CASE No. 4850

Application,

Transcripts,

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
Wednesday, November 1, 1972

EXAMINER HEARING

IN THE MATTER OF:	
Application of Dalport Oil Corporation for amendment of pool rules, Chaves County, New Mexico.	Case No. 4850
AND	
Application of Dalport Oil Corporation for designation of a special gas area and special rules therefore, Chaves County, New Mexico.	Case No. 4843

BEFORE: Elvis A. Utz,
Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 4850, the application of Dalport Oil Corporation for amendment of pool rules, Chaves County, New Mexico.

MR. CHRISTY: Sim Christy of Jennings, Christy and Copple, Roswell, appearing for the applicant, Dalport.

May I suggest to the Examiner, in view of the nature of the testimony, that we might consolidate for the hearing Case 4843 with 4850?

MR. UTZ: Well, is this the same area, Mr. Christy?

MR. CHRISTY: Yes, sir, and the testimony will be substantially the same.

MR. UTZ: Is the Double L area incorporated in your 320 acres?

MR. CHRISTY: It is the same area, it would not be governed by the special rules, but the testimony in the Double L here goes to the question of 320-acre spacing, as does Case 4843 with respect to Southwest Chaves; to that extent, they overlap.

MR. UTZ: My question was, I don't know the location of the Double L associated pool.

MR. CHRISTY: It's in the Southeast Chaves area.

MR. UTZ: It's within the area that you are recommending here, for the 320-acre spacing?

MR. CHRISTY: That is a correct statement.

MR. UTZ: I think in this case we can probably

consolidate these, or will consolidate these cases for purposes of testimony. Of course, separate orders will be written.

MR. CHRISTY: Yes, sir. We have one witness we'd like to have sworn.

LEO LAMPERT,

a witness, having been first duly sworn according to law, upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. CHRISTY:

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

A Leo Lampert, Corpus Christi, Texas, Dalport Oil Corporation out of Dallas, Texas.

Q Mr. Lampert, you are petroleum geologist and have had your qualifications previously accepted by this regulatory body?

A Yes, sir.

Q And are you familiar with what is sought in Cases 4850 and 4843, and the general area?

A Yes, sir.

Q And have you made a study of the wells in the area that would be affected by these applications?

A I have.

MR. CHRISTY: Are the witness' qualifications

acceptable?

MR. UTZ: Yes, sir, they are.

Q (By Mr. Christy) Now, first of all, I'd like you to tell me, this involves two cases, what are you seeking in the Double L application, which is Case 4850?

A We are seeking an amendment to Rule 2 (A) and Rule 7, special rules governing the Double L Associated Pool to increase the size of the standard gas well proration units from 160 acres to 320 acres and a corresponding increase in the gas allowable.

In Case 4843, we are seeking designation of Southeast Chaves-Queen area comprising all of Townships 12 and 13 South, Ranges 30 and 31 East, Township 14 South, Ranges 29, 30 and 31 East, and Township 15 South, Ranges 29 and 30 East.

Q Now, let me refer you to applicant's Exhibit 1 and ask you if that is a map depicting this area you spoke of as Southeast Chaves?

A Yes, sir.

Q I'd like to have you look at Exhibit 1, I notice you have some pools, or areas marked in yellow. Would you please explain what those are?

A Those are gas areas that are depicted on this map, from drill-stem test information, or completion test information, and the outlines are slightly arbitrary, but they are in

the areas of these gas tests. So, in essence, it's outlining possible gas areas based on test information in these wells.

Q And we'll come to the quality of the gas here in a moment, will we not?

A Right.

Q Is the quality of the gas generally similar in this whole area?

A Right.

Q And is the depth of gas we are talking about Queen gas, is it similar?

A It's all Queen gas, it's very similar, it's 65 to 70 per cent nitrogen gas.

Q Now, I notice also on Exhibit 1 you have some red circles around wells and you have some green circles. Would you tell me what those two colors depict?

A The red circles are wells that are shut-in, having been perforated in the Queen. They are shut-in gas wells. The green indicates that these are dry holes that had tested gas out of the Queen and then they were subsequently plugged.

Q Now, I notice also opposite some of the wells you have a figure with a per cent sign. What does that per cent sign mean?

A That is gas analysis that was obtained on that well showing

the nitrogen content of the gas.

Q And you have further exhibits to show on each of these wells?

A Right.

Q All right.

MR. UTZ: Excuse me a moment, which of these yellow areas is the Double L-Queen?

MR. CHRISTY: Right here (indicating).

THE WITNESS: In 14, 29; and 15, 29; along the east side of the township.

MR. CHRISTY: And this is Vest Ranch here.

Q (By Mr. Christy) Now, I notice also on Exhibit 1 you have some lines marked for exhibit, A to A', and so forth. Would you please explain those and let me refer you to Exhibit 2?

A Those are the cross-section lines that are in further exhibits, 2 and 3.

Q All right. Now, let's take Exhibit 2 and I think you are showing, first of all, A to A', which is up in 12 South, 31 East?

A Right.

Q All right. What's the purpose of showing us the A to A'?

A Well, this is a gas area, the top cross section has three wells on it, from left to right, the left well being the up-dip well, and it indicates where you have a gas

deposit, gas accumulation, with water down-dip.

Now, what we are going to show you in these cross sections is that most of these fields are very similar in nature, geologically; the fields are separated from each other, geologically.

Q Is this by a tight formation?

A By tight Queen sand, but the upper A-A' shows gas in the first two wells with water down-dip, the well down-dip being dry.

Q I think your tightness shows better in B to B' in Exhibit Number 2.

A That's correct, and that's in those fields further south in Exhibit 1, it's the next yellow area also shown in the index map on the cross section. And there are, in this cross section, B-B', it does show the tight sand that does surround the first two wells from left to right. You have a gas accumulation in the first well and it's separated from the accumulation in the second well.

Now, it's possible that the second and third well are connected.

Q You don't show them connected on Exhibit 1, but you don't show a tight spot in Exhibit 2 on B to B'?

A Right, it's possible that they are separated, but they could be one reservoir.

Q But they are still within the general area that we are

talking about?

A That's right. The geological conditions do not vary within the whole Southeast Chaves gas area. There are tight sand conditions separating all these fields.

Q Now, I notice you have a C to C' moving on down into the Double L West Ranch area. Let me refer you to Exhibit 3 in that connection and ask you what that depicts, if anything?

A If I'm going too fast, somebody please slow me down. C-C' is the cross section through the north end of the Double L, C being in Section 24, 14, 29.

That's in the Double L?

Q In the Double L Gascap. That's Double L Associated, it extends eastward to an oil well in the oil part of the

A field. That is Dalport No. 11 and then it continues eastward to a well in the north end, a well in the West Ranch Field, which well was plugged, the Cities Service Holbeck is in the West Ranch. It was plugged.

So, what I'm showing in this cross section in the top left is gas in the Gascap of the Double L going down to oil in the Double L, then water in the Double L that shows up in blue, and then a tight zone, down-dip, from the oil and then down-dip from the tight zone is a gas zone in red in that Cities Service Holbeck. Again, the normal progression that we see throughout the whole

southeast gas area.

Q Then, I think we have a D to D' starting over in the Lucky Lake going through the Double L and back into the Vest Ranch, again?

A Right. Now, the left well is in Section 15, 15 South, 29 East. It's the Shell 1-15 Federal which tested gas and they perforated the well and subsequently plugged it because the gas was not commercial. This was about 1957, and then going to the right there is a tight zone that separates this well, which I'm talking about in the Lucky Lake area, it separates it from gas in the Double L Gascap, which is the McClellan 1-B Lisa, that well is in the Gascap of the associated reservoir. That well is shut-in also, today.

Then, you move eastward to the Dalport No. 2 Sunset, which is in the oil portion of the Double L. It's the third well from the left with the green being oil and then down-dip from it is an oil-water contact, and then water. And then going further down-dip to the east, there is a tight sand, and then further down-dip to the Dalport Holbrook, which is a plugged well; but we drill-stem tested gas in it and so, this, I think, this last well on the east side will be a part of the Vest Ranch gas field.

Again, showing tight sands separating these yellow bodies that you saw on Exhibit 1.

Q Now, Mr. Lampert, I believe, exclusive of some casing head being produced as casing-head gas, none of these areas alone in this area produced as gas reservoir?

A That's correct.

Q Now, do you have anything in the area that we might use for an example of gas production so that we can see how these might be produced, and I particularly refer you to Exhibit 4.

A Right, there is some comparable Queen production in the general vicinity. Now, it's not on this map, Exhibit 1. Let me say that in Exhibit 1, all the dry gas wells are shut-in for lack of market, like Mr. Christy said, there are several wells that are producing casing-head gas to Phillip's pipeline, but all the other dry gas wells are shut-in for lack of market. And the oil field that is nearby is in Lea and Eddy Counties, just to the south of Exhibit 1 in 16 South, 29 and 30 East, 30 and 31 East.

Q Now, let's take up Exhibit 4 and let's take 4-a first. What is 4-a?

A 4-a is a location plat of the Mesa Queen Field, which, that's the northwest corner of Lea County. As I said a minute ago, it's actually 31 and 32 East in 16 South. The Mesa Queen is a Queen oil reservoir, the wells on the east, southeast side of the plat, are Queen oil wells and it's the same stratigraphic horizon as what produces in

the Caprock, Vest Ranch, Double L, all the fields in the southeast gas area. These Queen oil wells have a Gascap -- The wells in red show the wells in the Gascap.

Q Those are the gas wells, the ones in red are the gas wells in the Mesa Queen?

A In the area of the Mesa Queen, and the gas wells and the oil wells are not separated by any tight sands. They are all, it's actually one field as far as I can determine.

MR. UTZ: Has the Commission determined this an associated pool?

MR. CHRISTY: I don't think so.

THE WITNESS: I don't know.

MR. UTZ: Now, we have a Mesa Queen Associated Pool, I notice you call this West Mesa Queen.

THE WITNESS: The gas, I think, in the Commission Book is listed as Mesa Queen and was originally called West Mesa Queen.

So, these wells are part of the Mesa Queen production.

MR. UTZ: Okay.

THE WITNESS: But for my terminology, I'm calling it West Mesa.

Q (By Mr. Christy) Now, on Exhibit 4-a, again, I notice in Section 13 there are four wells in this section, and then over in the next township, in the section, there are only

two wells. We will come to that in a minute, but I did want to point that out to the Commission.

A Yes, sir. We have four wells in one section, we have two wells in the other section, both being in the same area.

Q Now, let's move on, taking these West Mesa or Mesa Queen gas wells and referring specifically to those four wells in one section, two wells in the other, I'll ask you if you have done some calculations with respect to the production profitability, et cetera, and refer you to Exhibit 4-b.

A Yes, sir, I have. And what I'm trying to show here is a comparison of production and economics using 160-acre spacing versus one well per 320-acre spacing.

Now, we utilized that section 13 in 16, 31, since it did have four wells on 160-acre spacing. So I'm using the production and the histories from those four wells compared to the production history of the two wells in Section 7 to the northeast, two wells basically on 320-acre spacing. And so, from here on out, I'm going to compare the statistics using the information from these wells.

Q Now, do I understand from Exhibit 4-b that your recovery per well on the 160-acre wells is .739 billion, and on 320 acres is 1.464 billion. Now, is that actual

production to date, or is that extrapolated out to lifetime?

A That is actual production extrapolated to ultimate production. The gas is sort of in the latter stages of depletion, and so they have maybe two to three years more to run before they will be depleted out. So most of this is ultimate production extrapolated no more than two years.

Q And do we note from Exhibit 4-b that the ultimate recovery of the section, or use of the 320 acres is approximately the same as for the 160 acres? You recover 2.959 billion for the 160 acres, and for the 320 acres you recover 2.928 billion, or approximately the same?

A That is true. Now, the one on the left side is 160-acre spacing, and the one on the right side is 320-acre spacing.

Q So it would appear from actual production history in a comparable area that you would recover the same amount of gas, whether you drilled on 160-acre spacing or 320-acre spacing?

A This is the basis of the whole thing today, is that we feel that on two wells we can produce the same ultimate amount of gas as we could with four wells in the same section.

Q Then, the exhibit also shows your profitability differential there for the 160 and 320?

A In the red under 160, the little red curve shows that you will make $23,394.00 after all expenses, royalty; compared to the red on the right of $72,986.00 per well, if you had drilled on 320 acres.

Q Now, --

A And then in green, it's on a section basis, on the left side there is $93,576.00 that would be the profit from four wells on one section, and to the right, there is $145,972.00 in profit from a section with 320-acre spacing.

Q Now, we will come to it in a moment, but my question at this point is did you use the same numbers on the 160 as for the 320, for royalty, taxes, and so forth?

A Yes, sir.

Q So we have a true comparison?

A Right.

Q Now, let me refer you to Exhibit 4-c and I ask if you will identify that and explain what it depicts?

A 4-c is a graph showing the average decline per well, yearly decline per well, of those four wells that we talked about awhile ago on the 160. That's the average, their yearly production, that's taking their yearly production and then taking an average and then doing the

same thing with the 320-acre spacing, taking the yearly production and averaging it. And then just simply plotting the yearly production versus time and the graph shows that the 160 curve, which is the solid curve, has a steep decline. This is actual production, this is no extrapolated production, this is actual production through 1971.

The 160 curve has a steeper decline than the 320-acre curve. The wells on 160 did not have quite the yearly production as the wells on 320.

For instance, in 1966 on the 160-curve the well averaged 235,000,000 cubic feet, where as just above it, the wells on 320 averaged 259,000,000 feet. And then the next year, you will see the dotted curve, the wells averaged 380,000,000 cubic feet per year on the 320 acres, where as the 160-curve shows they averaged 180,000,000. So, the wells on 160 didn't quite ever produce as much as the wells on 320 acres, and their decline was steeper.

Q That would be because of more intense counterdrainage, wouldn't it?

A Right.

Q Now, I notice in 1970 the 320-acre dotted line drops perceptibly and the goes immediately back up. Would that be a true curve at that point, or should you take the point from '69 to '71 and kind of draw a line?

A I would, for some reason, the production in 1970 was low and I don't have the reason, but that wouldn't be a true picture. I'd rather draw the curve through the '71 figure, or close to the '71 figure.

Q Now, you mention these average production declines on 4-c. Do you have some back-up information on that, and may I refer you to Exhibit 4-d?

A This is taken from the Commission Books, the Oil Conservation Commission Books, and I've used all their information up through 8/1/72; and then, extrapolated the reserves on the various wells from that point, 8/1/72, through depletion.

Q Now, I think up to 4-c we'd been dealing strictly with these West Mesa Queen wells, the four on one section and two on the other; and at 4-d, we are now giving the Commission all of the wells, are we not?

A This is everything producing, or that did produce at one time or another in the Mesa area.

Q In the Mesa, or in the Southeast Chaves?

A This is strictly West Mesa area production.

Q All right, sir. And this is your back-up information for your figures shown and your conclusions arrived at on Exhibit 4-b and c?

A That's correct.

Q Now, let's talk a little bit about the profit picture as

shown on Exhibit 4-b and I refer you to Exhibit 4-e and 4-f.

Now, at this point, have we gone back to the two wells on one section and four wells on the other?

A Yes, sir. This is based on the West Mesa production, again.

Q Of those particular wells?

A Right.

Q Which are the four wells on one section and two wells on the other?

A We just don't know how the rest of the southeast area are going to produce, we have no history, and this is the best history, the longest history we can come up with. Right.

Q Now, in preparing 4-e and 4-f, let me ask you first of all what investments, drilling completion costs, you used?

A We are using an average investment of $30,000.00 per well.

Q Does that coincide with your information for exhibits in Double L?

A Yes, sir. It will depend on depth, if the well is a little bit deeper, it's going to be more money; but that's the average.

Q What net working interest have you used in this?

A 79 per cent.

Q And have you taken off taxes?

A This is reducing it with State taxes and royalties.
Q And you've taken the standard discount factor?
A Right.
Q And I see your price of gas used in there, where did you get those figures?
A These are just estimated figures from conversations with people with pipelines that we anticipate, is 12 cents to 14 cents, hopefully, this, there will be more; but this is the estimated price.
Q But ycu are using the same parameter in 4-e and 4-f?
A Right.
Q Now, tell me what the difference is in the income to the working interest, the economic situation?
A Well, on the lower right in Exhibit 4-e, below the column of Cumulative Present Net Worth, is a figure of $72,986.00, which represents the profit after all expenditures on a well 320 acres, it would produce $72,000.00. Now, this goes back to the graph exhibit shown in red and green, these figures on the graph exhibits are taken from Exhibit 4-e and 4-f; on 4-b, the figures in green and red, the figures are taken from 4-e and 4-f, so on 320 acres you would anticipate a profit of $72,986.00, and for two wells on a section, the figures below that, would be $145,972.00 profit; getting a net profit over investment ratio of 5 to 1, if you drilled

on 320-acre spacing.

Q Now, that seems to take West Mesa Queen gas.

A Now, 4-f is the same comparison on 160-acre spacing, using on the lower right, present net worth per well of $23,394.00 per well profit, and with four wells on the section, multiplying by four, the profit would be $93,576.00, and giving you a ratio of net profit over investment of .779 to 1, if you drilled on 160-acre spacing.

Q Now, turn away from the West Mesa, which is the only comparison we had, let's go back to the Double L West Caprock and tell us what you found, geologically, what you estimated the economics in forecast, with respect to gas wells drilled in the southeast, proposed Southeast Chaves area, including Double L.

A The southeast area, including Double L, would have slightly less pay than the wells in the West Mesa Field, so I consider the production in the history in the West Mesa on the high side, on the optimistic side of the ledger.

I don't think the Double L and southeast area will produce quite as much gas because we do have slightly less pay, but it will compare, we might be slighly less on reserve, but it will compare with the figures I've previously testified to.

Q Let me refer you to Exhibit 5, it has an A, B, and C part,

I believe.

What are the average core data, let's talk about that. From what wells did you take that?

A The average core data?

Q I think 5-c shows your average core data and is backed up by your 5-b, which shows the actual cores taken.

A Correct. 5-b indicates analyses of wells in the Gascap. The first wells are in the Gascap of the Double L Field, the Cactus, Dalport, Grace Wells. It gives us the location, the number of feet of pay, the permeability, porosity, oil saturation, SW saturation; and these were all the wells that I could obtain, with core analyses.

Q Now, wait a minute. Where, in what area?

A In the entire area of Exhibit 1, Southeast Gas Area. That includes the Double L Field, this does not include the oil wells and we have cores on a number of oil wells.

MR. UTZ: Let's get these exhibits straight. You are talking about 5-b?

THE WITNESS: 5-b.

A These are true core analyses, the most analyses that we could obtain in the area, and we averaged them out.

Q Now, Exhibit 5-a.

A Exhibit 5-a.

Q Does that give us our nitrogen content?

A These are gas analyses of the wells in the entire area, again, they are different wells, of course; but it's every analysis I could lay my hands on in the entire area, showing the date of test, mol. percentage of nitrogen, BTU's, and then the GPM. And if you will look down the list on nitrogen, most of these wells are 63 per cent to 67 per cent to 70 per cent to 86 per cent nitrogen, which is very poor quality gas.

Q Now, I think 5-c summarizes a and b, does it not, plus an economic forecast?

A Yes, sir. 5-c, this is for the Double L West Cap Area, it indicates the average core data, some of the reservoir data, the bottom hole pressure of 900 points, and the temperature, and then the reserve figures that I tentatively have come up with in the southeast area.

On the very bottom, on the very bottom on the left, I've forecast the 160-acre spacing production, estimated production, and the profit versus the 320-acre production and the profit. And on the bottom left, the profit on 160 would be $15,080.00 and the bottom right, on 320-acre spacing, the profit would be $60,166.00.

Q Now, as I understand you, in the Double L application, Case 4850, you seek amendments to Rules 2 (A) and 7 to change the word "160" to "320"?

A That's correct.

Q And is this done because it's more economical to do it, and that one well will still drain the recoverable gas under it's proration unit?

A That's right. We think on 320 we can produce as much gas as we would have drilled with two wells on that same 320 acres. It will cost us less money, we can drill more wells, we can develop the entire area more feasibly.

Q And this will avoid waste, economic waste?

A Yes, sir.

Q And will it, in your opinion, violate the correlative rights of any interested parties?

A I don't think so.

Q Now, with respect to the application 4843, do you have any particular suggested rules to propose to the Commission?

MR. CHRISTY: At this time, I'd like to comment to the Commission. We have drafted them, they are part of our packet there, they are not marked as an exhibit per se.

We have first of all defined our area by land. We have tied down what Queen formation we are talking about and that is the identical one in the Double L. We have tried to track the Double L pool rules in so far as they affect gas. But because we do not have an associated pool in what we propose, we have deleted prorations and simply have talked about spacing.

We used the number to define what is a gas well in Southeast Chaves as exactly what we call it in Double L, that is 30,000 to 1 GOR's.

We are proposing that the Southeast Chaves Gas Area not include any areas which are governed by other rules such as the Double L Special Rules, the West Mesa Queen. I don't think the West Mesa is involved. There are some over in the Caprock area which apply to oil. As far as I've been able to determine, the only gas special pool rules are in the Double L. There is none in the Vest Ranch.

Q (By Mr. Christy) Is that true?

A That's correct.

MR. CHRISTY: So that is what we have proposed here in the rules, 1 through 13 inclusive. We have done one other thing. We have granted the right to grant an exception.

We have granted the exception on the unorthodox wells, which is the standard thing that the Commission puts in all of it's rules. That's Rule 3.

Then in Rule 4, we have adopted the standard 660-1980 state-wide rule for 320-acre spacing, but in Rule 5 provided for an exception to that because of the fact that certain wells have already been drilled which would be unorthodoxed.

This would mainly be involved in a reentry situation where you have the present dry hole, you want to

reenter and you would have Rule 5, which provides for an exception to it, referring back to Rule 3 (D), 3 (C), which again, the consent of all offset operators are notice and no objection being entered for 30 days.

We did that, as I mentioned a second ago, to protect again, a reentry on a present dry hole in Southeast Chaves area.

Outside of that, we have adopted almost uniformly state-wide rules with respect to tests.

Now, having heard my rather lengthy explanation, would you adopt that as your answer to my question a minute ago as to what your proposed rules are?

THE WITNESS: Yes, sir.

MR. CHRISTY: At this point, I would like to also mention to the Examiner that there are 12 or more pipeline purchasers interested in acquiring this nitrogen-gas. They obviously have their economic production with respect to more lines and it's, and they have, to my understanding, have been basing their calculations, have figured they could economically come into the area and take this gas which would otherwise be lost. They have been considering it on 320 spacing. They realize that this application has not been granted, but I was asked to make a short statement on their behalf.

Q (By Mr. Christy) Mr. Lampert, is there anything else that I have not asked that you think should be known by the Commission in the Cases 4850 and 4843?

A I don't think so.

Q Were Exhibits 1 through 5, with their integral parts, prepared by you or under your direct supervision?

A Yes, sir.

MR. CHRISTY: I think that's all we have from this witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Well, let me get this straight in my mind. I think I understand you.

As far as 4850 is concerned, you merely want to amend the rules to allow 320-acre spacing instead of 160 for gas wells?

A In the Double L.

Q And in your Southeast Chaves-Queen Gas Area, Case 4843, you want to control the gas spacing and the gas well designation by an order for the entire area covering all Queen gas wells in the area?

A Correct, with the exception of the associated pool, Double L pool, with that exception.

Q Is that the only associated pool in the area?

A To this date, yes. That is the only pool with field rules in that area, entire area.

Q Now, the Mesa Queen --

A It's outside of that area.

Q I'm sure, now, that it is an associated pool.

MR. CHRISTY: I might add to that, if the Vest Ranch comes in with associated pool rules comparable to Double L, then they would go outside the Southeast Chaves area because they would be governed by an associated Vest Ranch pool rule and therefore, not governed under Rule 1 by the Southeast Chaves area.

A If and when it ever comes up, it will be like the Double L, it came up two years ago, to promulgate rules for an associated pool.

Q Now, in regard to the oil wells, well, first let me say that you are recommending 30,000 to 1 as a gas well definition?

A We are using that figure because this was used by the Commission a year and a half ago in talking about the Double L. This figure 30,000 to 1 came from Commission testimony.

Q Okay. And then any well with less than 30,000 to 1 GOR's would be an oil well?

A Correct, I believe.

Q And would become governed by a 2,000 to 1 State GOR, Special Pool Rules in the area?

A If they were requested, yes, sir.

MR. CHRISTY: I think properly stated, it would not be governed by Southeast Chaves area, it would be governed by

state-wide, while there is 160-acre, 2,000 to 1, or by associated pool rules. It just wouldn't be involved.

A If, for instance, someone wanted to designate a certain area in this as an associated oil-gas pool, then they would probably promulgate, or request rules similar to Double L.

Q Then, the only associated pool in the area, being the Double L, then you would increase the gas takes by going from 160 to 320 wells. There are no gas takes, now, actually, is that right?

A Correct.

Q But if there were, you would double them, if the well was capable.

Now, how would that affect the oil wells?

A It wouldn't affect the oil wells because you are only taking out the same amount of gas that you would be taking out as of today, with two wells on 160, you would be taking out the same amount of gas from the Gascap, so it would not, the current allowable would be 160 acres per well, so if you changed the rules to 320 acres per well, you would be taking out the same amount of gas with one well as two, so the amount of gas would be identical.

So you wouldn't be affecting the oil reservoir.

Q I don't recall the GOR we set in the Double L.

A It's 20,000. The method there is taking the acreage

designated to a gas well, times 2,000, times the oil allowable, which is what, 80, and give us your daily allowable in the associated reservoir. And so, we would be doing it now with 320-acre spacing, and the same amount of gas would be withdrawn from that half section with one well as opposed to two wells.

Q Now, in the balancing of the area in the Southeast Chaves area, do you think the increased gas takes in the area will affect the oil wells?

A No, sir.

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

MR. STAMETS: Yes, I've got a few.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Lampert, I noticed on Exhibit 1 that there seemed to be oil down-dip and associated with gas in several of these areas.

For instance, the Sulimar area.

A Yes, sir.

Q And the Double L, and the Caprock, and the Lucky Lake, and the Vest Ranch.

A Right.

Q Is this a common occurrence for the Queen gas, Queen oil series in there?

A It's been known to occur in this area, and it can happen

again. And, it's fairly common on the southwest end of this map. It has not occurred, to date, up on the northern end of the map, that is west of the Caprock complex.

Now, let me say one thing. The Lucky Lake, that's on the far southwest part of the map in 15, 29. We drilled one well there, we drilled a gas well there in Section 22 and then just east of it, an oil well, which is a very poor well, and you have a very thin oil column and a much thicker gas column. So, I think it's more of a gas reservoir with an associated oil rim, as opposed to the Double L Field, which we have designated as an oil field with the associated gas.

Q This situation, though, is similar to the Double L, it could occur in other areas that have not been drilled as yet?

A Yes, sir, it could.

Q And you have proposed unlimited gas takes from these wells. Could that have any effect on any oil found?

A I don't think so, Mr. Stamets, because, assuming that there is another oil field in association with one of these other gas areas, at that stage of the game, or at some stage of the game, the operators of the Commission could call for special pool rules as they called for in the Double L, and your takes would then be regulated by your GOR's, like they are in the Double L.

And this we anticipate, if a field, let's assume it's a Vest Ranch, assume there is some oil on the east side of the Vest Ranch, if the operators of the Commission desire to request field rules similar to the Double L rules, then, like Mr. Christy says, then that area would be withdrawn from the southeast gas area and it would have its own special rules.

And so, a large amount of the gas would not be taken from the gas wells that would adversely affect the oil wells, again, like in the Double L. And I think we are asking for, we are requesting that if some circumstance occur in the future, that the areas can be changed in this manner.

Q Would you anticipate takes from any of these gas wells exceeding 1 and a quarter million daily?

A No, I would not. There are some exceptionally good wells scattered around, but on the average I doubt if the wells will make one and a quarter per day on a long, over a long extended period.

Q Now, if all these wells were prorated in accordance with the Double L rules, if my rough calculations are right, that would be 1,280,000 a day on a 320-acre spacing. So, it would look like that the production could be limited to a 2,000 to 1, times the allowable, times the acreage, without causing Dalport any problem.

A Well, but that would be fine in the area, in an area where you have some oil. But what if you have an area just strictly of gas, then you would be reducing the maximum take to 1,200,000 - some odd thousand per day, when you wouldn't damage reservoirs taking 2 and a half million a day, out of a true reservoir.

So you would be penalizing a 100 per cent gas reservoir, if you did this, if you regulated it on a 2,000 to 1 basis. Now, this is what worries us.

Q Referring to that Exhibit 4 series of exhibits, are the reservoir characteristics, the thickness, the porosity, comparable between wells developed on 160 and wells developed on 320?

A Would you repeat that?

Q What I'm getting at is, are the wells that were developed on the 320 just better wells than the ones developed on 160; and that's the reason that you show the 320 is better than the 160?

A I don't really know, and I don't have the core information down in West Mesa. I'm not certain of the answer of that question. I used that example because it's the only one I could locate with four wells versus two wells.

Q On Exhibit Number 4-a, you have a well in Section 18, developed on 640 acres, and if you carried this analogy to the limit, that ought to be the best well in the area,

and it isn't.

A That is the well, looking at 4-d, and I would, on 4-d, it gives us actual production. I would say that it's probably a tight zone in close association with that well and the well just northeast of that, causing that. As you can well notice, you have tight streams running through these areas that do affect the production, and I would suggest that that is the reason for that.

But what you asked is if you had one well on 640, you should have more production. If the reservoir conditions were alike between the two sections, that's true. The reservoir conditions will change, as some of those cross sections showed.

Q Now, on your Exhibit Number 5-b, are the averages reversed on the oil saturation and water saturation?

A Which was that?

Q 5-b.

A Are the averages reversed on the oil and water saturations?

Q The totals.

A Your keen eye has detected a slight error. Yes, the oil saturation would be 7.3 versus 46.4.

Q Did you have any information in the Double L area to indicate to you that there is a good drainage over the 320-acre spacing?

A In Double L?

Q Yes.

A I think so, based on the core analyses in the Double L Field. Now, we have more analyses there than we have throughout this southeast gas area, and the average permeability, for instance, in the Double L, is 67.7 millidarcies and porosity is averaged at 20.3 per cent. I think that in that Gascap of the Double L you would have conditions very similar to what we found in the oil portion. Now, bear in mind, these gas analyses, these core analyses in the gas wells, are scattered; they are not in any one spot, and some are just a few feet of pay, and some have quite a bit more. And although that's all we have to work with, I'm hoping that the permeability and porosity would be slightly higher in the area, with more control I think they will be.

They are higher in the Double L oil field, is what I am getting at.

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

RECROSS EXAMINATION

BY MR. UTZ:

Q Mr. Lampert, all the wells in this area are high nitrogen content?

A Yes, sir, from 65. We have had some up to 86 per cent nitrogen.

Q Is that a range or an average?

A I didn't take just an average on that exhibit 5-a. I didn't average all that out but that's an average, from 62, well, there is one at 60 and there is one at 58.

The range was from 60 per cent to 86 per cent, but if I were going to hazard a guess at an average, I'd say 66 per cent over the entire area. In the Double L it stays at 64 to 65 per cent, it stays right in that vicinity.

Q Now, do you have any opinion, or knowledge, of who will take the gas in this area?

A Not really, sir. There are several pipelines that are interested in this gas, and we've had people interested for two years, and no one has ever done anything. But they are becoming more and more interested in these days and we think, if we can iron out these problems, that we will have a pipeline there within the foreseeable future.

Q You would have to build a nitrogen extraction plant?

A Not necessarily. Originally, years ago, at one of the hearings someone stood up and said they were ready to build one, and some others are still talking about it. But it seems that they are uneconomical. But what we are talking about is just mixing the gas.

Now, I'm not saying that there won't be a nitrogen plant, I don't know of one that would be definiely planned, but it's possible that there would be a nitrogen

plant somewhere.

Q Have you made compilations as to how much gas would be available from this area?

A At one time I did, Mr. Utz, and it was somewhere in the vicinity of 80,000,000 to 1,000,000 feet.

Q Total?

A Gross, in the area. It's not in any of my exhibits and it's somewhere in that running.

Q Do you know how much a day they can get?

A Pardon?

Q Do you know how much a day would be available, on a daily basis?

A We're anticipating something like 40,000,000 or 50,000,000 feet a day, when they are all on stream, and this is an estimate.

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

CROSS EXAMINATION

BY MR. STAMETS:

Q At one and a quarter million a day, would you have any problem with your economics?

A I'm not sure, Dick, I haven't run it out on a per day figure. I've totaled them out, I'm not sure, but like I say, the problem would be, in a poor gas area, you would have no reason to limit your daily take in an

associated area, that limitation would be fine, but in a poor gas area, I don't know why it would be necessary.

But to answer your question, I have not run it out on a per day basis.

MR. STAMETS: That's all I have.

MR. LeMAY: May I ask a question?

MR. UTZ: Yes, go ahead.

CROSS EXAMINATION

BY MR. LeMAY:

Q One thing bothers me, and this doesn't pertain to your case entirely, but the fact that if they could allocate, well, say 320 acres in a very limited gas field, like the Sulimar, which is not to date treated as an associated pool, this withdrawal of rates to be such as to damage the reservoir, isn't that true, where you have limited gas wells?

A Not necessarily, Bill, because you do have such a small gas field. There is one well, to my knowledge, that is today a poor gas well.

You are referring to Exhibit 1, the southeast part of the Section 23. I'm sure there are some other wells that have some higher ratios, but if you had one well on 320 acres and if you could designate the 320 acres correctly, it wouldn't damage the reservoir, I don't believe.

Q Well, in your proposed rules, I haven't read them, but

there doesn't seem to be any automatic classification for an associated pool. So, anything outside of a Double L, you would have to go to the Commission?

A That's correct, this is what happened last time. We wanted to classify it, and it was so done.

Q On a pool-by-pool basis?

A Right.

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

(No response.)

MR. UTZ: Are there any statements in the case?

MR. CHRISTY: At this time we'd like to, before the statements are offered, we'd like to offer Exhibits 1 through 5, with their integral components.

MR. UTZ: Those exhibits will be entered into this case.

MR. CHRISTY: At the conclusion, we are about to conclude, I would like to make a statement.

MR. UTZ: Statements are in order.

MR. CHRISTY: I'd simply like to mention to the Commission, we recognize that the southeast area application, it is unique, we recognize that we do not have as much information as perhaps you would like and perhaps we would like. We would suggest to the Commission that if it saw fit to grant the application, that it might well see fit to make the rules

temporary, for a year or two, and let's see what develops. And then we could come back to you with more definitive information as these wells are drilled. We have the possibility of oil in the area, we think they are dry, but we don't know until we drill them out. We'd like to drill on 320, instead of drilling on 160 and it turning out that 320 was correct. From a waste and correlative rights, we suggest the Commission that if it consider this application at all, that it might consider the temporary rules with 320. That's all we have in this application.

MR. UTZ: In Case 4850 we have a letter from Amoco which states that they have no objection to 320-acre spacing of the pool.

Well, also, in Case 4843, from Amoco, we have a statement which opposes this designation.

I think that it might be well for me to read the last paragraph, I don't quite understand it myself. We have the letter here, so we won't need to take it down.

(Whereupon, a statement was read into the record.)

MR. UTZ: Now, you read that, because I don't think they understand the application.

We will take a ten-minute coffee break.

(Whereupon, the hearing was held in recess for ten minutes.)

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, JOHN DE LA ROSA, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

John De La Rosa
COURT REPORTER

I N D E X

WITNESS	PAGE
LEO LAMPERT	
Direct Examination by Mr. Christy	4
Cross Examination by Mr. Utz	26
Cross Examination by Mr. Stamets	29
Recross Examination by Mr. Utz	34
Recross Examination by Mr. Stamets	36
Cross Examination by Mr. LeMay	37

E X H I B I T S

	ADMITTED	OFFERED
Exhibits # 1 - # 5	38	38

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

September 13, 1972

Mr. Sim Christy
Jennings, Christy & Copple
Attorneys at Law
Post Office Box 1180
Roswell, New Mexico 88201

Re: Case No. 4850 4843
Order No. R-4434 & R-4435
Applicant:
Dalport Oil Corporation

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other Mr. Jason Kellahin

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4850
Order No. R-4434

APPLICATION OF DALPORT OIL
CORPORATION FOR AMENDMENT
OF THE DOUBLE L-QUEEN POOL
RULES, CHAVES COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 1, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 13th day of November, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Dalport Oil Corporation, is the operator of certain wells in the Double L-Queen Associated Pool, Chaves County, New Mexico.

(3) That by Order No. R-3981-A, the Commission promulgated Special Rules and Regulations for the Double L-Queen Associated Pool, including a provision for the classification of wells as oil wells or gas wells, providing for the dedication of 40 acres to oil wells and 160 acres to gas wells, and limiting the production from gas wells to that amount obtained by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40.

(4) That the applicant seeks the amendment of said special rules and regulations to provide for 40-acre spacing for oil wells and 320-acre spacing for gas wells.

(5) That the permeability and drainage characteristics of the Queen formation in the general area of the Double L-Queen Associated Pool indicate that one well will efficiently and economically drain the gas reserves underlying 320 acres.

(6) That the production from gas wells should continue to be limited, to avoid the possibility of reservoir damage and waste in the oil portion of the Double L-Queen Associated Pool.

(7) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the special rules and regulations for the Double L-Queen Associated Pool should be amended to provide for the dedication of 40 acres to oil wells and 320 acres to gas wells.

IT IS THEREFORE ORDERED:

(1) That Rules 2 and 3 of the Special Rules and Regulations for the Double L-Queen Associated Pool, as promulgated by Order No. R-3981-A, as amended, be and the same are hereby amended to read in their entirety as follows:

"RULE 2. (a) Each gas well shall be located on a tract comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision (half-section) of the U. S. Public Lands Survey. For purposes of these rules, a unit consisting of between 316 and 324 surface contiguous acres shall be considered a standard unit.

(b) Each oil well shall be located on a standard unit containing 40 acres, more or less, consisting of a governmental quarter-quarter section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 (a) without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a governmental half section and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the half section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application."

(2) That Rule 7 of the Special Rules and Regulations for the Double L-Queen Associated Pool, as promulgated by Order No. R-3981-A, as amended, be and the same is hereby amended to read in its entirety as follows:

"RULE 7. An oil well which has 40 acres dedicated to it shall be permitted to produce only that amount of gas determined by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool. In the event there is more than one oil well on a 40-acre oil proration unit, the operator may produce the allowable assigned to the 40-acre unit from the wells on the unit in any proportion.

A gas well shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is more than one gas well on a 320-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion."

IT IS FURTHER ORDERED:

(1) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing gas wells in the Double L-Queen Associated Pool shall have dedicated thereto 320 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each gas well presently drilling to or completed in the Double L-Queen Associated Pool shall receive no more than one-half of a standard allowable for the pool.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

dr/

LAW OFFICES OF
JENNINGS, CHRISTY & COPPLE
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180
ROSWELL, NEW MEXICO 88201

JAMES T. JENNINGS
SIM B. CHRISTY IV
ROGER L. COPPLE
BRIAN W. COPPLE

TELEPHONE 622-8432
AREA CODE 505

October 5, 1972

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. George Hatch, Legal Department

Case 4850

Gentlemen:

Pursuant to our telephone conversation of this date, we enclose herewith:

1. Motion for Dismissal of Application by Dalport Oil Corporation filed September 27, 1972.

2. New Application of Dalport Oil Corporation for amendmentto special rules and regulations for the Double L-Queen Associated Pool, Chaves County, New Mexico.

We understand that the new Application will come on for an examiner hearing November 1, 1972.

To the extent possible we would like to combine Dalport's Application for Southeast Chaves Queen Gas Area hearing with the new enclosed Application, but recognize that this may not be feasible in view of the publication that has already been made on the Southeast Chaves Queen Area Application. Therefore, I will call you the end of next week and discuss the possibility further.

Respectfully,

JENNINGS, CHRISTY & COPPLE

By S. B. Christy IV

SBC:jy
Encls.
cc w/cc Motion and new Application:
Dalport Oil Corporation (Dallas)
Dalport OIL Corporation (Corpus Christi)

Amoco Production Company
500 Jefferson Building
P.O. Box 3092
Houston, Texas 77001

D. L. Ray
Division Engineer

October 27, 1972

File: AWR-986.51NM-4323

Re: Case No. 4850
Double L-Queen Associated Pool
Chaves County, New Mexico

Mr. A. L. Porter, Jr.,
Secretary-Director
Oil Conservation Commission
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Porter:

Dalport Oil Corporation has scheduled a hearing for the Examiner Docket on November 1, 1972, as Case No. 4850 for amendment of Rule 2 (a) and Rule 7 of the special rules governing the Double-L Associated Pool. It is our understanding that Dalport will request that the standard gas well proration unit be increased from 160 acres to 320 acres and that gas well gas allowables be increased accordingly.

Amoco Production Company, as an operator in this pool, has no objection to this proposal providing that a liberal policy will be applied permitting non-standard gas proration units of less than 320 acres in recognition of existing wells and lease ownership.

Very truly yours,

D. L. Ray

DRC:as

EXHIBIT 4

UNION (OPER.) "SO. CAPROCK QUEEN" UNIT

N.E. SQUARE LAKE UNIT

MESA QUEEN GAS

Chaves

Eddy

Lea

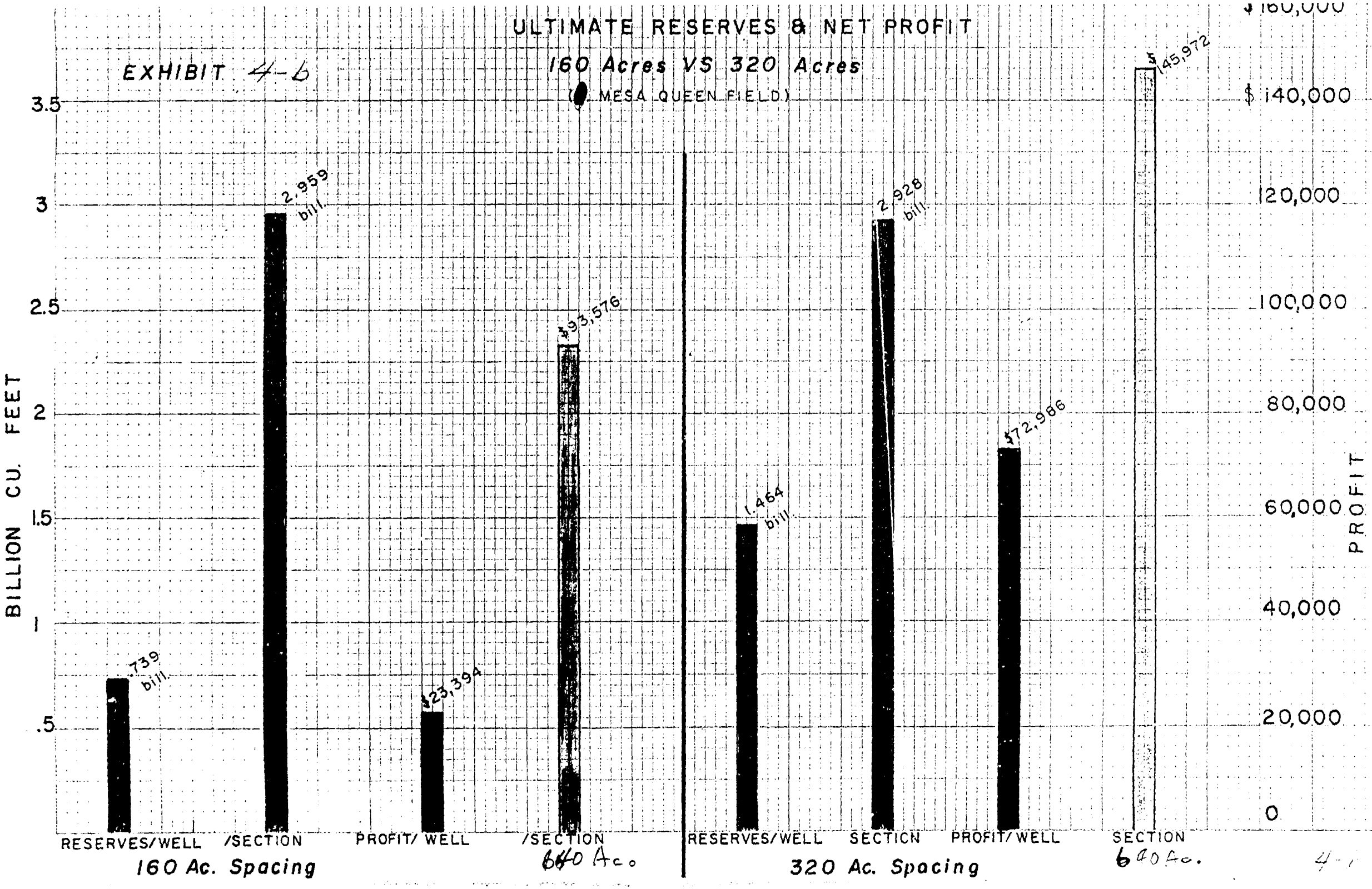
P32

EXHIBIT 4-6

ULTIMATE RESERVES & NET PROFIT

160 Acres VS 320 Acres

(MESA QUEEN FIELD)



4-1

Exhibit

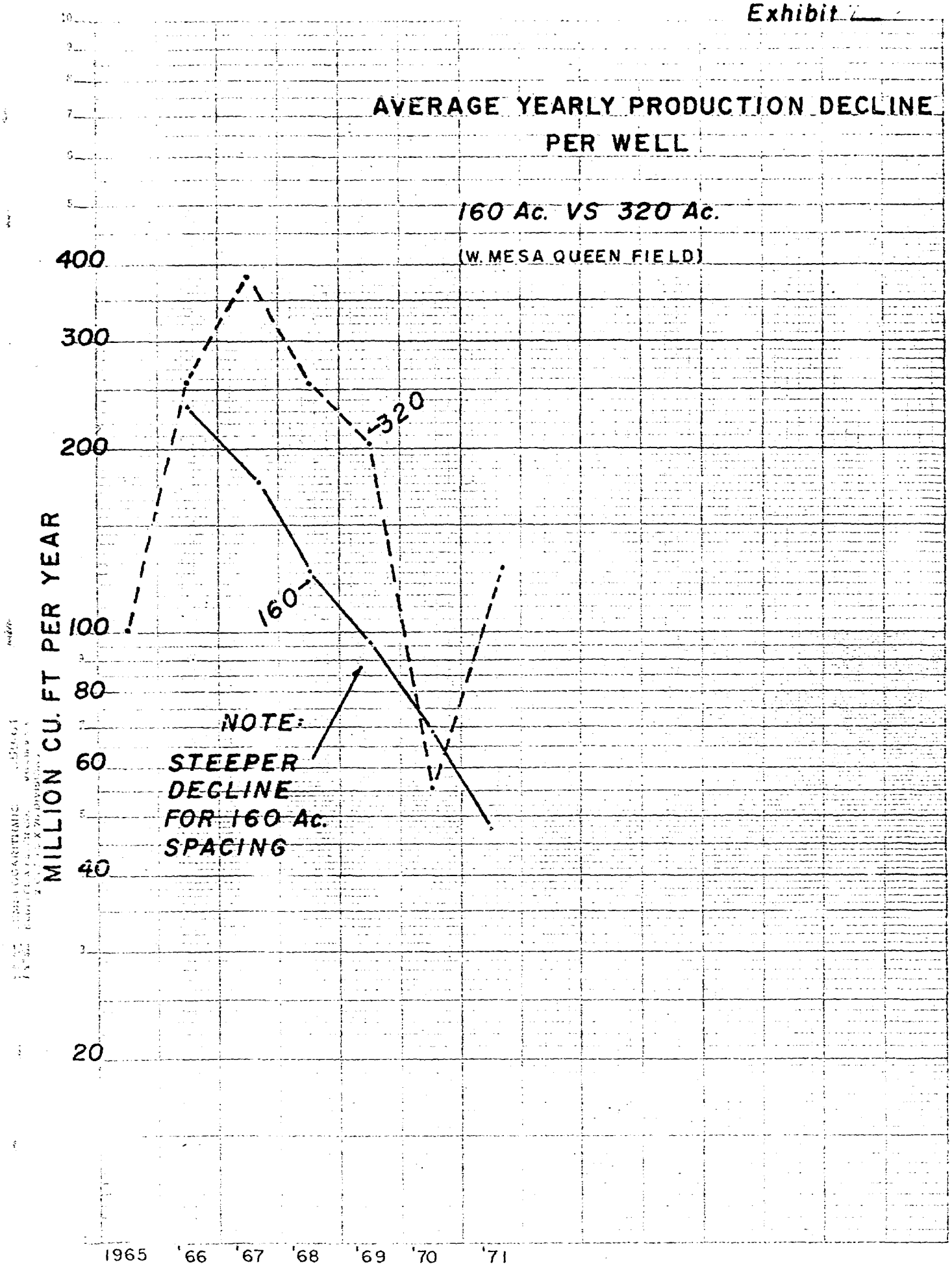

AVERAGE YEARLY PRODUCTION DECLINE
PER WELL
160 Ac. VS 320 Ac.
(W. MESA QUEEN FIELD)
MILLION CU. FT PER YEAR
400
300
200
100
80
60
40
20
320
160
NOTE:
STEEPER
DECLINE
FOR 160 Ac.
SPACING
1965
'66
'67
'68
'69
'70
'71

EXHIBIT 4-J

WEST MESA QUEEN GAS PRODUCTION - MCF

		1964	1965	1966	1967	1968	1969	1970	1971	1972 to Aug.	Cumulative 8-1-72	Ultimate Reserves	Reserves Per Section
Sec. 7-16S-32E													
Remuda #1-7 Mobil	E		101,530	209,964	422,131	296,722	199,874	78,194	205,767	49,116	1,563,298	1,696,182	
Remuda #1-7 Pan Am	K			307,226	330,507	214,605	205,295	33,018	49,757	27,992	1,168,400	1,232,408	2,928,590
Sec. 17-16S-32E													
Blue Danube #1 Tide	D		50,091	127,393	119,061	62,964	P-A						
Sec. 18-16S-32E											359,509		
Remuda #1 Sinclair	H		49,267	78,655	59,791	60,574	32,826	21,719	9,233	4,886	316,951	320,000	
Sec. 12-16S-31E													
Remuda #1 Bogle	J												
Read #1-A Bogle	N	44,958	241,846	226,551	259,066	143,305	71,982	16,796	35,210	15,876	1,055,590	1,081,714	
Read #4-A Bogle	F			129,318	399,771	283,513	114,605	62,708	36,491	4,629	1,031,035	1,036,406	
				168,003	376,246	376,156	300,649	199,985	132,869	16,427	1,570,335	1,593,908	
Sec. 13-16S-31E													
Read #1 Bogle	L			97,928	78,217	56,062	62,986	36,068	21,685	9,298	362,244	366,946	
Read #2 Bogle	E			395,866	183,573	78,158	57,657	32,663	22,546	7,705	778,168	780,463	
Remuda #1 Pan Am	A			217,804	313,460	123,980	77,002	81,434	74,940	33,849	922,469	996,620	
Remuda #1 So. Union	J				128,514	242,473	187,579	123,324	71,356	19,230	772,476	815,426	2,959,455
Sec. 14-16S-31E													
Remuda #3 Bogle	G			18,090	224						18,314		

EXHIBIT 4-E

DETERMINATION - PRESENT VALUE OF FUTURE INCOME

320 Acre Spacing (Based on West Mesa Production)

Production MCF	Income	Expense	Net Income*	Discount Factor	Present Value Net Income	Invest-ment	Cumulative Present Net Worth
310,000	$27,621	$1,350	$26,271	.96674	$25,396	$30,000	$ (4,604)
340,000	30,294	1,350	28,944	.90349	26,151		21,547
250,000	22,275	1,350	20,925	.84439	17,669		39,216
200,000	17,820	1,350	16,470	.78914	12,997		52,213
125,000	13,000	1,350	11,650	.73752	8,592		60,805
100,000	10,400	1,350	9,050	.68927	6,238		67,043
70,000	7,280	1,500	5,780	.64418	3,723		70,766
40,000	4,160	1,500	2,660	.60203	1,601		72,367
25,000	2,600	1,500	1,100	.56265	619		72,986
1,460,000	$135,450		$122,850		$102,986		

Present Net Worth $72,986

* 1-4 years, gross 12¢/MCF; net 8.91¢ to 79% WI
5-9 years, gross 14¢/MCF; net 10.4¢ to 79% WI

NOTE: For 2 wells on one section present net worth $145,972

$\frac{\text{Net Profit}}{\text{Investment}}$ Ratio = 5 to 1

EXHIBIT 4-f

DETERMINATION - PRESENT VALUE OF FUTURE INCOME

160 Acre Spacing (Based on West Mesa Production)

Production MCF	Income	Expense	Net Income*	Discount Factor	Present Value Net Income	Invest-ment	Cumulative Present Net Worth
350,000	$31,185	$1,350	$29,835	.96674	$28,842	$30,000	$ (1,158)
180,000	16,038	1,350	14,688	.90349	13,270		12,112
98,000	8,732	1,350	7,382	.84439	6,233		18,345
57,000	5,079	1,350	3,729	.78914	2,943		21,288
32,000	3,328	1,350	1,978	.73752	1,459		22,747
22,000	2,288	1,350	938	.68927	647		23,394
739,000	$66,646		$58,550		$53,394		

Present Net Worth $23,394

* 1-4 years, gross 12¢/MCF; net 8.91¢ to 79% W.I.
  5-6 years, gross 14¢/MCF; net 10.4¢ to 79% W.I.

NOTE: For 4 wells on one section
Present Net Worth $93,576

$\frac{\text{Net Profit}}{\text{Investment}}$ Ratio = .779 to 1

EXHIBIT 5-L

GAS ANALYSES
SOUTHEAST CHAVES GAS AREA
CHAVES COUNTY, NEW MEXICO

Lease and Well Number	Location Sec., Twp., Range	Date of Test	Mol. % Nitrogen	BTU Wet Basis	GPM
Double L Field - Gas Cap					
Dalport #1 Hill	26-14-29	3-3-71	63.84	478	2.38
Dalport #8 Spurck	36-14-29	6-1-71	63.93	469	1.093
McClellan #1 Patrick	12-15-29	9-5-68	62.93	491	1.186
Lucky Lake, South Lucky Lake Area					
Dalport #1 Jones	22-15-29	3-30-72	61.55	518	1.408
McClellan #1 Mark	4-15-29	1970	60.54	508	1.142
Shell #1 Federal	15-15-29	9-5-63	66.31	489	1.146
Vest Ranch Area					
Continental #1 Means	28-14-30	3-31-70	67.71	468	1.44
Texas Crude #1 State	16-14-30	6-10-55	64.0	460	
West Caprock Area					
Reading-Bates #1 R & J	20-12-31	12-30-70	58.78	530	1.14
		10-12-72	66.96	449	1.2
Stringer #1 Terra	17-12-31	12-30-70	60.49	505	1.04
		9-21-70	72.35	365	.742
Yates #1 Holder	4-13-31	9-68	62.0	495	
		1965	71.6	407	
Yates #1-AA Federal	4-13-31	9-19-72	86.36	179	.424

CORE ANALYSES

EXHIBIT 5-b

SOUTHEAST CHAVES GAS AREA

Well	Location	Pay	Permeability md	Porosity %	Oil Saturation %	SW Saturation %
Double L Field						
Cactus #1 Amoco	G-23-14-29	9	125	17.0	8.1	48.5
Dalport #1 State	M-36-14-29	2	38.5	24	2.9	46.0
Dalport #8 Spurck	P-36-14-29	7	114.0	23.5	15.3	51.0
Grace #1 State	A-1-15-29	8	108.0	22.7	12.4	48.3
Grace #2 State	B-1-15-29	7	84.0	22.4	5.53	47.9
Vest Ranch Area						
McGrath #1 Chorney	0-15-13-30	9	37.5	18.0	3.9	40.4
Texas Crude #1 State	M-16-14-30	4	17.5	21.4	9.0	50.4
West Caprock Area						
Coquina #1 SM	C-13-13-30	5	48.6	17.7	4.2	38.2
Reading & Bates #1 R & J	A-20-12-31	5	75.8	18.8	4.0	46.6
Yates #1 Holder	0-4-13-31	4	17.9	17.8	7.3	46.7
AVERAGE		6	66.7 md	20.3%	46.4%	7.3%

5-b

EXHIBIT 5-C

DOUBLE L - WEST CAPROCK AREA

Average Core Data

Thickness	6.0'	Porosity	20.3%
Permeability	67 md	Salt water	46.4%
		Oil Saturation	7.3%

Reservoir Data:

Bottom hole pressure 900#

Temperature 80^{o} Abandonment Pressure 75#

Reserves

Recovery per acre foot 575 MCF

160 Acres:

160 X 7 X 575 = 644.000 MCF

320 Acres:

320 X 7 X 575 = 1,288,000 MCF

Economic Forecast

160 Acre Spacing

Gross production 644,000 MCF
Net Income at net 7¢/MCF $ 45,080

Well Cost 30,000

Net Profit $ 15,080

320 Acre Spacing

Gross production 1,288,000 MCF
Net Income at net 7¢/MCF $90,160

Well Cost 30,000

Net Profit $60,166

November 1, 1972

LIST OF EXHIBITS
SOUTHEAST CHAVES GAS AREA
Chaves County, New Mexico

1. Area Land Map showing Gas Areas
2. E-W Cross-section A-A', B-B', West Caprock Area
3. E-W Cross-section C-C', D-D', Double L - Vest Ranch Area
4. a. W. Mesa Gas Field - Location Map
   b. W. Mesa Field - Graph, Reserves, Profit of 160 Ac vs. 320 Ac Spacing
   c. W. Mesa Field - Graph, Average Yearly Production Decline Per Well, 160 Ac vs. 320 Ac Spacing
   d. W. Mesa Field, Gas Production, Ultimate Reserves
   e. 320 Acre Spacing, Economic Analysis
   f. 160 Acre Spacing, Economic Analysis
5. a. Southeast Chaves Gas Area - Gas Analyses
   b. Southeast Chaves Gas Area - Average Core Data
   c. Southeast Chaves Gas Area - Reserves - Economic Forecast

4843

DALPORT OIL CORPORATION
1134 THE 600 BUILDING
CORPUS CHRISTI, TEXAS 78401

CODE 512-882-7863

November 1, 1972

PROPOSED 320 ACRE/WELL SPACING
Southeast Chaves Gas Area
Chaves County, New Mexico

There are six parallel Queen gas reservoirs in the Southeast Chaves Area, each being separated from the other by tight red or gray sand. Due to high nitrogen content of the gas (62% - 70%), gas companies have not been interested in these gas reserves, and if gas-gathering facilities would ever be constructed, this gas would be sold for approximately 12¢ per MCF, well below current prices.

Queen gas has been produced in the West Mesa Field, Lea and Eddy Counties, since 1964. In this field four gas wells were drilled on 160 acre spacing in Sec. 13, 16S-31E. Ultimate reserves from these wells will be 2,959,455 MCF, yielding 739,000 MCF and $23,394 profit per well. This compares to Sec. 7, 16S-32E, where two wells that are drilled on 320 acre spacing will produce 2,928,590 MCF, or 1,464,000 MCF and $72,986 profit per well. Therefore, profit per section on 160 acre and 320 acre spacing is $93,576 and $145,972, respectively.

Core data in the West Caprock gas area show average permeability of 66 md and porosity of 20.3%. In the Double L Field permeability is 121 md and porosity is 21.8%. With high permeabilities exhibited in this area a well would adequately drain 320 acres and no economic waste would occur. If operators are forced to drill on 160 acre spacing, fewer wells will be drilled due to the resulting smaller profit.

We respectfully request adoption of 320 acre spacing in the high nitrogen gas area of southeast Chaves County, New Mexico.

DALPORT OIL CORPORATION

Leon M. Lampert

That effective _____ 1, 197___, a new area in Chaves County, New Mexico, classified for the production of gas from the Queen formation is hereby created and designated as the Southeast Chaves Queen Gas Area, with vertical limits comprising the Queen formation and horizontal limits comprising the following described area:

> All of Townships 14 and 15 South, Range 29 East; All of Townships 12, 13, 14 and 15 South, Range 30 East; All of Townships 12, 13 and 14 South, Range 31 East; N.M.P.M.

the Queen formation being defined as that zone productive in the Dalport Oil Corporation No. 11 Spurck State, 2310' from south and west lines of Section 25, Township 14 South, Range 29 East, N.M.P.M., between the vertical limits 1908'-1922'.

That effective _____ 1, 197___, special rules and regulations for the Southeast Chaves Queen Gas Area are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
SOUTHEAST CHAVES QUEEN GAS AREA

Rule 1. Each gas well completed or recompleted in the Southeast Chaves Queen Gas Area which is not within the limits of a designated Queen gas pool or Queen associated oil and gas pool, shall be spaced, drilled, operated and produced in accordance with the special rules and regulations hereinafter set forth.

Rule 2. Each gas well completed or recompleted in the Southeast Chaves Queen Gas Area shall be located on a standard unit containing 320 acres, more or less, comprising the N½, S½, W½, or E½

of a governmental section of the United States Public Land Surveys.

Rule 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a nonstandard unit and an unorthodox size or shape of unit is necessitated by the variation in the legal subdivisions of the United States Public Land Surveys or the following facts exist and the following provisions are complied with:

(a) The nonstandard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The nonstandard unit lies wholly within a governmental half section and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the half section in which the nonstandard unit is situated and which acreage is not included in said nonstandard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such nonstandard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such nonstandard unit within 30 days after the Secretary-Director has received the application.

Rule 4. Each gas well shall be located not closer than 660 feet to the nearest side boundary line of the designated tract nor closer than 1980 feet to the nearest end boundary line nor closer

than 330 feet to any quarter-quarter section or subdivision inner boundary. (For the purpose of this rule, "side" boundary is defined as one of the outer boundaries running lengthwise to the tract's greatest overall dimension; "end" boundary is defined as one of the outer boundaries perpendicular to a side boundary and closing the tract across its least overall dimension.)

Rule 5. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox well location which relates to any well drilled (whether presently producing, shut-in or a dry hole) prior to the effective date of these rules when the requirements of Rule 3(c) or the first sentence of Rule 3(d) have been complied with by the applicant.

Rule 6. A well shall be classified as a gas well if it has a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons.

Rule 7. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon completion of the well and in any event such test shall be commenced not later than 30 days from the date of first production of the well; provided, however, any well which is shut-in shall be exempt from the gas-liquid ratio test requirement so long as it remains shut-in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 8. If the gas-liquid ratio is 30,000 cubic feet of gas per barrel of liquid hydrocarbons, or more, the operator shall not produce the well until beneficial use can be made of the gas.

Rule 8. Gas-liquid ratio tests shall be taken on all wells during the months of March and September of each year. The initial gas-liquid ratio test shall suffice for the first semi-annual test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the appropriate district office of the Commission a test schedule for its wells specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators. Commission district supervisors may grant exceptions to the above test requirements where it is demonstrated that wells produce no liquids.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

Rule 9. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

Rule 10. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

Rule 11. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same order as they are listed on the appropriate proration schedule.

Rule 12. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

Rule 13. Wells whose classification have changed from oil to gas or gas to oil, and allowables therefor as to the latter, which result from a gas-liquid ratio test, shall commence on the 1st day of the month following the month in which such test was reported provided that a plat (Form C-102) showing the acreage dedicated to the well and the location of all wells on the dedicated acreage has been filed.

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF DALPORT OIL CORPORATION FOR AMENDMENT TO SPECIAL RULES AND REGULATIONS FOR THE DOUBLE L-QUEEN ASSOCIATED POOL, CHAVES COUNTY, NEW MEXICO.

CASE NO. 4850

APPLICATION

COMES NOW Dalport Oil Corporation and applies for amendment to the special rules and regulations for the Double L-Queen Associated Pool, promulgated in Case No. 4352, Order R-3981-A, entered August 3, 1971, and for grounds thereof, states:

1. Applicant is the operator of one or more wells in the Double L-Queen Associated Pool, Chaves County, New Mexico, and is the owner of one or more leases affected by this Application.

2. That in the opinion of Applicant waste will be prevented and correlative rights more appropriately protected by amendment to the special rules and regulations for the Double L-Queen Associated Pool by the amendment of Rule 2(a) to provide:

> "Rule 2(a). Each gas well shall be located on a standard unit containing 320 acres, more or less, consisting of the N½, S½, W½ or E½ of a governmental section of the United States Public Land Surveys."

and, by the amendment of the second paragraph of Rule 7 to provide:

> "A gas well shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is

more than one gas well on a 320-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion."

WHEREFORE, Applicant prays that, after notice and hearing, the Commission amend the special rules and regulations for the Double L-Queen Associated Pool, Chaves County, New Mexico, pursuant to this Application.

Respectfully,

DALPORT OIL CORPORATION

By _____
S. B. Christy IV, as a
Member of the Firm of
Jennings, Christy & Copple,
P. O. Box 1180
Roswell, New Mexico 88201

Attorneys for the Applicant

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JAMES T. JENNINGS
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ROGER L. COPPLE
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TELEPHONE 622-6432
AREA CODE 505

October 5, 1972

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 4850

Attention: Mr. George Hatch, Legal Department

Gentlemen:

Pursuant to our telephone conversation of this date, we enclose herewith:

1. Motion for Dismissal of Application by Dalport Oil Corporation filed September 27, 1972.

2. New Application of Dalport Oil Corporation for amendmentto special rules and regulations for the Double L-Queen Associated Pool, Chaves County, New Mexico.

We understand that the new Application will come on for an examiner hearing November 1, 1972.

To the extent possible we would like to combine Dalport's Application for Southeast Chaves Queen Gas Area hearing with the new enclosed Application, but recognize that this may not be feasible in view of the publication that has already been made on the Southeast Chaves Queen Area Application. Therefore, I will call you the end of next week and discuss the possibility further.

Respectfully,

JENNINGS, CHRISTY & COPPLE

By S. B. Christy IV

SBC:jy
Encls.
cc w/cc Motion and new Application:
Dalport Oil Corporation (Dallas)
Dalport OIL Corporation (Corpus Christi)

DRAFT

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4850

Order No. R-4434

application of Dalport Oil Corporation for amendment of the Double L Queen Pool Rules, Chaves County, New Mexico

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 1, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of November, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Dalport Oil Corporation, is the operator of certain wells in the Double L-Queen Associated Pool, Chaves County, New Mexico.

(3) That by Order No. R-3981-A, the Commission promulgated Special Rules and Regulations for the Double L-Queen Associated Pool, including a provision for the classification of wells as oil wells or gas wells, ~~and~~ providing for the dedication of 40 acres to oil wells and 160 acres to gas wells, and limiting the production from gas wells to that amount obtained by ~~of gas obtained by~~ multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. ~~In the event there is more than one gas well on a 160-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion.~~

Double L-Queen Associated Pool

(1) That pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing gas wells in the ~~West Lindrith Gallup-Dakota Oil Pool~~ shall have dedicated thereto 320 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Double L-Queen Associated Pool

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each gas well presently drilling to or completed in the ~~West Lindrith Gallup-Dakota Oil Pool~~ shall receive no more than one-~~fourth~~ half of a standard allowable for the pool.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

Done at etc

(4) That the applicant seeks the amendment of said special rules and regulations to provide for 40-acre spacing for oil wells and 320-acre spacing for gas wells.

(5) That the permeability and drainage characteristics of the Queen formation in ~~this~~ the general area of the Double L-Queen Associated Pool indicate that one ~~gas~~ well will efficiently and economically drain the gas reserves underlying 320 acres.

(6) That the production ~~of~~ from gas ~~wells~~ wells should continue to be limited, to avoid the possibility of reservoir damage and waste in the oil portion of the Double L-Queen Associated Pool

(7) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the ~~Special~~ special rules and regulations for the Double L-Queen Associated Pool should be amended to provide for the dedication of 40 acres to oil wells and 320 acres to gas wells.

IT IS THEREFORE ORDERED:

(1) That Rules 2 and 3 of the Special Rules and Regulations for the Double L-Queen Associated Pool, as promulgated by Order No R-3981-A, as amended, be and the same are hereby amended to read in their entirety as follows:

"RULE 2. (a) Each gas well ~~completed or to be completed in the Double L-Queen Associated Pool~~ shall be located on a tract comprising any two contiguous quarter sections of a single governmental section, being a legal subdivision (half-section) of the U.S. Public Lands Survey. For purposes of these rules, a unit containing between 316 and 324 surface contiguous acres shall be considered a standard unit.

(b) Each oil well shall be located on a standard unit containing 40 acres, more or less, consisting of a governmental quarter-quarter section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 (a) without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a governmental ~~quarter~~ half section and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the ~~quarter~~ half section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application. ''

(2) That Rule 7 of the Special Rules and Regulations for the Danlee L-Queen Associated Pool, as promulgated by Order No. R-3981-A, as amended, be and the same is hereby amended to read in its entirety as follows:

"RULE 7. An oil well which has 40 acres dedicated to it shall be permitted to produce only that amount of gas determined by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool. In the event there is more than one oil well on a 40-acre oil proration unit, the operator may produce the allowable assigned to the 40-acre unit from the wells on the unit in any proportion.

A gas well shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is more than one gas well on a 320-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion."

IT IS FURTHER ORDERED:

Case 4850
Hearing 11-1-72
Rec. 11-1-72.
Grant Dalport a revision in
order R-3981-A, Rule 2(a)
to read 320 Ac. rather than
160 Ac.