calculation of 40-acre deep well allowables. It is presented as a matter of procedure under existing rules and regulations of the Commission, and would apply only to those fields where the Commission had established 80-acre spacing after hearing. It is the purpose of Rule 505 to provide for allocation between pools and provide for a top unit allowable. The allocation to any pool may be distributed to the respective units in the pool in accordance with the proration plan for that pool where such a plan exists. The nature of the calculations involved in Rule 505 place proration in New Mexico on a state-wide basis, and each proration unit of comparable size

and depth receives the same allowable. The operation of this rule appears to be satisfactory, and its validity has not been questioned. It has been used herein, therefore, as a basis upon which to calculate 80-acre deep well proportional factors which would place the allowable of 80-acre proration units on a same state-wide basis as all other proration units with appropriate consideration being given to the number of acres and the depth involved.

I want to review briefly the calculation of the 40-acre proportional factor as a basis of my plan for the calculation of the 80-acre proportional factor. The 40-acre factor is composed of what I term an acreage credit and an economic credit added together. The acreage credit represents the normal unit allowable in the factor and has a numerical value of one. The economic credit adapts the factor for depth and might be referred to as an added investment factor as it was designed to provide a reasonable return on the additional investment required to drill a well below 5,000 feet.

I would like to introduce Continental Exhibits 1 and 2, which will illustrate my point.

MR. BRALY: Now, do you have additional copies of that you can distribute to the Commission and the people in attendance here?

MR. COLLISTON: I do.

(Passes copies of the exhibits to the audience.)

MR. COLLISTON: A break-down of these credits for 40-acre

proportional factors is shown in columns A, B, and C of Continental Exhibit No. 1. The points I would like to emphasize here are as follows:

The Acreage Credit for 40 acres has the value of 1. The 40-acre proportional factor is the result of adding the acreage credit to the added investment credit. And third, that the relationship just mentioned would remain the same eventhough it were found that the added investment factor would require adjustment with changing economic conditions.

When these points are considered, it becomes an easy matter to expand Rule 505 to provide a reasonable proportional factor to compute the top unit allowable for a deep well located on a proration unit of any size. At present we are concerned only with 80-acre units. It is important to remember as a fundamental principle of proration in New Mexico, every 40-acre unit receives the same unit allowable except in the case of th deep wells, where deep well adaptation is received as mentioned above. Therefore, when two 40-acre tracts are combined to form an 80-acre proration unit, the proper calculation to determine the proportional factor is as follows:

This can be followed very well on Exhibit 1.

To the acreage credit of one for the first 40 acres is added the acreage credit of one for the second forty acres giving the ^{total} acreage credit of two. To the ~~total~~ acreage credit of two is added the appropriate added investment factor, the sum giving the proper proportional factor to be multiplied by

the normal unit allowable in order to calculate the top unit allowable. To illustrate:

Given a well between 10,000 and 11,000 feet deep, located upon an 80-acre proration unit, the proportional factor would be calculated as follows:

To the 40-acre proportional factor, which already contains the acreage credit of one for the first 40 acres and the added investment factor, add the acreage credit of one for the second 40 acres. The calculation would read, 4.67 plus one equals 5.67. This calculation is illustrated for each depth bracket in columns D and E on Continental Exhibit No. 1.

The top unit allowable resulting from this method of calculating 80-acre deep well proportional factors is a proper so-called double allowable, gives the appropriate credit to the fact that the basic proration unit of 40 acres has been doubled, but recognizes the fact that the operators investment has not been increased and that he is entitled to no additional economic credit.

It follows, it isn't proper to calculate a so-called double allowable by multiplying the 40-acre allowable by some factor such as two or one and a half to obtain an 80-acre deep well allowable for the following reasons:

The 40-acre proportional factor already contains the added investment credit. To multiply the 40-acre proportional factor by two is to give an operator credit for making two investments

or drilling two wells, and actually he has made but one investment. Such an operator has no just claim to compensation for an expenditure he did not make.

The nature of the component parts of the 40-acre proportional factor are such that the factor must be increased by the process of addition and not by multiplication.

It is recommended therefore, that Paragraph 2 of state-wide Rule 505 be amended to provide for 80-acre deep well proportional factors calculated as herein described and as shown on Continental's Exhibit 2. It is our contention that the proposed factors contain nothing that is new or not already a part of the Commission's records and that their application will have the effect of placing the top unit allowable for an 80-acre deep well proration unit on a reasonable and comparable basis with the top unit allowable for other deep fields in order to provide for a proper allocation between fields.

That is all.

(Off the record by the Commission.)

MR. BRALY: Does anyone wish to examine him? That's all for us.

MR. SPURRIER: I would like to ask a question. Mr. Colliston, the question comes up, did you state for the record how you arrived at column B, which is the added investment?

MR. COLLISTON: If you look at the **existing** rule 505, you find that the proportional factor for the zero to 5,000 feet

interval is one. Or the allowable for 40-acre unit or the normal unit allowable. Therefore, in these figures, the normal unit allowable has the value of one. And contemplates one well. Therefore, your deep well adaptation, the proportion of that 40-acre proportional factor, that is credited to investment, is that shown in column B, which is really column C less column A. The acreage credit in each depth has remained constant. The increase has been due to compensation for the added investment.

MR. SPURRIER: Does anyone have any further questions of Mr. Colliston? Mr. Kellough.

MR. KELLOUGH: Mr. Colliston, we understand that your recommendation for the proposed amendment does not include any recommendation as to how you will apportion the allowable within the pool among the various tracts in the event you have a fractional unit of less than 80 acres or an 80-acre unit which is only partly productive.

MR. COLLISTON: I made no statement regarding the distribution of allowable within a pool.

MR. KELLOUGH: Then you don't mean to infer that the added factor of one should be used to determine the manner in which the allowable is to be adjusted between the tracts within a pool.

MR. COLLISTON: No.

MR. KELLOUGH: You have used that factor simply as part of the formula to determine how much it should be in each 80-acre unit within an 80-acre pool, assuming they are all regular.

MR. COLLISTON: To determine how a field allowable for a field spaced on 80 acres should be determined, or how their share of the market demand should be determined.

MR. KELLOUGH: In other words, to put it another way, in an assumed 80-acre field, a 12,000 foot well would get an allowable of 7.75. That is your bottom one. Now, an adjoining isolated 40-acre tract or fractional unit would not under your plan receive 6.75. In other words, your proportion has no bearing at all on that subject.

MR. COLLISTON: I am strictly referring to the allowable of the pool as a whole.

MR. KELLOUGH: Well, in your opinion as an engineer, do you not consider it essential in order to do equity and protect the correlative rights of the parties, that in allocating the allowables you recommend to different units within a pool, it must be done on a surface acreage basis here in New Mexico.

MR. COLLISTON: The Commission is, I think, instructed on how to do that in the statute.

MR. KELLOUGH: Excuse me. I am asking your opinion as an engineer.

MR. COLLISTON: As an engineer, that is my interpretation.

MR. KELLOUGH: You mean it is your opinion as an engineer it is necessary to maintain equity and protect correlative rights, it should be apportioned between the various units in the pool on an acreage basis.

MR. COLLISTON: In New Mexico, that is my opinion.

MR. KELLOUGH: I believe that is all the questions I have.

MR. SPURRIER: Mr. Selinger.

MR. SELINGER: Mr. Colliston, in addition to the qualifications that you gave at the outset of your testimony, you are perfectly familiar with, over a great number of years, proration in New Mexico, are you not?

MR. COLLISTON: 18 years, to be exact.

MR. SELINGER: And you are familiar with the history of allowables, and particularly in the depth bracket.

MR. COLLISTON: I am.

Q (By Mr. Selinger) Now, in answer to a question of Mr. Spurrier's, I don't believe you answered fully the question he intended for you to have; and that was between five and six thousand you have .33 on your Exhibit No. 1, and between six and seven thousand you have .77. Now, this added investment credit is based on testimony adduced before the Commission at previous hearings in which the cost of drilling at 1,000 foot intervals clear on down to I believe 12,000 or 11,000 feet originally, your testimony is based on the transcripts of the previous hearings as to the investments.

A That is correct.

Q And you are making no change in the investment credits, in effect, all these years under the present Rule 505.

A That is correct.

Q Now, I understand that your testimony is solely to substitute

Paragraph/in Rule 505 only as to the depth bracket of 40 and 80 acres. You are making no change as to the 40 by introducing an additional depth bracket calculation for 80 acres?

A That is correct.

Q And the Rule 505 as you know is concerned exclusively with allocation between pools.

A That is correct.

Q And you are not in anyway affecting Paragraph 1, Paragraph 3, Paragraph 4, Paragraph 5, Paragraph 6, Paragraph 7, Paragraph 8, and Paragraph 9 of Rule 505, which is concerned with allocation between pools in the state, is that correct?

A That is my recommendation. Strictly concerned with the 80-acre proportional deep well factor part of Paragraph 2 of Rule 505.

Q And your testimony, outside of your personal opinion that Mr. Kellough asked you as an engineer, your testimony is confined exclusively to a uniform method of allocation between pools?

A That is correct.

Q So, now as to the method of allocation between wells or tracts within a pool, you still believe that Paragraph 7 of Rule 505 which reads, "Thereupon, the allocation to each pool shall in turn be prorated or distributed to the respective units in each pool in accordance with the proration plan of the particular pool where any such plan exists." You desire that to continue as it exists now?

A I have made no recommendation for change.

MR. SELINGER: That's all.

MR. SPURRIER: Does someone else have a question of Mr. Colliston?

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

MR. SPURRIER: Mr. Foster.

Q (By Mr. Foster) Now, this proportional factor you are making is designed to cure the existing evils, if any.

A We were answering the call of the Commission, giving them our idea of what should be done.

Q I know, but what are you trying to cure.

A Put the calculation of the allowable for 80-acre pools on a comparable basis with the others.

Q Well, in other words, you want each pool to produce in accordance with its reserves.

A I don't know that that is any factor in New Mexico, proration between fields, I certainly didn't consider it.

Q Well, I am at a loss to know what the remedy is supposed to cure and ought to be cured. That is all I am trying to find out. Now, what is the matter with the way it is being done now?

A I believe that I stated that proration in New Mexico has been on a state-wide basis and it means on individual pools which allowable hasn't quite been in accord with that procedure we have been following for a good many years here, we have offered the Commission a suggested method for putting it on the same basis.

Q Well, do you mean that you are opposed to a well on 80 acres under the present set-up, getting twice as much allowable as a well on 40 acres?

A No, I believe I proposed what I said was a properly calculated double allowable.

Q Well, under the present system, if I understand it correctly, you don't have per well unit allowables in New Mexico, do you?

A You have unit allowables.

Q You have unit allowables. However, many wells in the unit you just have unit allowables.

A That is correct.

Q And the only unit that is provided for by the rules at the present time is 40-acre units?

A I believe I prefaced my remarks, was this would apply to fields where the Commission had established 80-acre spacing after hearing.

Q Well, I understand. But I am just talking about the present set-up. The only units provided for under the existing rules of the Commission are 40-acre units.

MR. BRALY: Are you talking about the general rules, Judge, or are you talking about all the special rules as well?

MR. FOSTER: Well, I am talking about the present set-up. I don't know of any rule by the Commission that has set up any 80-acre proration units.

MR. BRALY: Haven't they approved some 80-acre fields, weren't

those rules?

MR. FOSTER: Well, I don't know of any rules. I haven't seen them.

MR. McKELLAR: You mean allowables don't you, Judge?

MR. FOSTER: No, I am talking about 80-acre units, any orders in effect setting up 80-acre units in New Mexico.

A VOICE: Yes, sir.

MR. FOSTER: Now, has the Commission set up any rule for determining what an 80-acre unit ought to get?

A VOICE: On an individual field basis.

MR. FOSTER: Any that individual field basis has been what? What I am trying to get at is, I don't understand what the evil is Mr. Colliston is trying to cure.

MR. BRALY: The Commission stated in the beginning --

MR. FOSTER: The Commission stated it in the beginning, that some of these fields weren't making their allowable. And the fact that they are not making their allowable, I don't know how it is related to the proportional factor made by Mr. Colliston. Now, if he can tell me how it is related, I would like to have him do so.

A I don't know, as we tried to relate it.

Q All right. If there isn't any relationship between what is happening and what you are trying to cure, that is what I am getting at. Is there in these fields that won't make their allowable.

MR. MCKELLAR: Judge, at the risk of breaking in on your question, I think what he was trying to do was to show how the present rules and regulations could be adapted without changing anything to the 80 acres, is that right?

A That's right. As I recall the testimony, double allowables or one and a half times allowables, was requested in these fields. The phrase double allowable or one and a half allowable was mentioned, but I don't recall that anybody introduced any testimony to tell the Commission how to properly calculate that result.

Q What would you do in those fields where pressure maintenance is instituted or will be instituted with respect to the allowable?

A In any particular field?

Q Yes, sir.

A I would suggest the Commission call a hearing for that particular field.

Q And you just propose until the Commission can determine on what ought to be in an 80-acre field, what the allowable ought to be of the 80-acre units, this rule of yours apply until the Commission can determine otherwise?

A I am proposing they use this in the same manner they presently used 40-acre proportional factors, that there be no change in their procedure at all. As I said before, we are not advocating any change in present practice, we are simply trying to point out a method we believe to properly calculate it.

Q In other words, you use a factor set out in rule 505 and apply it to 80-acre fields?

A Would you state that again, Judge, please?

Q In Rule 505, suppose you just adopt the same factor for 80-acre spacing you have mentioned for 40-acres here, do you feel that would give the wells in that pool too much of an allowable?

A I don't quite follow what you getting at, Judge. Use the 80-acre factor for 80-acre fields?

Q Yes.

A Well, you have doubled your acreage, haven't you?

Q Yes.

A Shouldn't the additional acreage get some consideration?

Q I think it should.

A That is what I am proposing.

Q You are just proposing it get--well, how much will -- how much more do you think an 80-acre well ought to have over a 40-acre well?

A I think it is plain from our proportional factor, we give the same credit to the second 40 acres as the first.

Q That would apply to every field, regardless of the cost of production in that field?

A The Commission has determined what the added incentive or added investment credit should be. It seems to be satisfactory to everybody.

Q But that is just drilling cost, isn't it?

A It was drilling and equipping. The investment the operator made.

Q That wouldn't include cost of pressure maintenance.

A That is a pool problem.

Q This whole thing is a pool problem.

A No, we are talking about allocation between pools.

Q I know, but you use a cost factor for the purpose of determining how much each pool will receive of the total of the allowable, and allocate a portion of it based on a cost factor. But here, if you go to 80-acre spacing in this state with the institution of pressure maintenance, you have a cost question you haven't taken into consideration at all.

A May I refresh your memory as to one statement I made, Judge, referring to the added investment factor? "The relationship mentioned would remain the same even though it were found that the added investment factor should require adjustment with changing economic conditions." The principle remains the same.

Q In other words, if the cost should be a great deal more than it is at present, you don't propose to take it into consideration?

A I said it would have to be taken into consideration, but I said the method of calculation would remain the same. Economic factors change. Everybody realizes that, Judge.

Q You would increase these cost factors.

A You would have to show the Commission you were going to additional expense.

Q And if they institute pressure maintenance, don't you think you would have to increase the cost factor.

A You would have to convince the Commission of that.

Q I am assuming you have increased cost and you would have to increase the cost factor.

A Whenever economic conditions change, and if you convince the Commission there should be an additional credit, I am sure the Commission would hear your grounds.

Q I don't think you are answering the question very clearly and there is no way I can do much about that. What I am trying to get here for the record, Mr. Colliston, if you institute pressure maintenance in some of these fields, you know it is going to cost more money to operate in that field.

A That's right.

Q And these so-called added cost factors in the deep brackets would naturally have to be increased to take care of that added cost of operation, wouldn't it?

A I am sure they would.

Q And by increasing those factors you would thereby increase the allowable, you would thereby increase the allowable to the 80-acre wells, wouldn't you?

A That would follow if the Commission adopted the principle of added cost.

Q That is what I am saying, if they did.

A They have in the past and I assume they would in the future.

Q Now, you don't think -- do you agree with the theory you ought to prorate the oil in this state on the basis of reserves?

A All I testified to was an extension of the existing method, Judge.

Q That don't answer the question.

A Well, we have accepted the unit basis of proration and that is all I am prepared to testify on, Judge.

Q You don't want to express any opinion on anything except unit proration.

A I am not prepared to express an opinion at this time.

MR. MCKELLAR: There is nothing in your proposed plan which would preclude any operator from a given pool asking for additional allowable based on increased economic cost.

A He can get anything he can get the Commission to allow him.

MR. MCKELLAR: They haven't increased economic cost as to 40-acre units since 1945.

MR. BRALY: Isn't the same trouble, Judge Foster, inherent in the 40-acre fields?

MR. FOSTER: Certainly. I don't see why 80 acres should be singled out for it.

MR. SCOTT: I wonder if I could ask the Judge a question here. In order to understand his line of questioning. I didn't

get what he was driving at. And I would like to ask him two or three questions, if it wouldn't be out of order.

MR. SPURRIER: The Judge isn't sworn. However, he may condescend if he wishes.

MR. SCOTT: If the cost for drilling and completing wells are more now, did I understand you then that you would favor an increase in the investment factor for one well for 40-acres?

MR. FOSTER: Well, that would naturally follow. Of course, if it is any basis of allocating to the pools now, certainly.

MR. SCOTT: Now, considering the fact that these present factors Mr. Colliston has used were made from previous testimony presented before the Commission here, and these factors were realized to be investment factors for the drilling of one well to pay for the investment cost of one well, then do I understand you to mean you would want to investment factors to apply to one well on 80 acres?

MR. FOSTER: No, I don't say that. But I do say that I don't believe that the proposal that he makes offers sufficient incentive here to justify 80-acre drilling.

MR. SCOTT: Thank you, Judge.

MR. SELINGER: I would like to ask Mr. Colliston another question or two.

Q Mr. Colliston, the purpose of your proposal here is to start a uniformity for 80-acre development in the event the

Commission should find any particular field should have or wants 80-acres.

A That is correct.

Q Now, do you believe that the uniformity established by the Commission on 40 acres all these years has led to a better regulation of proration in this state, that is, on the seven to eight thousand foot wells on 40 acres which were given the same allowable, as being more preferable to a difference of allowables for wells for the same depth throughout the various parts of the state? Do you follow my question?

A No, sir, I don't.

Q Under present 40-acre depth plan, all five to six thousand foot wells have a uniformity of allowable.

A That is correct.

Q And like six to seven and seven to eight?

A That is correct.

Q In the absence of this uniformity rule of this Commission all these years, we would most likely have different allowables for the same depth wells throughout the state.

A Probably would.

Q And it would mostly be a matter of nominations by purchasers or producers and you would have different allowables for wells of the same depth.

A That is correct.

Q Do you believe then that the effect of the uniform depth bracket on 40 acres has led to better proration in the state as a result of the Commission's action?

A In my opinion it has.

Q And you are attempting to have a synonymity of 80 acres along with the 40 acres along the same line?

A That is correct.

MR. SPURRIER: Mr. Kellough.

MR. KELLOUGH: I don't have any further questions of this witness. But I would like to make clear the matter in which there is a great concern to Amerada, and any other operator that has 80-acre fields. And that is you have got to have an equitable per acre apportionment within the pool. Now, Continental's proposal as far as it goes is incomplete in that respect. On behalf of the Amerada, I would like to urge the Commission if they adopt this proposal they include the provision that the tracts within the pool which are less than 80 acres be given the allowable in the proportion of their acreage. As the Commission well knows, in these three hearings which we have had on the 80 acres, our engineers testified to what the allowable should be and made recommendations as to what it should be. The Hightower and the Knowles, it is doubled, and the Hightower it is now one and a half and that matter is again being considered and under advisement by the Commission in view of the last exception hearing we had.

But it is incomplete if you propose to have a state-wide rule that is going to provide when you have an 80-acre field it be given different sized allowables. Our concern is if you do that and do not go further and say you will change a state-wide rule that will create some equity within the pool itself, you might as well junk the whole thing. The matter that is of great concern to us is the maintaining of equity between the tracts in the pool. It has been argued and your statute provides that where a tract within a pool -- I will give you the exact language of that here.

MR. FOSTER: (Interrupting) His proposed rule violates the statute, that is what it does.

MR. KELLOUGH: The statute I spoke of, the proposed rule doesn't go far enough, the statute says, "The owner of any tract that is smaller than the drilling unit established for the field, shall not be deprived of the right to drill on and produce from such tract, if same can be done without waste; but in such case, the allowable production from such tract, as compared with the allowable production therefrom, if such tract were a full unit, shall be in ratio of the area of such tract to the area of the full unit." So your legislature has already said when you have a separately owned tract within this pooling unit, it ought to be on an acreage basis. You might say that ought to be enough. But it has happened at Knowles and Bagley, the 80-acre units owned by Amerada, there weren't any separately owned tracts, but proven by a dry hole, half of it

was not productive. So certainly there could be no objection on the part of the Commission to having their regulations overlap to a certain extent the mandate of the statute. And the point we wish to make is that our main concern is that you have got to maintain equity within the pool. If you are going to have a state-wide rule on one you ought to have it on both, and if not on both, leave it up to the Commission to determine what they are going to do about it at each hearing.

MR. BRALY: May I ask a question?

MR. KELLOUGH: Yes, sir.

MR. BRALY: Would you be satisfied in allocating among the wells in the pool to have the Commission follow its statutory duty?

MR. KELLOUGH: In the first place, they are not allocated among wells. They are allocated among proration units.

MR. BRALY: Let's see. Say they get to the point where they are allocating among wells.

MR. KELLOUGH: I tried to point out awhile ago it happened in two cases we had that two statutes -- that the statute wasn't applicable, because it wasn't a separately owned small tract within the proration unit. We owned it all but half of it was non-productive.

MR. BRALY: I see your trouble there.

MR. KELLOUGH: Your opinion as a lawyer might be fine as the statute applies. So would mine. But there comes in

MR. BRALY: But the Commission in one or two cases already has the matter under advisement. In the second case, gave a 40-acre tract a full allowable, which I don't think they should have done.

MR. KELLOUGH: The point I am making is, if you are proposing a state-wide rule to make everything plain, simple and clear-cut, you can't make the rule complete unless you go ahead and further provide you have got to prorate it in the pool among the tracts.

MR. McKELLER: Wouldn't a logical application of your plan follow, in an 80-acre pool if you had only 60 productive acres to a well, to give it one factor for economics and one and a half for acreage, instead of two. It seems to me that would be the logical application.

MR. KELLOUGH: It may be. And if it is you are going into the very objective we have.

MR. McKELLAR: What could be similar under the present system in New Mexico.

MR. KELLOUGH: If you have 80 you get a few barrels more.

MR. McKELLAR: No, if you have 80 you get two acreage factors. Still just got one hole in the ground.

MR. KELLOUGH: When do you figure that out in barrels of oil it means if you have a 12,000 foot well and a man has 40 acres, he gets in the neighborhood of, we will say, 307 barrels and the man with 80 acres gets 53 barrels more. Your royalty owner won't like that. It just won't work unless you maintain

equity within the pool.

MR. BRALY: We agree you have to maintain equity within the pool. We have no objection to that.

MR. WHITE: My name is Emmett White of the Leonard Oil Company. I would like to ask Mr. Colliston one question.

Q Do you believe deeper drilling in New Mexico has been retarded by the absence of prefixed proration or allowable rules such as you propose here?

A I believe it has been retarded by the absence of --

Q Of prefixed rules?

A I don't think it has been retarded by the absence of them.

MR. FOSTER: Do you think it would be encouraged by the presence of them?

A I don't think it will be retarded under the present proposal.

MR. FOSTER: I say do you think it would be encouraged by the presence of them.

A I don't think our proposal will discourage them.

MR. FOSTER: I didn't ask that. I said do you think it will encourage them.

A Well, yes.

MR. FOSTER; In what way?

A Well, that is the allowable in proportion to what you are drilling for in other states, similar depth and similar expense charge.

MR. KELLY: Mr. Colliston, do you think if you had to set up field nominations for each field that operators would be retarded from deep drilling due to the fact that they wouldn't know what their allowable would be before a hearing? In other words if every deep pool is put on a separate/^{pool}allowable basis and one fellow wants 500 barrels a day and another wants 300 barrels, do you think maybe deep drilling will be retarded? That you had to come in and submit to the Commission evidence to justify an allowable when you wouldn't know ahead of time what the basic allowable would be.

A I don't think it would encourage it.

MR. KELLY: In this case you do know what the basic allowable will be, is that right?

A That is correct.

MR. SPURRIER: Any other questions?

BY MR. CAMPBELL:

Q Mr. Colliston, have you calculated what your allowable will be on an 80-acre well as to percentage?

A I haven't calculated the actual percentage increase. Under a 53 barrel normal allowable, in order to make a 53 barrel increase across the board, the factor of one would add 53 barrels.

MR. SPURRIER: May I answer the question partly for you?

MR. COLLISTON: Yes, sir.

MR. SPURRIER: For a 12,000 foot well the 80-acre allowable would be approximately 1.15 times a 40-acre allowable for a

12,000 feet. In other words, it would approach that point two you just mentioned.

Mr. FOSTER: One point fifteen?

MR. SPURRIER: One point fifteen.

MR. FOSTER: What would it be from five to six thousand?

MR. SPURRIER: You are probably better with a pencil than I am, Judge.

MR. CAMPBELL: You just add 53 barrels to everything on forth.

MR. SPURRIER: 53 barrels.

MR. CAMPBELL: There was no recommendation from zero to 5,000 feet.

MR. SPURRIER: Anymore questions of this witness?

(Off the record.)

MR. CAMPBELL: In other words, Mr. Colliston, the deeper you go you get more oil but a smaller percentage of increase?

A You double your acreage all the way through. The increase is simply the proportional factor, which is still in there.

Your economic factor.

MR. KEELER: Could I ask a couple of questions.

Q Mr. Colliston, have you made any comparison as to the 80-acre allowables you would get under this method you are presenting with the allowables you get in Texas under the so-called 1947 yardstick?

A I simply made a rough comparison and in general they are approximately the same.

Q Did you take that far enough to compare say the allowable which you would get today in New Mexico based on 53 barrels basic under you plan as compared to the Texas allowables under the Texas calendar day allowables under current shut-down basis?

A You could get a higher allowable in New Mexico.

Q You could get a higher allowable in New Mexico. And certainly under that there would certainly be no tendency to discourage drilling in New Mexico as compared to Texas?

A I can't see that there would be.

MR. SPURRIER: Anyone else? If not, the witness may be excused. Thank you very much, Mr. Colliston.

(Witness excused.)

MR. CAMPBELL: If the Commission please, I would like to make a statement, -- go ahead.

MR. SCOTT: I would like to make a statement with regard to Case 313. Shell Oil Company would like to go on record as being in accord with the proposal of Continental. The suggested amendments for this Rule 505 with reference to the method of calculating top unit allowables for wells producing from depths greater than 5,000 feet. And in fields for which 80-acre spacing has been or would be designated by the Commission. We feel that Continental's interpretation of this proportional factor, or depth factor is a fair and a reasonable approach. With respect

to its economic aspects, we further believe that such a method of calculating these allowables for the deep wells in 80-acre spaced fields would be in keeping with sound conservation practices.

MR. CAMPBELL: I would like to make a statement on behalf of the Texas-Pacific Coal and Oil Company on Case 313. If the Commission should see fit to establish a state-wide allowable and deep well adaptation to 80-acre proration units, it is the opinion of the Texas-Pacific Coal and Oil Company that the order, if issued upon this case, would not operate retro-actively and would not supersede field rules now in existence, for two reasons: First, of course, that the notice, the call of this hearing is not sufficient for that purpose. And in the second place, the state-wide rule would not supersede a field rule. And field hearings would have to be called on 80-acre fields now in existence.

MR. SPURRIER: Mr. Bond.

MR. BOND: The Stanolind Oil and Gas Company. Mr. Kellough read a statutory provision which provided for allocating allowable to a well on a fractional unit in regard to the number of acres that unit contained. I would like to also refer to state-wide Rule 104H; which we have discussed once today, which provides that if the drilling tract is within an allocated oil pool or is placed within such allocated pool at anytime after completion of the well and the drilling tract consists of less than $39\frac{1}{2}$ acres or more than $40\frac{1}{2}$ acres, the top unit allowable for such well shall be increased or decreased in the proportion

that the number of acres in the drilling tract bears to 40. In other words, under the provisions of that rule, allocation is also on a basis of 100 per cent acreage. I think quite a bit of 100 per cent acreage as an allocation formula. Because it has the effect of causing the per acre withdrawals to be the same. Apparently the Commission has had a similar belief in its good qualities. It seems to me that regardless of what the Commission had in mind when they awarded the deep well adaptation factor, those factors result in a well that is drilled in excess of 5,000 feet receiving^a/certain allowable and withdrawing a certain number of barrels per acre from the unit it is completed on. I think it would be only fair that that 100 per cent acreage be carried over to apply to 80-acres or any other size unit which are found by the Commission to be adequate for efficient drainage of the pool.

MR. SPURRIER: Anyone else?

MR. BRALY: May I say a word in response to that? It is quite obvious when the Commission passed that rule they didn't have in mind any 80-acre field. That rule would just as obviously require some amendment if the Commission does adopt a state-wide 80-acre field program. The rest of the gentleman's observation of course, pertains to maintaining the relative status of the wells within a field as among themselves. And this rule doesn't contemplate any violation of that principle at all. The thing suggested here, you have simply got in addition to the 40-acre unit a greater 80-acre unit which you

will treat for the purpose of allocating between wells on the same principles as you would treat 40 acres.

MR. BOND: If I might make one further observation. The problem Mr. Kellough brought up, that of allocating within the pools, wouldn't be existent if oil were allocated between pools on the basis of 100 per cent acreage. It was my impression from the Continental's testimony, they would not be opposed to allocating between units in a pool on the basis of 100 per cent acreage. Perhaps I am wrong in that, but if that is an equitable basis for allocating between units in a pool it appears to me it should also be equitable for allocating between various pools in the state.

MR. SPURRIER: Does anyone else have a comment?

MR. KEELER: I represent Magnolia Petroleum Company. We believe that the method presented by Continental Oil Company is a reasonable one. And we are in full agreement with the proposed plan. I would like to make one comment however, on behalf of Magnolia, and that is that doesn't necessarily mean in all cases we believe that that particular depth bracket allowable will be the proper allowable for all reservoirs within that bracket. But it may be in the future we will have sufficient reservoir information on a certain field that we may have to request changes based on the efficient rate of producing the reservoir.

MR. SPURRIER: Anyone else? If not, the case -- Mr. Selinger.

MR. SELINGER: For the record, on behalf of the Skelly Oil Company, we wish to concur with the recommendations made by Continental with respect to establishing a uniform pattern for allocation between pools to be made applicable to 80-acre units as has been done for 40-acre units. I think that has been a boon to the oil industry for the past few years in the 40 acres. I know of no state in the so-called nine or ten regulated states that have a program as simple for allocation as this state. Kansas has a similar, although on a location. In those states where we have a uniform allocation we have less trouble and less fighting and going around for hearings than in those states where it is based on fields, and -- I also want to impress on the Commission Continental's application is only between pools. We can see 100 per cent allocation between tracts and leases and wells within a pool. However, we don't wish to go on record as saying that is the only way, because you have in effect already some fields on the basis of one and a half times. If the Commission finds that is the way it should be in that particular pool, we wish to defer the 100 per cent acreage as between tracts and wells as in a particular pool. This also doesn't necessarily mean that the allocation is fixed for 80-acres indefinitely and permanently. For example, in the Brunson Pool where the allocation was a certain figure and the operators felt there was waste probably being committed and went before the Commission and the Commission

reduced the allowable.

Lastly, Magnolia's point is well taken where it is just an unusual fields where this particular uniformity for 80 acres doesn't apply, the operators can come in and make a showing for a different distribution of the allowable. That point is particularly covered by the statute, Section 13, Paragraph E, and in brief it says, the method of allocation within a pool agreed upon by the owners for the distribution of any allowable fixed by the Commission which plan in the judgment of the Commission has the effect of preventing waste as prohibited by this Act and is fair to the royalty owners in such pool, shall be adopted by the Commission. However, the Commission upon hearing and after notice may subsequently modify any such plan to the extent necessary to prevent waste as prohibited by this Act. So that this doesn't fix it forever and permanently. But it establishes a rule of procedure for operators like ourselves -- and I am not taking particular credit for our company, other companies are similarly situated. We are drilling 13 deep wells in this state at the present time. And other operators are drilling deep wells. And I think the uniformity of knowing what your base allowable is has considerable to do with the plans that operators may have for the next year or two years as to knowing what their return will be on a 12 or 13 thousand foot well.

MR. SPURRIER: Mr. Dewey.

MR. DEWEY: My name is R. S. Dewey, on behalf of the Humble Oil and Refining Company. We concur in the statement presented by Magnolia.

MR. SPURRIER: Mr. Kellough.

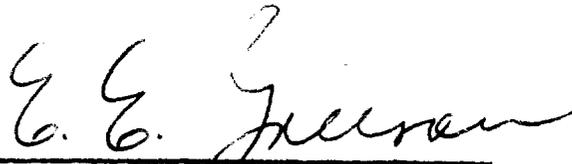
MR. KELLOUGH: On behalf of the Amerada in case I didn't make myself clear, we have no objections to the formula for the over-all 80-acre unit presented here provided the Commission includes with it as part of the state-wide rules, an order providing for the allocation within the pool on a surface acreage basis for fractional units or units which include non-productive acres. As to the three present 80-acre orders in which Amerada is interested, in all three of them, as Mr. Campbell pointed out, I believe under your present law the special order would probably take precedence over the general state-wide order and that it would seem that any state-wide order adopted now would not effect those pools until we have had an opportunity to appear before this Commission and present our evidence on those cases.

MR. SPURRIER: Anyone else? If not, the case will be taken under advisement and the Commission is in recess until Thursday, October 25, at 10:00 o'clock.

STATE OF NEW MEXICO)
 : SS.
COUNTY OF BERNALILLO)

I HEREBY CERTIFY that the foregoing and attached Transcript of Hearing in Case No. 313, before the Oil Conservation Commission, taken on October 25, 1951, in Mabry Hall at Santa Fe, New Mexico, is a true and correct record of the same to the best of my knowledge, skill, and ability.

DATED at Albuquerque, New Mexico, this 19 day of November, 1951.



REPORTER

CONTINENTAL OIL COMPANY

EXHIBIT NO. 1

Pool Depth Range	A 1st 40 Acre Credit	B Added Investment Credit	C 40 Acre Proportional Factor (A / B)	D 2nd 40 Acre Credit	E 80 Acre Deep Well Proportional Factor (C / D)
0 - 5,000	1.00	-----	1.00	-----	-----
5,000 - 6,000	1.00	0.33	1.33	1.00	2.33
6,000 - 7,000	1.00	0.77	1.77	1.00	2.77
7,000 - 8,000	1.00	1.33	2.33	1.00	3.33
8,000 - 9,000	1.00	2.00	3.00	1.00	4.00
9,000 - 10,000	1.00	2.77	3.77	1.00	4.77
10,000 - 11,000	1.00	3.67	4.67	1.00	5.67
11,000 - 12,000	1.00	4.67	5.67	1.00	6.67
12,000 - 13,000	1.00	5.75	6.75	1.00	7.75

CONTINENTAL OIL COMPANY

EXHIBIT NO. 2

RULE 505. OIL PRORATION

* * * * *

Pool Depth Range	40 Acre Proportional Factor	80 Acre Deep Well Proportional Factor
0 to 5,000 Feet	1.00	-----
5,000 to 6,000 "	1.33	2.33
6,000 to 7,000 "	1.77	2.77
7,000 to 8,000 "	2.33	3.33
8,000 to 9,000 "	3.00	4.00
9,000 to 10,000 "	3.77	4.77
10,000 to 11,000 "	4.67	5.67
11,000 to 12,000 "	5.67	6.67
12,000 to 13,000 "	6.75	7.75

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