STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	CASE NO. 11,263 11,265 (Consolidated)
APPLICATIONS OF YATES PETROLEUM CORPORATION AND NEARBURG EXPLORATION COMPANY	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

July 27th, 1995

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, July 27th, 1995, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

July 27th, 1995
Examiner Hearing
CASE NOS. 11,263, 11,265 (Consolidated)

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A P P E A R A N C E S

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* * *

WHEREUPON, the following proceedings were had at 3:05 p.m.:

EXAMINER CATANACH: Call the hearing back to order, and at this time we'll call Case 11,263.

MR. RAND CARROLL: Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

MR. ERNEST CARROLL: Mr. Examiner, I'm Ernest Carroll of the Artesia law firm of Losee, Carson, Haas and Carroll, and I'm here today on behalf of Yates Petroleum, and I have three witnesses.

EXAMINER CATANACH: Additional appearances?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing in opposition to Yates Petroleum on behalf of Nearburg Exploration Company.

I have also three witnesses to be sworn.

We would ask that you consolidate Case 11,265 with the case that you just called.

EXAMINER CATANACH: At this time we'll call Case 11,265.

MR. RAND CARROLL: Application of Nearburg Exploration Company for compulsory pooling, Eddy County,

New Mexico.

EXAMINER CATANACH: Are there any additional appearances in either of these cases?

MR. ERNEST CARROLL: The only thing that should be noted is that Yates appears in opposition and would utilize the same three witnesses.

EXAMINER CATANACH: Okay, will the four witnesses please stand to be sworn in?

MR. RAND CARROLL: Six.

MR. ERNEST CARROLL: Six

MR. KELLAHIN: Didn't work.

(Thereupon, the witnesses were sworn.)

MR. ERNEST CARROLL: Call Kathy Porter first.

Are you ready, Mr. Examiner?

EXAMINER CATANACH: Yes, sir.

KATHY H. PORTER,

the witness herein, after having been first duly sworn upon her oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ERNEST CARROLL:

Q. Would you please state your name and where you reside?

A. My name is Kathy Porter. I live in Artesia, New Mexico. I'm employed by Yates Petroleum as a landman.

Q. And have you had occasion to previously testify

before the New Mexico Oil Conservation Division and have your credentials as a petroleum landman accepted?

A. Yes, I have.

MR. ERNEST CARROLL: Mr. Examiner, we would tender Ms. Porter as an expert in the field of petroleum land management.

EXAMINER CATANACH: Ms. Porter is so qualified.

Q. (By Mr. Ernest Carroll) Ms. Porter, are you familiar with the Application of Yates Petroleum and also the competing Application of Nearburg Producing Company?

A. Yes, I am.

Q. Have you prepared certain exhibits for presentation today?

A. Yes, I have.

Q. If you would turn to Exhibit Number 1, would you please explain for -- identify the exhibit for the record and then, if you would go ahead and then explain it and its relevance to today's two cases.

A. Exhibit Number 1 is a lease plat showing Section 21 of 19 South, 25 East, and the offsetting sections.

The northeast quarter proration unit is outlined in red, with the red dot signifying the location of the Ross EG Federal Com Number 14.

The yellow reflects the north Dagger Draw-Upper Penn proration units operated by Yates Petroleum.

Orange reflects these same proration units operated by Nearburg.

Q. The well that is being proposed by Yates Petroleum is in the northwest of the northeast; is that correct? And is marked by the red dot?

A. That's correct.

Q. The well proposed by Nearburg is located where?

A. It is located in the 40 due east, which would be the northeast-northeast.

Q. All right. Now, there were some other wells that will be -- and let's go ahead and identify them on this plat.

Yates Petroleum operates a water disposal well by the name of the Osage. Where is it located?

A. That's correct, that is in the 40 due south of the proposed Ross 14 location. That would be the southwest-northeast.

Q. All right. Now, previous to this particular time, earlier in the year, another well was proposed and actually joined -- there was a joint operating agreement signed between the two companies, Nearburg and Yates, and that well was never drilled. Where is it in location to these other three wells that we've just now previously talked about?

A. That would be the location that's in the

southeast-northeast. You might can read it on the map where it says "Alto AOL Number 1".

Q. All right. And the location itself is the open circle?

A. Correct.

Q. Just to the left of the "1AOL" or --

A. Due east [*sic*], that's correct.

Q. Okay. Now, we will also hear testimony, considerable testimony today, Ms. Porter, concerning a water disposal well operated by Anadarko. Can you point out for the Examiner where that well would be?

A. That well is in Section 22. It would be the southwest-northwest, right up next to the section line. It's probably rather hard to see on this particular exhibit.

Q. That well is actually marked by -- It looks like a dryhole symbol almost, isn't it?

A. Right, where it says "1WD" beside it.

Q. Okay, and it's a very unorthodox location, snuggled up in the northwest corner of that southwest of the northwest?

A. Correct, right by the Section line of Section 21 and 22.

Q. We will also hear testimony about another well, which is the Ross Ranch Number 2. Is it -- Could you also

point out at this point in time for the Examiner where that location is?

A. I believe that the Ross Ranch Number 2 is in the southwest-northwest. Again, it's rather hard to see. This would be Section 22.

The next exhibit, it will be clearer where these locations are.

Q. But it shows -- Right under the wording "Anadarko Dagger Draw", there's a location, an open circle or some kind of a circle?

A. It's really a closed one with the number "2" by it.

Q. Right, okay. Now, the colors on -- The yellow colors are proration units that are operated by Yates Petroleum at this time; is that correct?

A. That's correct, they're proration units that have producing wells in the North Dagger Draw, drilling wells, completed wells or locations building.

Q. All right. This particular proration unit with which we are concerned with by the two competing Applications has no producing well on it at this time; is that correct?

A. No producing well, that's correct.

Q. Now, the orange that are outlined in green, these are Nearburg-operated North Dagger Draw proration units; is

that correct?

A. Correct.

Q. And so they each have a producing Dagger Draw, at least one producing Dagger Draw well on them?

A. Either producing or completing, yes.

Q. Completing, okay.

Anything else that you would like to point out on this particular exhibit, Ms. Porter?

A. Just that there are some differences -- When you look at this northeast quarter of 21 proration unit, there are some differences in the working interest owner percentages. They do change with depth.

Q. All right. Apparently some of these leases had -- there were some earlier depth limitations and problems with that; is that correct?

A. That's correct.

Q. Why don't we go ahead, then, since we brought that up, and let's discuss -- first of all, why don't you -- There are three depth limitations. Why don't we set out what those three zones are?

A. The three different depths are:

Surface to 7704. In that depth, Yates has approximately 53 percent, Nearburg has 43 percent.

Seventy-seven --

EXAMINER CATANACH: Slow down a little.

THE WITNESS: Okay.

EXAMINER CATANACH: Let me write these down.

Fifty-three percent for Yates?

THE WITNESS: Yes.

EXAMINER CATANACH: And Nearburg?

THE WITNESS: Forty-three percent.

Q. (By Mr. Ernest Carroll) There's also one other interest owner in this?

A. There is the interest owner of Conoco, who has the remainder, three percent, 3.125 percent.

Q. Okay, what is the intermediate zone, then?

A. The intermediate zone, then, is 7704 to 7800.

Q. The interests, do they change from the shallow zone?

A. Yes, that's where Yates has approximately 50 percent, Nearburg has 46, and again Conoco has the balance, 3.125 percent.

The final depth, then, would be below 7800 feet.

Q. What are the interests -- Are they different from the other two?

A. Again -- On some of the parties they are. In that particular one, Nearburg stays the same with their 46 percent, Yates is back up to 47 percent, Conoco has 6.

Q. Now, the projected depth of this particular well would actually be right on -- in that -- possibly the

intermediate and the deep zone; is that not true?

A. The TD is actually in the below-7800 feet. I understand that the productive formation might be up in the intermediate zone.

Q. All right. With respect to this particular Application to force-pool, is Yates Petroleum seeking to force-pool Conoco?

A. No, Conoco has agreed to participate with us in the drilling of this well.

Q. And we will introduce in a later exhibit the joint operating agreement where Conoco has agreed to join with Yates; is that correct?

A. That's correct.

Q. So with respect to the interests that are supporting this Application, the Conoco interest should be added to the Yates interest?

A. As far as control, yes.

Q. Yes, all right. All right, are we ready to proceed to Exhibit Number 2?

A. Exhibit Number 2 is a computer plat of Section 21 and the offsetting sections that shows, among other things, the percentage ownership of Yates and Nearburg in these proration units.

Q. All right. In, for example, this northeast quarter of Section 21, I see a cross-hatched box in the

northeast corner, and I see a cross-hatched box in the southwest quarter -- corner, excuse me, of the quarter section. What is the significance of those numbers that fall in those quarters -- cross-hatched triangles?

A. The numbers in the upper right-hand corner always reflect the Yates percentage ownership in that proration unit. The numbers in the lower left-hand corner show the Nearburg percentage.

Q. All right. Apparently the 48 and the 46 that is being reflected here is really the rounded-off ownership of just Yates in the below-7800; is that right?

A. That's exactly right. Yates was actually 47.65, and so it does round up to the 48.

Q. And then Conoco would have 6.25 in that --

A. Right, and if you will look up in the upper left-hand corner, that's where the Conoco percentage is shown.

Q. And just to show -- Let us look up in Section 15, which would be just to the northeast, and that -- in the whole west half of Section 15, there is no cross-hatched triangle up in the northwest corner of each of those proration units, but there is one down in the bottom, and it's 100 percent. What does that mean or signify, then?

A. That reflects the Nearburg interest in that proration unit or in that west half, if you will.

Q. All right. So in that offsetting southwest

quarter of Section 15, Nearburg controls 100 percent?

A. That's correct.

Q. Okay, now -- And again, what we have marked here, we have four locations marked in this proration unit comprised by the northeast quarter of Section 21, and again it lists the Rodke AOY Com Number 1, which is the Nearburg proposal; is that correct?

A. That is the same location. That is our well name and well proposal, but it is the same location.

Q. All right. And then you have the Ross EG Federal Com 14.

And then there's the Alto down in the southeast corner of this quarter section, the Alto AOL Com Number 1. You have a line through it. Would you explain historically what's going on and what -- how that well came to be proposed and what happened?

A. Well, before we proposed the Ross 14, last August, Nearburg had proposed a Canyon test in the southwest-northeast of Section 21. That would be the same quarter-quarter as our Osage saltwater disposal well.

Five days later, Yates Petroleum proposed this Alto AOL Com Number 1 in the southwest -- no, excuse me, the southeast-northeast, stating that we felt like that was a more favorable location than to drill the well on the same 40 as the saltwater disposal well.

We also stated that we felt like we should be the operator.

This is the well that Nearburg did elect to participate.

The operating agreement for this well provided for a February 1st, 1995, drilling commencement date.

After the agreement to drill this Alto well, Nearburg drilled a Canyon well in the southwest-southwest of 22, the Ross Ranch 2. For reasons unknown to us, this well had very high water volumes, compared to the oil produced.

After that, both Yates and Nearburg were concerned about the Alto Number 1 location and started discussing a possible alternate. Yates was reluctant to propose any other well in the northeast quarter, and this took some time, due to the results of the Nearburg well in this southwest-southwest 22, and also due to our concerns about the unknown effect of the saltwater disposal wells.

In our February proposal letter, when we finally did propose the Ross EG Federal Com Number 14, we pointed out that we are proposing this well as it was requested by Nearburg, to have a well proposal other than the Alto in this quarter section.

Q. The proposal that you were just speaking of is the basis of Exhibit Number 3; is that not true?

A. That's correct. That's where we did propose the Ross EG Number 14.

Q. With respect to your proposal of this Ross EG Com Number 14, did -- at that time had Nearburg proposed its well up in the northeast of the northeast, or did it come after or subsequent to the proposal of your Ross 14?

A. It came after our letter. In fact, on March 17th, Nearburg wrote us a letter and let us know that the Ross 14 and the subsequent Rodke well, that we pointed out in the northeast-northeast, were not proposed under any operating agreement, and they asked to be advised as to which well we intended to drill first.

On that same day, we received another certified letter from Nearburg, proposing their Alto 21 Number 2 well, which is the same location as the Rodke well, northeast-northeast of 21. In this letter, Nearburg also pointed out and referred to claims against Yates for possible damages, considering saltwater disposal in this quarter section.

After we received the March 17th letters, March 29th we received a fax from Nearburg concerning the exact same issues as the earlier March 17th letter, and again made the same statement about asserting possible claims against Yates for saltwater disposal into the Osage.

Q. With respect to Yates' company position as to the

proposed Alto well, could you -- what is Yates' -- is its position based on which -- Has it totally condemned the Alto location? What is its position with respect to that Rodke Alto alternate?

A. Well, as far as its position for any of these wells in this northeast quarter, with the damages threat that we feel like are contained in the Nearburg letters, Yates has been very uncomfortable about Nearburg's motive in placing us in a situation where we might be forced to drill a well in the northeast quarter of 21 that might in some manner build a case against us for disposing water into our Osage, which is located in the same quarter section.

Q. With respect to the motives of -- or reasoning behind Nearburg's choosing that location, in your opinion, in Yates' position with respect to it, how does Yates characterize that?

A. Well, we suspect Nearburg wants to force the northeast-northeast well to be drilled first, because the location is closer to their 100-percent owned acreage. We don't want to drill what we feel is the high-risk location first, and we don't want to pay half to help Nearburg prove up their 100-percent leases.

Also, this northeast-northeast is definitely a stepout. The location that we proposed as the Ross 14 in

the northwest-northeast is closer to economic production. Yates feels it's the best shot, because it is further away from the two existing saltwater disposal wells and whatever unknown effect they might have.

Q. With respect to the -- this extension of the -- and I know we'll have a later exhibit from our geologist, but just so that we have it in mind here, this field has been developing in a northeasterly direction; is that not true?

A. That's correct.

Q. And in fact, this panel that we have here, this computer panel, is actually that northeast -- almost the farthest extension of that field at the present time?

A. Almost, that's correct.

Q. And presently all the real development that is going on is within the sections that are depicted here on this plat?

A. They are the most active, yes.

Q. All right. Anything else that you'd like to comment on with respect to your Exhibit Number 2?

A. (Shakes head)

Q. We've already talked about Exhibit Number 3. Is there anything -- which is the February 23rd proposal for this Ross EG Com Number 14. Is there anything further that you would like to point out with respect to that exhibit?

A. Only that in the letter when this was sent to all the working interest owners, it was also pointed out that they would be furnished with the revised page 4 to the operating agreement. That is the drilling-commencement-date page.

Q. All right. Now, would you turn to Exhibit Number 4? Would you identify it for the record?

A. Exhibit Number 4 is our proposed form of operating agreement for the Ross EG Federal Com Number 14. It's on the AAPL Form 610-1977.

Q. What are the overhead rates that are proposed by this?

A. This agreement provides for overhead rates of $5400 drilling, $540 for producing well rate.

Q. Is that the general rate that is being adopted by the operators in this area of North Dagger Draw field?

A. Yes, it is.

Q. And is that what you're proposing that the Division grant if this Application is approved?

A. That's correct.

Q. With respect to the penalty provision that Yates Petroleum is asking the Examiner or the OCD to approve in this case, what is that?

A. A total of 300 percent.

Q. Okay, so that would be the statutory 200 plus

costs?

A. That's correct.

Q. Okay, and that's what's provided for in this operating agreement?

A. This operating agreement provides for a 200/500. All the new operating agreements in the North Dagger Draw have been sent out under those percentages.

Q. All right. And then that's what Conoco has at least agreed to; is that correct?

A. That's correct.

Q. Exhibit Number 5, would you identify that for the record?

A. Exhibit Number 5 is the notification letter to Nearburg dated March 30th, 1995, and the certificate of mailing concerning the Yates Petroleum Corporation Application for compulsory pooling.

Q. All right. The letters show letters being given to Anadarko, Kerr-McGee and Nearburg. No notice was sent out to Conoco because they had already joined in this?

A. They had voluntarily agreed to participate.

Q. Now, we have not talked about the interests of Anadarko and Kerr McGee. Could you explain, first of all, with respect to Anadarko why we -- one, in the ownership interest, you didn't mention that?

A. Yates Petroleum Corporation did buy out the

Anadarko interest in this northeast quarter of 21.

Q. And so the ownership figures that you reported earlier included that interest that was -- originally belonged to Anadarko?

A. Yes, because as of that date we had bought them out.

Q. All right. What about the Kerr-McGee interest? Why was notice sent to them?

A. Notice was sent to them because the record check done by one of our landmen showed that they had an interest. We were subsequently informed by Nearburg that they had farmed out that interest.

Q. So it was your understanding at this time, the Kerr-McGee interest is part of that that you credit in the roughly 46 percent to Nearburg?

A. That's correct, and those are all before payout interests. Kerr McGee does have the option to increase their override after payout or convert to a working interest, convert part of it to a working interest.

Q. Have you actually seen that farmout agreement, or are you just operating on the representations of Nearburg?

A. That's exactly right, I have not seen it.

Q. Is there anything else that we have not covered that you wish to tell the Examiner with respect to these exhibits that we've given?

A. I don't believe so.

MR. ERNEST CARROLL: Mr. Examiner, at this time I'd move admission of Yates Exhibits 1 through 5.

EXAMINER CATANACH: Exhibits 1 through 5 will be admitted as evidence.

MR. ERNEST CARROLL: And then I would pass the witness.

EXAMINER CATANACH: Thomas?

MR. KELLAHIN: Sir.

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q. Ms. Porter, is this your project, or does this belong to Mecca?

A. This project belongs to Mecca Mauritsen as far as this well is concerned. I am her supervisor. I am also in charge of the Dagger Draw team.

Q. So you're knowledgeable about the sequence of events, as opposed to something that you're just filling in for Mecca?

A. I'm very knowledgeable about the sequence of events.

Q. All right. If you'll turn to Exhibit 4 with me, it's the operating agreement, it's the one dated August 23rd of 1994?

A. Yes.

Q. It deals with the northeast-quarter spacing unit?
A. Uh-huh.
Q. The agreement here, is this the one that you have relied on to testify that Conoco's percentage interest in the spacing unit is committed now to Yates, for the development of the northeast quarter?
A. I have seen their signed AFE.
Q. I didn't make myself clear.
A. No, I'm sorry, I guess you didn't.
Q. The Conoco interest below 7800 feet --
A. Uh-huh.
Q. -- is six percent, give or take?
A. (Nods)
Q. Six percent?
A. Uh-huh.
Q. You told me that Conoco had committed their interest to Yates?
A. Yes.
Q. By what device did they do that?
A. They signed the AFE and agreed to participate.
Q. Under this joint operating agreement, right?
A. You will notice this joint operating agreement has revised pages.
Q. I haven't gotten that far yet.
A. Oh, okay.

Q. Now, has --

A. They were sent this proposal. Conoco has not signed this joint operating agreement. Conoco and Yates have been dealing on any well drilled in the Dagger Draw area on an operating agreement similar to this.

In other words, many of these wells that we drilled in Dagger Draw with Conoco, we have two operating agreements.

Q. All right. Under this operating agreement for the northeast quarter of this section, Conoco is not a signing party to the joint operating agreement?

A. To the operating agreement? Not at this time.

Q. All right. Under this joint operating agreement, it proposed the initial well on page 4, didn't it?

A. That's correct.

Q. On page 4 --

A. Last year.

Q. Yes, ma'am. Page 4, that well location is Unit Letter B, which corresponds to the Ross EG Federal 14 location, doesn't it?

A. That's correct. You noticed it was revised at the bottom of that page in February, when the new well proposal was sent out.

Q. Am I looking at the revised page or the original page?

A. You should be looking at the revised page.

Q. All right. Let me check with you.

A. Yes, the revised page for February.

Q. The revised page from February 24th, 1995, shows that under this commitment, the initial well is to be drilled in Unit Letter B, which corresponds to the Ross EG Federal 14 location?

A. The force-pooling well, yes.

Q. Yes, all right. It says the initial well is to be commenced on or before May 1st of 1995.

A. That's correct.

Q. May 1st has come and gone. What's happened?

A. Since this was revised in February, the proposed -- when the Ross 14 was proposed, there were some conflicts between Nearburg and Yates, and you notice the force pooling was filed on March 30th. Obviously, we did not drill the well before May 1st, because we didn't have everyone signed up.

Q. All right. So Conoco has not committed their six percent pursuant to this joint operating agreement?

A. They were sent this joint operating agreement and a well proposal, and they have committed to drill the Ross 14 well with us.

Q. And how have they exercised or displayed that commitment?

A. By the signed AFE.
Q. That's all?
A. By correspondence.
Q. Do you have that correspondence?
A. No, sir, I do not. We're not force-pooling Conoco.
Q. It's one of the parties involved in the pooling case, and did you bring that correspondence with you?
A. No, sir, we're not force-pooling them, so we did not bring them into this.
Q. You have indicated that they have committed, and I would like to see verification of the commitment.
A. We can furnish you with a signed copy of their AFE if you would like.
Q. All right. The AFE specifies the Ross 14 well?
A. Yes, it does.
Q. When did they execute that commitment?
A. I could not tell you.
Q. All right. Under the calculation, then, you have credited Kerr McGee's interests to Nearburg, based upon conversations you've had with Nearburg?
A. Right.
Q. And you bought out the Anadarko interest?
A. That's correct.
Q. Okay. The well proposal that you're making

pursuant to the pooling Application, is that consistent with your February 27th, 1995, proposal for the Ross Federal 14 well?

A. That was the proposal.

Q. That was the proposal, wasn't it?

A. Yes, sir, in February, yes, sir.

Q. And that's what you're seeking to pool, based upon that proposal?

A. Exactly.

Q. All right. What caused you later, on March 6th of 1995, to then propose the Rodke Com Number 1 well in Unit Letter A, which is the same location that Nearburg now proposes with the Alto 21 Number 2 well?

A. That proposal went out on March the 6th --

Q. Uh-huh.

A. -- along with many other proposals. Yates sent out proposals in a sweep of the North Dagger Draw area for every undrilled 40 that they felt like might have potential if developed in an orderly fashion.

Q. How many did you send out?

A. I couldn't tell you the exact number.

Q. More than 10?

A. Perhaps.

Q. More than 20?

A. Perhaps, perhaps less.

Q. More than 50?
A. No, sir.
Q. This sweeping concept of well proposals --
A. Uh-huh.
Q. -- throughout the entire south of the --
A. No, sir, the North Dagger Draw area.
Q. North Dagger Draw?
A. Uh-huh.
Q. What caused you to do that?
A. Like I say, it was part of the Yates decision to let people know what their plans were, not necessarily what order these wells were going to be drilled in, but to send out AFEs to all the working interest owners on undrilled 40s.
Q. And this was part of that plan?
A. That was part of the sweep of the area, yes.
Q. Was this a sweep of an area to threaten the other working interest owners?
A. Certainly not.
Q. That's the only letter and proposal on this well?
A. On the Ross 14 or --
Q. Yes.
A. -- on the Rodke?
Q. On the Rodke, the Rodke. We've got the sweeping --

A. Sir, I'm not sure if that was the only proposal that was sent out March the 6th on Rodke or not.

Q. All right. March 6th Rodke proposal is part of the sweep?

A. Yes, sir.

Q. That's the location now that you express concern with because of potential water effects from the saltwater disposal wells?

A. We express concerns on any location in the northeast of 21. We feel like -- We've never said that that might not be a potential possible well. We just don't feel like it should be drilled first, when you have another location that's not as high risk.

Q. So you propose the Rodke well as an additional well in the spacing unit?

A. Yes.

Q. Which well would be drilled first under your plan?

A. We've always said we wish to drill the Ross 14, which is the northwest-northeast.

Q. What did Conoco do with regards to your AFE on the Rodke Com Number 1 well?

A. I don't know that.

Q. Am I clear in understanding your testimony that Yates plans to drill the spacing unit with the Ross EG 14

well first, if you're allowed to operate the spacing unit?

A. That's correct.

Q. And then in sequence the plan would be for you to drill the Rodke Com well?

A. Depending on the results of the other well.

Q. All right. In either instance, though, Yates wants to operate Unit Letter A, as opposed to Nearburg?

A. We want to operate the spacing unit, yes.

Q. When we look at the spacing units on Exhibit 1 --

A. Uh-huh.

Q. -- down in Section 31, which is the southwest corner of the area you've yellowed under Yates' operations, why didn't you color in that section that's operated by Nearburg with producing Delaware -- Dakota -- Dagger Draw wells?

A. The same reason we didn't go outside, up into Section 9 or 10. We only showed Section 21 and the surrounding sections.

Q. All right. Up in Section 15, then, the west half of Section 15 is still open because a well has not actually been drilled; is that what I'm reading?

A. Drilled, recompleted, built location, we show no producing well there.

Q. All right. Have well proposals been exchanged between you and Nearburg on wells in the west half of 15?

A. To my knowledge, we don't have an interest in the west half of 15.

Q. If Yates is so concerned that there's a high risk to drilling the Alto or the Rodke location, that Unit Letter A location, why don't you just stand back and let Nearburg take that risk and drill it?

A. Because we think it's an unknown concern. We're not sure what the total effect is going to be. We do know that there is a location that we feel is much lower risk.

Q. The decision about which you assess risk, is that exclusively a geologic assessed risk?

A. No, sir.

Q. What other components are in that risk?

A. Engineering.

Q. Anything else?

A. Not to my knowledge.

MR. KELLAHIN: I have nothing else. Thank you.

EXAMINATION

BY EXAMINER CATANACH:

Q. Ms. Porter, when was the Ross well proposed to the various working interest owners?

A. The Ross well was proposed by letter dated February 23rd, 1995.

EXAMINER CATANACH: I don't have anything else. The witness may be excused.

MR. ERNEST CARROLL: Mr. Examiner, since Mr. Kellahin called into question the statements of Ms. Porter concerning Conoco having joined this unit, we will submit to the Examiner copies of the signed AFE and the letter between the two signifying it, because I represent to the Examiner that they are signed up, and I will furnish that as soon as we return.

EXAMINER CATANACH: Okay.

MR. ERNEST CARROLL: I have nothing further of this witness, and we would call our next witness, then, who will be Brent May.

BRENT MAY,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ERNEST CARROLL:

Q. Would you please state your name, place of residence and occupation, sir?

A. I'm Brent May. I'm a petroleum geologist with Yates Petroleum in Artesia, New Mexico.

Q. Have you had occasion to testify before the New Mexico Oil Conservation Division and have your credentials as a petroleum geologist accepted?

A. Yes, I have.

MR. ERNEST CARROLL: Mr. Examiner, I would tender

Mr. May as an expert in the field of petroleum geology.

EXAMINER CATANACH: Mr. May is so qualified.

Q. (By Mr. Ernest Carroll) Mr. May, with respect to the two competing Applications, one by Nearburg and one by Yates Petroleum, are you familiar with those Applications?

A. Yes, I am.

Q. And as part of your normal work for Yates Petroleum, have you been assigned to the area of this North Dagger Draw?

A. I am currently the Dagger Draw geologist, yes.

Q. All right. Now, have you prepared certain exhibits for presentation today?

A. Yes, I have.

Q. Would you turn to the first exhibit, Exhibit Number 6? Would you, for the record, describe what it is, and then if you would go ahead and explain its significance to Yates' Application?

A. This is a stratigraphic cross-section, A-A', through the North Dagger Draw area, surrounding the Ross EG Federal Com Number 14.

I might point out there's a location map in the lower right-hand corner showing the location of the cross-section. Just north of the cross-section circled in orange is the location of the Ross EG Federal Com Number 14. And I'll just add right now that the main objective of that

well is the Canyon or Upper Penn dolomite.

The datum on this cross-section is the base of a shale that carries throughout part of North Dagger Draw and is a pretty good marker to carry.

Also shown is the top of the Canyon dolomite and a small sliver of Canyon limestone in the Ross Ranch 22 Number 2. Also shown as the base of the dolomite.

Shown along with that, is the DST interval in various wells and also perforations, along with the DST information and perforation information.

I might point out that this is a west-to-east cross-section. And starting on the west, the left-hand side, the first well is the Yates Petroleum Hooper "AMP" Number 2. It's located in Section 21, 19 South, 25 East.

This well was drilled through the Canyon dolomite. Several DSTs were performed, with some of them recovering oil. Pipe was run, and this was turned into a Dagger Draw completion. It IP'd for 447 barrels of oil, 526 MCF and 1521 barrels of water, and that was back in 1993.

The next well on the -- heading towards the right, on the cross-section, is the Yates Petroleum Osage Number 1, located in Section 21 of 19 South, 25 East. This is the disposal well that Yates has operated in the past.

This well was originally drilled back in 1973 by

Coquina, and it was drilled to the Morrow. On the way down, they performed a couple of DSTs in the Canyon.

The first one, from 7690 to 7720, recovered 840 feet of oil and 930 feet of sulfur water.

The next DST, a little further into the Canyon dolomite, at 7830 to -65, recovered 5795 feet of water. They plugged the well.

Later on, in 1982, Anadarko re-entered the well and attempted a Canyon dolomite completion. The perforations are shown -- Well, the perforations were from 7672 to -80, 7694 to 7704. And after an acid job it pumped approximately 75 barrels of oil and 820 barrels of water.

They kept pumping for a little while, and the volumes dropped, and I assume that they decided it was not economic, because later Yates Petroleum took over the well in 1989 and converted it to a disposal well. We used the existing perforations and added some others. I might point out, all the perforations shown on this well are being injected to, or had been injected to.

The next well on the cross-section is the Anadarko Dagger Draw SWD Number 1 in Section 22 of 19 South, 25 East. This is a currently operating saltwater disposal well. And from what I understand, Anadarko specifically drilled it as a disposal well. And the perforations are shown that they are injecting into.

The last well on the cross-section, on the far right, is the Nearburg Ross Ranch 22 Number 2, in Section 22 of 19 South, 25 East. Nearburg, I believe, drilled this back in 1994, had about 3 DSTs on it.

The first one from 7644 to 7732, recovered 500 feet of heavy gas-cut oil and mud and 3000 feet of formation water.

The next DST down, from 7732 to -82, recovered 30 feet of oil and 190 feet of mud.

And the last DST, 7782 to 7855, recovered 670 feet of drilling fluid and 5030 feet of formation water.

They did run pipe on this well, and they did complete it. Perforations are shown. It IP'd for 44 barrels of oil, 578 MCF and 4187 barrels of water.

I believe that's all I have for this.

Q. All right. Now, with respect to the Osage well that you were talking about, you went through the history of who drilled it, Anadarko's subsequent attempts.

It was only after the failure of Anadarko's completion attempts in the Canyon formation that Yates acquired it and then made an application for a saltwater disposal well; is that correct?

A. That is correct.

Q. At the time that Yates made that application for a saltwater disposal well, was there any Canyon production

close to the Osage?

A. No, sir. In fact, the next exhibit shows that.

Q. That would be Exhibit 7?

A. Yes, that's correct.

Q. All right. This exhibit is prepared as of February of 1989, then; is that correct?

A. This shows the producing wells in the North and South Dagger Draw Pools, in the Upper Penn Pool, the existing wells completed and producing at the time of February of 1989.

The two heavy black lines show the extent of the Canyon dolomite, so the North and South Dagger Draw Pools are within these two dark black lines.

The red dots show the locations of producing oil wells, and if they are inside the two black lines they are Upper Penn producers. If they are outside the black lines, they are not producing from the Upper Penn and the Canyon dolomite.

The gas wells shown within the two black lines, most are Morrow producers.

Note the green circle, which denotes the location of the Osage SWD.

And just to the east in Section 22 -- it's not marked but it's shown as a disposal well -- that is the Anadarko disposal well.

Q. Then the Anadarko disposal well was a disposal well as of the date of acquisition by Yates of the Osage?

A. From what I understand, that well was drilled in 1984, specifically to be a disposal well, so it had -- I'm assuming it had been on line for the five years before the Osage was converted.

Q. And so based on that 1984 drilling date and the 1994 drilling date of Nearburg's Ross Ranch, almost ten years -- that well had been a saltwater disposal well for approximately ten years before Nearburg elected to drill a well?

A. That's correct, and the Ross Ranch 22 Number 2 is approximately about 600 feet from the Anadarko disposal well.

Q. The -- Since the date of 1989, February of 1989, considerable drilling has occurred, has it not?

A. Yes, there's been several hundred wells drilled in South and North Dagger Draw since February of 1989.

Q. The comparison of our Exhibit Number 2, which is the computer printout, that shows -- The black dots show the Canyon producers that have been drilled, and all of those would have been drilled since the date of this map?

A. I believe so, yes.

Q. Anything else that you would like to draw to the attention of the Examiner with respect to Exhibit 7?

A. Just that this exhibit was prepared specifically to show why Yates converted this Osage into an SWD.

If you look at the map now, there's production real close to it, and you wonder why is anybody injecting water into the same formation that's producing with production nearby? And this explains why.

There was no production anywhere close. If Yates had any inkling back in 1989 that that area would have produced, we would not have converted that disposal well into the Canyon, at least. We may have tried a disposal attempt in other formations, but not in the Canyon dolomite.

To the south -- From 1989 on, the dramatic development of Dagger Draw really kind of started in south Dagger Draw. There were some in up in North Dagger Draw, but it was more to the west of the Osage. That development occurred, and then eventually, as was stated earlier, now is creeping to the northeast in North Dagger Draw.

Also --

Q. Excuse me, Mr. May, I would like for you to touch on what's the difference? Because this well had been attempted -- Two companies prior to Yates had attempted to complete this as a Canyon producer. There's no other Canyon producers out there. No one thought the production was there.

What -- Since they were at least attempting to try, what's the difference, in your opinion, between then and now?

A. The Osage, especially back then, was downdip of current production and so -- and was downdip of what then was originally thought to be the oil-water contact. We know now that is not -- possibly not true.

Also, South Dagger Draw, where the big development occurred first, the oil-water contact there is higher structurally than it is in North Dagger Draw, we have learned.

And so for that reason, in 1989, in February of 1989, Yates thought the Osage was downdip. We had seen Anadarko try a Canyon attempt in the Osage and fail. We at that time thought there was no possible production from the Osage.

And so we -- Knowing the reservoir characteristics of the Canyon dolomite, we thought at that time it would be a good disposal candidate.

And we disposed into the Osage until around October of 1993, when the production had gotten close to the Osage and we had realized that it might possibly be productive. We then curtailed dramatically the disposal of the water into that SWD well.

Q. All right, why don't you turn next to your

Exhibit Number 8, and if you would again identify it for the record and then explain its significance to this case?

A. Could I make one other point?

Q. Oh, yes, please do. I thought you were --

A. I'd just like to point out that, again, as soon as we found out that we thought this area would be productive, we curtailed production.

Describing why we originally converted this into a SWD is kind of an industry standard. You look for zones that are way downdip of production where it's only water-productive, and that's where you inject.

So we're not alone in doing this. Anadarko did it. In fact, even Nearburg has done it down in the Indian Basin area. They have a disposal well downdip, in fact, just a half mile from current producers, in the same Canyon dolomite. In fact, that Canyon dolomite in the Indian Basin-Upper Penn Associated Pool where Nearburg's disposal well, is the same dolomite that's located up in North Dagger Draw. In fact, they are continuous. So we're not alone in this practice.

Q. All right, Exhibit Number 8 then.

A. This is a structure map of the top of the Canyon or Upper Penn dolomite as the datum. The contour interval is 50 feet, with the colors denoting 100-foot intervals.

Both the Yates and Nearburg locations are spotted

with the Yates being circled in blue and the Nearburg location circled in purple.

Note that the Osage location is due south of the Yates Petroleum, and it's denoted by the "SWD", along with the Anadarko SWD over in Section 22.

This map shows a structural high trending basically northeast-southwest and plunging to the northeast. The two locations are on the flank of this structure.

The way I have this map drawn, I feel like that the Yates location should be slightly structurally higher than the Nearburg location, and -- probably around 10 to 15 feet higher.

And this map also shows that the location should be structurally high enough to produce. You note that some of the other producers, which -- in fact, all of the oil producers shown on this map are out of the Canyon dolomite, that there's -- The two locations are structurally high enough, because there are other producers that are even structurally lower than these two locations.

Q. Now, within Section 21, Mr. May, there are now six producing Canyon wells; is that correct?

A. That's correct.

Q. All six of these are being operated by Yates Petroleum; is that correct?

A. That's correct.

Q. With respect to the type of wells, meaning just good, bad or what have you, how do these six wells rate, generally, with the rest of the wells in North Dagger Draw?

A. Five of the six are very good wells. In fact, all of the 160 proration units except the one in the northeast of 21 are at their current allowable.

Q. Now, the numbers that are outside, that you have posted outside of each one of these producing wells, numbers -- such as up in the northwest of the northwest, it's minus 4166. What is that?

A. That's just the structural component. That's the structural position that the Canyon dolomite came in on each well. So that's just showing how I drew my contour lines.

Q. All right, that is what you are basing your opinion that the Yates Petroleum location is structurally higher than the Nearburg; is that correct?

A. That's correct.

Q. And the -- In your opinion, does the way the -- in particular, these six wells that are drilled, do they substantiate the fact or denote a trend of this structure dipping off to the northeast?

A. Yes.

Q. Now, with respect to this location that Yates is

proposing to be drilled first, could you summarize for the Examiner why you feel that Yates' location should be drilled prior to the Nearburg location?

A. Well, as I stated before, the structure is slightly higher than the Nearburg location. That's one reason.

Some of the other, bigger reasons, though, are that as we've been talking about the SWD locations, the Osage and the Anadarko location, which both of these proposed locations offset, those cause -- as a geologist, cause me some concern, and that is where the risk comes into play.

Both of these locations have risk because of the SWDs. I feel, though, that the Yates location has less risk than the Nearburg location. And why I state that is because the Nearburg location, in its close proximity to both SWDs, could be affected by both, whereas the Yates location is only close to the Osage 1 SWD, so it may only be affected by the Osage. And I say "may" because we don't really know until we get up there and drill.

But looking at the Anadarko SWD, it has already been offset by the Nearburg Ross Ranch 22 Number 2. That well has a very high water cut, and in my opinion, I feel like that it may have some effect on the Ross Ranch, the Anadarko disposal well.

And so we have a known around the Anadarko disposal well, that there could be a problem. And the Nearburg location is offsetting the Anadarko disposal well.

The Osage location, there have been no direct offsets drilled to that, and in my opinion, we don't know until the well is drilled.

That's why I rate the Nearburg location as a higher risk than the Yates location.

Also, I might point out that both parties have joined in for the Alto Number 1, the location in the southeast of the northeast of 21, and it -- because -- and both parties backed off of that location after the drilling of the Ross Ranch 22 Number 2, because it is in between two disposal wells and could be affected by both of them.

And that's the same reasoning I give to the higher risk to the Nearburg location. It could possibly be affected by both disposal wells.

Q. Mr. May, in your opinion is it less risky to drill closer to known production than to drill farther away?

A. Yes, that's another reason, the Yates location is closer to known production than the Nearburg location.

Q. Now, there are undrilled locations in many of these proration units that are within Section 21, but isn't it true the reason that those have not been drilled is that

-- because of allowable?

A. That's correct, and the other three 160 proration units in Section 21, they are all producing at the allowable. So there's no -- currently no room for additional wells, with the exception of the northeast of 21.

Q. Now, is there anything else that you would like to comment on with respect to Exhibit 8?

A. I think that's all.

Q. All right. Would you turn to your Exhibit Number 9?

A. This is a net isopach of the Canyon dolomite. Again, the contour interval is 50 feet, with the colors denoting 100-foot intervals.

The map shows a northeast-southwest-trending dolomite thick, which roughly mimics the structure map.

Both the Yates and the Nearburg location should have in excess of 350 feet of dolomite, which is excellent for this area. So according to this dolomite thick, there's no difference between the two locations.

Q. Anything else that you would like to --

A. I think that's all.

Q. Mr. May, with respect to the concerns that this Division -- must concern itself, and that's the prevention of waste and the protection of correlative rights, in your

opinion, first with the issue of preventing waste and the drilling of unnecessary wells, which, in your -- which of the two competing proposals would best -- or be more in the vein of preventing waste?

A. I think the Ross EG Federal Com 14 should be the first well to be drilled.

Q. That would be the Yates well?

A. Yes, sir.

Q. With respect to the protection of correlative rights, do you have an opinion as to which proposal -- the one by Yates or the one by Nearburg -- which would best promote or protect correlative rights?

A. The same location, the Yates location.

Q. Your opinions, are they based on the information that is known to both the parties at the present time?

A. I believe so.

Q. Anything further that you would like to comment to the Examiner?

A. I believe that's all.

MR. ERNEST CARROLL: Mr. Examiner, I would move, then, at this time admission of Yates Exhibits 6, 7, 8 and 9.

EXAMINER CATANACH: Exhibits 6, 7, 8 and 9 will be admitted as evidence.

MR. ERNEST CARROLL: Pass the witness.

EXAMINER CATANACH: Mr. Kellahin?

MR. KELLAHIN: Thank you, Mr. Examiner.

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q. Mr. May, we'll work with your cross-section, Exhibit 6, and then the structure map which is Exhibit 8. Let's look at both of those, if you please.

When I look at the cross-section for the Yates Osage disposal well --

A. Yes, sir.

Q. -- what are you finding to be the depth of the top of the Canyon reservoir that would provide the point at which there would be no further opportunity for oil production?

A. Could you restate that?

Q. Yeah, I'm looking for the top of where you would likely look for oil.

A. Okay, it would be the very top of the Canyon dolomite, and then the Osage. That would be a depth of -- Let me see my numbers. It looks like approximately 7638, if I'm reading that right.

Q. And I'm looking -- And that's below the datum line, isn't it?

A. Yes, sir. Yes, sir.

Q. I'm looking at the lighter horizontal line below

which it says "Canyon dolomite"?

A. Yes, sir.

Q. All right. That's approximately minus 7638, 7638 on the log, as you pick it?

A. Yes, sir.

Q. All right. When we get to the first perforation in which subsequently water was disposed of into, would that be the top perforation that's still shown on the log?

A. Yes, sir, I believe so.

Q. And approximately where is that?

A. At 7672, I believe.

Q. The additional perforations added to the well by Yates are represented how?

A. I didn't graphically represent them, but I do have them at the bottom of the log, under -- If you can read down what Coquina did, what Anadarko did, and then I have Yates Petroleum convert to SWD, 2-89, and I show those perforations.

Q. All right. So when I look at the upper perforations, those were the perforations in the wellbore before you took over as operator?

A. Yes, I believe so, and those were used along with the perforations that Yates added to disposed water.

Q. All right.

A. So all the perforations were used to dispose

water.

Q. Prior to the time that Yates commenced disposal in this well, do you know what the total cumulative water disposal had been in that well?

A. I'm sorry, could you restate that?

Q. Yes, sir. Prior operators used it for disposal?

A. Oh, not that I'm aware of. Yates was the only operator that disposed into this well.

Q. All right. When we look at the initial opportunity for this well, there's a -- It looks like a swab test, I guess.

A. I would have to --

Q. Coquina's first entry into the well. When they drilled it, did they do any swab tests?

A. No, they did not run pipe, they plugged the well. It was Anadarko that ran, and from my information, what I'm showing under Anadarko, they pumped 75 barrels of oil and 820 barrels of water.

Q. All right. I'm trying to get a sequence here. In 1982, is that a point in time where everybody got smart and started the high-volume lift?

A. I believe that's before then.

Q. This predates that, doesn't it?

A. Yes, sir, I believe it does.

Q. If you were to see this type of information now

in a North Dagger Draw well in this interval, is this a candidate?

A. Oh, sure, and I stated that before.

Q. This would be a producer, right?

A. Yes, sir, I stated that before. It looks like it should have been a producer, yes, sir.

Q. Okay. When you acquired it in 1989 as a well, did you go back in and try to produce it with the current technology to see if you could recover oil?

A. As far as what our records show, no, we did not. We just converted it to an SWD.

Q. Okay. At that point in time, 1989 would be after those people that were smart enough to think to do it started doing it?

A. Probably it started just shortly before then, but I'm not for certain because I didn't -- I was not the Dagger Draw geologist at that time.

But that was probably just prior to then, because on my other exhibit, Exhibit Number 7, that's why I showed that, that production had just started in the Dagger -- that dramatic development had just started in the Dagger Draw --

Q. Okay.

A. -- so --

Q. You commenced using it as a disposal well in

February of 1989, and I think you said you continued that until sometime in 1995 when you became --

A. October of 1993.

Q. -- 1993, October of 1993?

A. Now, I should add that we curtailed our disposal in October of 1993. After October of 1993, we just injected just enough water to keep the SWD permit alive.

Q. And what kind of volume is that? Do you know what --

A. I don't know.

Q. -- the general rate is?

A. I don't know. It was -- I think it was, you know, just -- Well, I'd better not say, because I'm not for certain. But the engineer could probably answer that question.

Q. All right. So the volume, the cumulative volumes of disposal in the well are those attributed to February of 1989 to October of 1993?

A. Plus a little bit after that.

Q. All right. During that period of time, do you know -- well, cumulative -- What's the current cumulative disposal on that well; do you know?

A. I don't know the exact figure, but it's somewhere around 6 million barrels of water.

Q. All right.

A. But the engineer can give you a better answer on that.

Q. Okay. Have you attempted as a geologist to map where that water may have migrated to?

A. I don't think anybody at this point can do that.

Q. Okay. When we look at the vertical height in the disposal well at which water could potentially migrate, in my hypothetical, how high in the reservoir, on this log, could it go?

A. Using what I know about Dagger Draw, there's always the possibility for some vertical fractures or permeability connections between the different zones within the Canyon dolomite. I would say as high as it could go would be at the top of the Canyon dolomite.

Q. The 7638 number?

A. Yes, sir, in the Osage. Yes, sir.

Q. All right. When I look at your structure map, is that the value that I am finding on Exhibit Number 8?

A. Yes, except on Exhibit 8 -- Exhibit 8 is the subsea value.

Q. I understand, you make the conversion, and we're talking about the same point?

A. Exactly.

Q. All right. So the mapping of the structure is taking the top of the Canyon dolomite as we have discussed

it in the disposal well?

A. That's correct.

Q. As we move over into the Anadarko Osage disposal well in the next section, 22, what is the top of the Canyon dolomite in that well?

A. It looks like 7648.

Q. All of the disposal in that well has been down -- The top perforation is 7806?

A. That's, I believe, correct.

Q. All right. Draw the comparison for me geologically. When I look at the Anadarko disposal well, all of their perforations are lower in the reservoir than the earlier perforations in the Anadarko well --

A. That's correct.

Q. -- which you continue to use?

A. That's correct.

Q. When you look at this geologically, is there any kind of separation in the reservoir as you see it, between this lower portion where Anadarko was disposing and the part where you were putting part of your water? Do you follow my question?

A. Yes, I do. It's hard to say, because we have -- In my experience with Dagger Draw, we have seen some wells that you see interconnection between different zones, and then other wells where you don't.

So it could be separated, or it might not. I can't say at this point.

Q. On log evaluation, or using geologic tools, do you see an impairment geologically to the flow of water injected in the lower portion in the Anadarko well?

A. It's hard to say, using the electric logs.

Q. What other tools would be available to you?

A. Cores would be the best thing.

Q. Are there cores here?

A. As far as I know, there are not.

Q. All right. We get over to the Nearburg Ross Ranch 22-2 well, that's a well that was drilled more recently. That's a 1995 well, isn't it?

A. It's 1995, I stand -- I may have misspoke when I said 1994. It's either 1994 or 1995.

Q. 1994 perhaps. It's a recent-vintage well?

A. Yes.

Q. Yates has an interest in that well, do they not?

A. Yes, we have a small interest.

Q. Okay. Are you geologically arguing that the Ross Ranch well's results are directly attributable to water disposed of in the Anadarko well?

A. I'm saying that's a possibility. It may -- It may not be, but knowing what I've seen in Dagger Draw, it is a possibility.

Q. All right. You have not elevated that discussion or that review by you to a reasonable geologic probability?

A. Yeah, I would hate to do that at this point. I think I would just say it's a possibility right now.

Q. When we're comparing the two proposed locations, yours based upon your mapping, you're saying that the Ross EG Well 14 is higher --

A. Yes, sir.

Q. -- structurally --

A. Yes, sir.

Q. -- than the well proposed by Nearburg for Unit A?

A. Yes, sir.

Q. What's the difference in that structural height?

A. The amount?

Q. Yes, sir.

A. Approximately 10 to 15 feet.

Q. Do you know how much water has been disposed of in the Anadarko disposal well?

A. I'm not for certain, but from what I understand, it was in between one and two million barrels, but I could be wrong on that.

Q. All right. We've got one to two in the Anadarko well, six-plus in your well?

A. That's --

Q. When I look at your location, geographically,

your location is closer to your disposal well, isn't it?

A. That's correct.

I might point out, though, that with the complexity of the Canyon dolomite, it's an unknown exactly where all or part of that water has gone, in which direction.

I doubt, in my opinion, that it's -- that water from the Osage went out radially -- in a radial, uniform fashion.

There's probably some water that went in one direction, other water that went in another, and it definitely could be an orientation to it. And which way that orientation is, nobody knows at this point.

Q. When I'm looking at the structure map, I don't see the difference between your two locations as mapped.

A. Let me explain that. Note the heavy, thick line, the minus-4200 line, which drops down into the southwest-southwest of Section 15 --

Q. Yes, sir.

A. -- and then the thinner line, which would be the minus-4150 line, which almost exactly goes through the Osage well.

Those lines are closer together through the Nearburg location than they are through the Yates Petroleum location.

So your contour -- If you subdivided your contours down even further, they would be closer together. In other words, the structure would be steeper there than through the Yates location.

And so that's where I count the 10 to 15 feet.

Q. You'd just as soon, geologically, not have to drill either one, would you, Mr. May?

A. No, I don't think I'd say that, because -- Maybe originally, before we had some of these other wells drilled in 21, I was afraid of these locations, but with the other wells coming on line and doing very well, I feel like that there's definitely a need to drill at least one well next to these SWDs.

They have risk because of that, and -- But I think there's definitely a need for that now.

MR. KELLAHIN: Thank you, I have no further questions.

EXAMINER CATANACH: I have no questions of this witness.

MR. ERNEST CARROLL: We call our next witness, Bob Fant.

May I proceed?

EXAMINER CATANACH: Certainly.

MR. ERNEST CARROLL: I didn't know if you were ready.

ROBERT S. FANT,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ERNEST CARROLL:

Q. Would you please state your name where you reside and your occupation?

A. My name is Robert Fant, I reside in Artesia, New Mexico. I'm a reservoir engineer for Yates Petroleum Corporation.

Q. Mr. Fant, have you had occasion to testify before the New Mexico Oil Conservation Division and have your credentials with respect to being a petroleum engineer, with emphasis as a petroleum reservoir engineer, accepted?

A. Yes, sir, I have.

Q. And Mr. Fant, are you familiar with the competing Applications that the Examiner now has before him, one by Nearburg and one by Yates?

A. Yes, sir, I am.

Q. Do you also work in the North Dagger Draw area for Yates?

A. Yes, sir, I'm the reservoir engineer for that area.

MR. ERNEST CARROLL: Mr. Examiner, I would tender Mr. Fant as an expert in the field of reservoir

engineering.

EXAMINER CATANACH: Mr. Fant is so qualified.

Q. (By Mr. Ernest Carroll) Mr. Fant, first of all let's deal with the costs that have been proposed for the drilling of these two competing wells, and you have before you what's been marked as Exhibit Number 10; is that correct?

A. Yes, sir, that is.

Q. Would you identify for the record what Exhibit Number 10 is, and then if you would, please, explain its significance to this case.

A. Exhibit Number 10 is the AFE written for the Ross EG Federal Com Number 14. That's the Yates Petroleum-proposed well.

It has an estimated total cost for the well of $508,745. This was written back in February of 1995 by our drilling superintendent, Al Springer.

Q. This was drilled contemporaneous with this original proposal; is that correct?

A. Yes, sir.

Q. At the time that this well was proposed, had another well already been proposed within this proration unit?

A. Yes, sir, the Alto Number 1 in the southeast of the northeast had already been proposed.

I just want to state straight up front, I have discussed this AFE with Mr. Springer, and his estimation is, as a first well drilled on a proration unit, this AFE is probably low, in terms of expenditures.

At the time this was, written, as Mr. Carroll brought up, another AFE had already been written for this area. Mr. Springer was not aware that we were not going to drill that well. That other AFE carried facilities for the proration unit, building a tank battery, and separation equipment and the tank battery. He was not looking to add -- duplicate those facilities, and therefore when he wrote this AFE he did not include facilities.

There was also a concern back in February over the cost of wells in Dagger Draw, and there was a push made within our company to reduce the costs of the wells in Dagger Draw. So a few things were scrutinized in the AFEs, and so -- and they were cut out. So this AFE does not have facilities expenditures on it, and it's a little tight in terms of expenses in a few areas, according to Mr. Springer.

Q. Have you examined the AFE that has been proposed by Nearburg for its competing Application?

A. I have examined that AFE, yes, sir.

Q. Would you discuss -- compare the two AFEs?

A. Well, theirs is -- Their AFE is a little over

$722,000, is their estimate. They have a large number of contingencies in there. Basically, ten percent seems to be added in as a contingencies. That just seems to be a practice of theirs, and that's just the way that is.

In many ways they're comparative. But again, this one -- Our practice when we were looking -- When this AFE was written, we were looking at cutting out DSTs. We had been doing a large number of DSTs on each well. We were going to reduce the DST costs.

Plus, this one did not carry the facility costs. I don't have Nearburg's AFE, so I can't do a line-by line comparison right here, but --

Q. Now, you have studied the actual completed-well costs by both Yates and Nearburg in this area, have you not?

A. Yes, sir, I have. In fact, that is Exhibit Number 11, if we may move on to that.

Q. All right. First of all, though, let's do a little prefaratory work.

With respect to the wells that Yates operates out here in the Dagger Draw, approximately how many wells would that be?

A. We operate approximately 180 wells in the North and South Dagger Draw Pools.

Q. The experience that Yates has, is that

considerably more than Nearburg has?

A. It's approximately a 10-to-1 ratio, the number of wells we operate versus the number of wells they operate. And I say "approximate"; it's not an exact number.

Q. Why don't you turn to Exhibit 11, and why don't you discuss the significance of it with respect to what you've just been telling us.

A. Again, I've presented an exhibit such as this before, but it contains -- it shows the wells that we have drilled in which Nearburg is a participant, the wells Nearburg has drilled in which Yates Petroleum or one of the Yates companies is a participant.

And this, I believe, is a very -- AFEs are written and you can make them say just about anything. But the facts of the matter of how much you spend drilling wells don't really -- You can't bend those numbers. I mean, they're facts, they're book numbers. That's what's in the systems.

We've got approximately 18 wells in our -- in the data pool that we've drilled, and they have -- and -- that they have an interest in. The average on those wells is $664,794. I've rounded off to dollars in this exhibit.

It's interesting to note that I have just recently added four new wells to this list, and the average on the most recently drilled wells is $635,000, so less

than this average. We have brought the cost down on the wells.

Q. Has this been a significant concern of Yates Petroleum out in the Dagger Draw area or a concern of Yates management?

A. Yes, we are continually trying to find ways to more economically complete wells, and one of the best ways to do that is to lower the up-front costs.

Nearburg -- The four wells for which I have information, it's $719,895. Very, very consistent with the AFE that they have written. I feel their numbers for what they have written are very, very close.

But when you just look at the historical figures, there's about $55,000 difference between the two companies.

Q. All right. In your opinion, Mr. Fant, and based upon your experience in the oil industry and not just with Yates Petroleum, do you feel that this added experience, the drilling of the great number of wells, benefits Yates in its ability as an operator to drill less costly wells and thus increase the economics or better the economics of the wells drilled out there?

A. Absolutely. Not only do we have the experience in drilling them, but we have greater experience in completing them, and that is one of the things I'd like to discuss on Exhibit 12.

Q. All right. Would you -- Are you ready to turn to Exhibit 12 at this time?

A. Yes.

Q. All right. Would you identify what it is, and then explain its significance?

A. Okay, Exhibit 12 is simply a plat of the basic area surrounding Section 21. What I've taken is -- and subdivided each section into the proration unit for that section, and I've calculated the water-oil ratio for that proration unit. That is the number that is written in bold numbers in the middle of each proration unit.

Now, I've also marked on here in the center of the section, you can see the black proration unit that has the Yates and the Nearburg location.

It also locates the Osage Number 1, and there's a saltwater disposal well located in Section 22 that is the Anadarko.

Q. It's almost -- The heavy dark blue almost blocked it out, but it is marked there in the northwest of 22, is it not?

A. Yes, it's not real easy to see, but it's there.

The significance of this particular plat is, I have color-coded -- generally color-coded these water-oil ratios. The more green, the lower the water-oil ratio, i.e., the more oil you're producing for every barrel of

water. As they tend towards blue, you get more water with your oil.

We are constantly striving out here to reduce the water-oil ratios in the wells, to reduce water production in the wells, because that's the single highest expense over the life of the well, is saltwater disposal.

And as Mr. May presented earlier, we have a northeast-dipping nose coming through this portion of the area, and that is dramatically shown by this plat as most of the green is in the southwest and the bluer proration units are up to the northeast, So as you go northeast, you're getting a lot more water.

Now, that is the big concern -- one of the big concerns in drilling, of which location to drill. We feel that as you -- if you pick -- In choosing the location that Yates Petroleum chose of the Ross 14, we're moving back towards the west. Of the two locations that we feel we can drill in this proration unit right now, which is Unit A or Unit B, B is further to the west, closer to the low water-oil ratio production, and that's one of the most -- the biggest concerns.

You know, we feel that as a prudent operator, we ought to move that direction. Conoco basically has agreed with us in choosing to sign an AFE for that location. That's -- You know, that's basically all there is

associated with this plat, is that the Yates Petroleum location is closer to low-water-oil-ratio production. And that's critical in this portion of Dagger Draw because we are moving downdip, and as you move downdip your water production is increasing.

And we feel it's -- we should -- and that supported -- Mr. May was speaking of being 10 to 15 feet higher. This plat supports that basic contention.

Q. I was noticing in looking at -- and comparing your Exhibit 12 with Mr. May's Exhibit 8 --

A. Yes.

Q. -- there is a -- when you look at his structure map, there appears to be in the southwest corner -- excuse me, the southeast corner of Section 20, explanation structurally for the higher oil -- water ratio to oil, does it not?

A. Yes.

Q. So this plat -- Structurally they're consistent, and they explain one another I guess; is that correct?

A. To a degree, yes. There are other considerations that can cause the higher water-oil ratios, but primarily structure is one of the biggest things to cause that.

Q. Well, as a reservoir engineer, do you feel it is safer, more conservative, then, to take the position that Yates is doing and try to stay closer to known production,

like they are doing?

A. Absolutely, known economic production.

Q. All right. Is there any other comment that you'd like to make with respect to your Exhibit 12?

A. Not at this point.

Q. All right. Turn, then, to your Exhibit Number 13. If you'd explain -- One, identify it for the record, and then explain its significance.

A. The Exhibit 13 is a plot of the aggregate producing water-oil ratio for the Yates Petroleum wells in the Dagger Draw pools -- that's both North and South -- you know, plots from January of 1991 up through May of this year.

And the reason I bring this point is, from mid-1992 up through January -- up through mid-1994, we had a dramatically increasing water-oil ratio in our production. It was because of shutting in some wells and things of that nature. It kind of bounced around in late 1994.

But if you'll notice, in 1995 it's taken a dramatic downturn. We have employed -- not employed, but we have reorganized, a different gentleman is doing the completions in Dagger Draw. He's obviously very good at keeping the water-oil ratios down, and he has helped us dramatically reduce not only our water-oil ratios in the new wells, but he's been able to make it -- you know, the

numbers affect the fieldwide numbers. So the new wells are dramatically lower than the water-oil ratio in the other ones.

And that just goes back to the experience factor of our company. We've completed so many wells, and they're -- In this particular area, Mr. Collins has learned the techniques for completing the wells with lower water-oil ratio without sacrificing oil production.

Q. With respect to this improved performance of Yates' wells, besides completion practices, does just the choice of locating the wells -- do you feel that that has played a practice [*sic*], based on Yates' experience gained from drilling?

A. I believe so. You know, it's been a combined effort from the engineering and the geological department in picking locations, and the wells that have been put on have increased production dramatically, oil production.

Q. In your opinion as a reservoir engineer, and based on your experience in this area and this field itself, do you have an opinion as to which location is more economically sound from a sense of having to deal with risk, of the two proposed locations?

A. Oh, I believe that the westernmost of the two, the Yates Petroleum location, presents the lower risk and the better potential for completing an economic well.

Q. Well, with respect to the -- the double-prong duty of the Oil Division to prevent waste and protect correlative rights, in your opinion which of these two locations would better promote that obligation?

A. I believe that granting Yates' Application will help us to prevent waste and drill the wells with the lower water-oil ratio and allow the interest owners to recover their oil underlying that proration unit.

Q. During some cross-examination of Mr. May, I'm sure you heard the questioning which dealt -- and basically posed the question to Mr. May that, well, the Yates Petroleum location is closer to the Osage well than the Nearburg.

Do you feel that just a simple analysis of that sort has any validity in this particular area?

A. Well, the traditional -- I don't believe that that straight -- just drawing a circle around the well is valid in Dagger Draw. Mr. May alluded to the fact that the porosity development or the flow paths within the Canyon might take the water in different directions, that we can't predict.

Furthermore, that would be traditionally what we just call bubble-mapping. I don't believe bubble-mapping can be done in Dagger Draw at this time for two primary reasons.

Number one, we don't know what the displacement efficiency is, how the fluids displace within Dagger Draw.

But probably more importantly, we get numbers from the porosity logs that will tell us a ϕh number. We can calculate a porosity over the interval. I've done a study, started looking at things with the Schlumberger personnel who are experts in the area of well-log interpretation, and basically what we find is that the well logs are not -- the porosity indicated by the well logs is not the true porosity. It's not anywhere -- really anywhere near accurate. Based upon the fluid volumes that are produced in these wells, the numbers can't be accurate.

And the displacement efficiency and the ϕh calculations in a bubble map, that's basically the primary consideration, that's the two primary inputs that the engineer has to calculate. And if you can't get a good handle on those, you can't do bubble-mapping.

It would be invalid to do bubble-mapping in this type of reservoir, or to use it -- to just straight use bubble-mapping as the technique for picking a location.

Q. Well, Mr. Fant, if you have to -- if you have two concerns, one -- Which would you give more importance to: closeology to the water well or closeology to known production?

A. My biggest concern at this point, moving downdip,

is staying close to the producing wells, is to stay near the wells that have produced commercial quantities of oil.

Q. Now, you have looked at the Anadarko well, disposal well in this Ross Ranch 2. You're aware that the interval of injection in the Anadarko well is below that of the production zones in the Ross Ranch Number 2?

A. Yes, sir.

Q. And there was some questioning along the lines, with Mr. May, that the Osage well has a broader interval of injection, and I think there was some allusion that that may mean that there's probably more room for damage.

But do you feel that that argument can consistently be made in light of the fact that the injection has been confined to the lower zones, and yet it's affected the higher zones in the Ross Ranch? And would you comment on that?

A. Well, the -- You know, as Mr. May said, we don't really know what's going on in the reservoir a few feet out from -- or -- He didn't say this, but he was kind of alluding to it. We don't exactly know how the fluids move within the reservoir.

We drill an 8-inch borehole, we make porosity measurements inside, and that may reach out a foot to two feet. And then we try to extrapolate that to 160 acres, something this big to 160 acres.

Just not -- We can't say exactly what the fluid movements are specifically out there. The fluid could move up unaffected, it's a possibility. Fluid could be moving up in their well, in the Ross Ranch 22 Number 2. It could be moving up behind pipe. You know, lots of things can happen there.

Q. All right. Is there anything further that you would like to comment on with respect to your exhibits and what have you that you presented here?

A. Not at this point.

MR. ERNEST CARROLL: Mr. Examiner, I would move admission of Yates Exhibits 10, 11, 12 and 13.

EXAMINER CATANACH: Exhibits 10, 11, 12 and 13 will be admitted as evidence.

MR. ERNEST CARROLL: I pass the witness.

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Fant, I don't understand Exhibit 12. Would you pull that out so I can talk to you about it?

A. Sure.

Q. In Section 16, up in the northeast quarter, there's a value of 2.4?

A. Yes, sir.

Q. Is that the ratio between total oil and total water in that well? Is that a cumulative number?

A. No, that is as of -- for all of the proration units except the one in Section 22, that particular value is for the 25th of July of 1995.

I took current production, as current as I could get.

Q. All right. Is that a monthly volume you're working with?

A. That was for that day.

Q. On a particular day, then, at that well, I would be producing 2.5 barrels of water per barrel of oil recovered? Did I do that right?

A. Basically, yes, sir.

Q. All right.

A. It might fluctuate a little, but not significantly.

Q. All right. I've got one data point in that spacing unit --

A. Uh-huh.

Q. -- and so you have -- I guess the color code has some significance. You have shaded the whole spacing unit based upon that data point?

A. Yes.

Q. All right. When I go over into the northwest --

A. Uh-huh.

Q. -- I've got one value but two data points?

A. Yes, sir.

Q. We just average the two?

A. Well, no, it's not an average, it's -- Add the oil production from the two wells together, the water production from the two wells together, then take the ratio.

Q. All right. Have you attempted to take those data points of water-oil ratio and attempt to contour them in any fashion within the reservoir?

A. No, I haven't. This is -- You know, basically the color-coding is a pseudo-contouring.

Q. All right. And it will presume that you're taking the data point using that value and then drawing the assumption for that particular spacing unit?

A. Yes, sir.

Q. In 21 in the northwest quarter, the two data points are in the west half, and yet the display shades in the whole spacing unit with that value. That was your methodology, right?

A. Yes, it was strictly color in the whole proration unit.

Q. All right. Give me a sense of the water volumes. If I'm in Section 21, in one of these existing wells, how many barrels of water am I producing to get a barrel of oil? Is there a --

A. In Section 21 -- Well, in the northwest you would be producing 1.6 barrels of water for every barrel of oil.

Q. All right. In terms of -- Are those Yates-operated wells there?

A. Yes, all of these on this particular plat, other than the one in Section 22, are Yates-operated wells.

Q. All right. When I look at a well in terms of daily rate, what is the total water volume you're dealing with? Give me an estimate.

A. In terms of a well or a specific well?

Q. In general within this area, how much total fluids am I moving on a daily basis?

A. Well, I think I can -- It varies dramatically within -- from well to well. But as Mr. May pointed out, in Section 21 those three proration units are basically at allowable.

Q. Well, let's do those, then.

A. That would be 700 barrels a day, so it would be 1.6 times 700, is how much water we're moving in the northwest quarter, you know, which -- off the top of my head, 1100 barrels a day up in the northwest quarter.

Q. All right. You've given me a sense of volumes now.

A. Uh-huh.

Q. For all the Yates-operated wells that I'm seeing

on this display, where do you take that water and dispose of it?

A. That water is gathered into our State CO water system, and we have multiples of wells, of injection wells, connected to the State CO water system.

We recently completed a trunk line -- See, our wells in Dagger Draw, when we complete a well, the State CO water system connects to the well. The well is not charged for that connection.

Q. No, that wasn't my issue.

My issue is, the volume of water being gathered within the producing wells needs to be taken somewhere and disposed of.

A. It's by the State CO water system.

Q. All right. It's in your system.

A. Uh-huh.

Q. As part of that system at one point you had the Osage disposal well --

A. Yes.

Q. -- that you operated?

A. Yes.

Q. And apparently as of October, 1993, you substantially curtailed that well?

A. Almost totally.

Q. All right. What is the total cumulative water

disposed of in that well when it was part of the system? Do you know?

A. I don't have an exact number, but it's approximately 6.5 million barrels were injected into the Osage Number 1 as part of the State CO water system.

Q. How much are you putting in there now?

A. We have stopped injection totally into the Osage. We have --

Q. When did you stop?

A. I want to say April of this year, approximately around that time frame.

Q. All right. Have you attempted to determine as an engineer where the 6.5 million barrels of water move to within the reservoir?

A. That basically goes back to my statements before. I do not feel that we have the technology available to us as engineers at this time to do that, because we cannot measure the porosity correctly in Dagger Draw.

Q. All right. As a reservoir engineer, then, what tells you the selection of the wells between the Ross EG 14 and the Alto 21?

A. The proximity to known economic production. We want to stay as close as possible to known economic production.

Q. Are all the wells hooked into your saltwater

disposal well system putting water back into the Dagger Draw reservoir, into the Cisco or into the Canyon reservoir?

A. The State CO water system contains basically two injection intervals, primarily.

Much of it goes into the Devonian. Some does go into the Canyon.

We have instituted a pilot waterflood in South Dagger Draw and created a trunk line moving from this area down to there, and so we have approximately 17,000 to 20,000 barrels a day of water going into a pilot waterflood in the Canyon.

Q. In the disposal system that Yates operates, where is the nearest injection or disposal well to Section 21?

A. I honestly -- I am not the reservoir engineer for the disposal system, so I would be hesitant to say exactly where the nearest one is.

Q. All right. I was just trying to get a sense -- You've expressed concern --

A. I know we have one well up in Section -- I believe it's 14, the Cotton, but we have just recently curtailed injection with the completion of our trunk line to the south, we have reduced injection.

But I do not know if we have a Devonian injection well closer than that.

Q. The Cotton disposal well in 14 would have been disposing into the Cisco/Canyon formation, wouldn't it?

A. Yes, sir.

MR. KELLAHIN: Okay. I have nothing else, Mr. Examiner.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Fant, your -- you stated that your AFE was low. Do you have any idea what that actual figure might be?

A. My best estimate to you is the completion from the last four wells, and I'll just briefly -- That's the Hinkle 2 -- you might just mark them off -- the Patriot 10, the Boyd 6 and the Tackitt 3.

The average of those four wells is $635,000, and in speaking with the drilling superintendent, he felt that would be a good -- an accurate number.

EXAMINER CATANACH: All right. I have nothing further.

MR. ERNEST CARROLL: Mr. Examiner, that would complete our case.

EXAMINER CATANACH: Okay. Take a short break here.

(Thereupon, a recess was taken at 4:51 p.m.)

(The following proceedings had at 5:05 p.m.)

ROBERT G. SHELTON,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Shelton, would you please state your name and occupation?

A. My name is Bob Shelton. I'm a landman for Nearburg Exploration Company.

Q. Where do you reside, sir?

A. Midland, Texas.

Q. On prior occasions you have testified and qualified before the agency as an expert --

A. Yes, I have.

Q. -- in matters of petroleum land management?

A. Yes, I have.

Q. Do your duties with Nearburg Exploration Company and Nearburg Producing Company involve negotiating with Yates with regards to the development of spacing units in which you have working interests among the companies in the North Dagger Draw Pool?

A. Yes, they do.

Q. And have you been personally involved in this case?

A. I have been.

MR. KELLAHIN: We tender Mr. Shelton as an expert witness.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) If you'll turn to Exhibit 1 and identify and describe what you're showing.

A. Exhibit 1 is simply a locator map that indicates where their proposed location of the Alto 21 Number 2 well is, the appropriate 160-acre spacing unit.

And it shows other locations, as did Yates' map. It shows where Nearburg participates with Yates, and we have agreed to allow them to operate the units in red.

Q. All right. Let's turn to the next display, Exhibit Number 2. What's the source of this data?

A. Well, this source of the data is compiled from two sources: landman checks of the records and also a title opinion rendered through Mr. Vandiver of the Fisk-Vandiver law firm, which his title opinion was done for Yates and furnished to us as a working interest owner.

And it shows our ownership interest and the various ownership interests of Yates and all the other companies in the 160-acre unit.

Q. By Ms. Porter's tabulation, I believe she had credited Nearburg with the Kerr-McGee interests in this spacing unit?

A. Yes, that's correct.

Q. Would you look at Exhibit 2 and describe for me what one of your concerns is about your ability to consolidate some of your interests?

A. One of our major concerns, and the reason we're here now and the reason we want to go ahead and get something done immediately, and virtually have to, is because we've got a Kerr McGee interest in the northeast-northeast and also in the southwest-northeast, comprising 7.5 acres out of the unit, which expires September 14th, 1995.

And we feel like it's imperative to protect our interest and that we want to go out, we want to operate, we want to drill a well, and we want to have time to be able to do it before our expiration.

Q. I don't propose to ask you to detail the willingness of you and Nearburg to negotiate a potential solution, but have you engaged on a voluntary basis with Yates and their personnel in an attempt to resolve this issue?

A. Yes, we have talked to Yates' personnel to try to resolve this issue before coming up here.

Q. And you have not been successful?

A. We have not been successful.

Q. You are now out of time, in your opinion, and you're asking the agency to make some decision on this

case?

A. Yes, so we can protect our leases, our expiring lease.

Q. Ms. Porter had a different tabulation or breakdown of the total percentages. You're showing an Exhibit 3 in which you have used your information to come up with a percentage allocation.

Summarize what you've done, and then we'll talk about your impression of her work.

A. Well, this is the tabulation of the ownership that we got for the -- what they're calling the lower zone, below 7804, I believe, which we believe by far the majority of the production will be in.

It shows Nearburg at 46.09375, Yates at 47.65625 and Conoco at 6.25.

Q. You have no information about what Conoco's position was with regards to what they intended to do in the spacing unit?

A. I know it's not the practice of anybody to drill a well out here without an operating agreement, and I feel comfortable that there is no operating agreement between Yates and Conoco.

I know there may have been an AFE signed when the original AFE was proposed. But now having that operating agreement terminated, I would just bet you that Yates would

want another operating agreement before they drilled.

Q. Let's talk about the sequence of the chronology. I think all these documents that we've provided the Division, plus other information, have been summarized by you on a chronology sheet. Do you have that before you?

A. Yes. And let me -- You know, I'll try to go through this very briefly, because to some degree it's been discussed by Kathy.

We proposed the first well out here because we wanted to see a well drilled in this 160 acres. We proposed a well in 1980, on August 17th. It's offset to the Osage injection well.

Yates came back and proposed a well at 1980 from the north, 660 from the east on August 23rd.

We said, That's fine, we'll drill your location, and we agreed to drill that, signed an operating agreement. The operating agreement provided for a date which the well was not commenced under the operating agreement, and the operating agreement expired.

Since that period of time, we've proposed the Alto 21 Number 2 well, and Yates has proposed two wells in there, and at least until this hearing date, I was unaware of which well they really wanted to drill.

Both companies show now in the chronology that we both filed force-poolings, and there is no currently

effective operating agreement on the spacing unit.

Q. Do you have a recommendation with regards to the overhead rates in the pooling Application?

I think Ms. Porter, if my memory serves me right, said $5400 drilling well and I guess $540 a month producing-well rate?

A. Those are the current rates that both of the companies in their operating agreements are charging one another. They're acceptable. We use that rate on operating agreements where we operate and also where other people operate, so that's --

Q. So that's not an item of importance by which we have a significant difference to decide this issue?

A. No, it's not.

Q. Based upon your knowledge, Mr. Shelton, does Nearburg -- Now, it's Nearburg Producing that's the actual operator of the well?

A. That is correct.

Q. And the ownership interest is in Nearburg Exploration Company?

A. That is correct.

Q. And so the Application is filed by the Exploration Company?

A. Right.

Q. And you're seeking to designate the Producing

Company as operator, should the Division allow you to operate this spacing unit?

A. That is correct.

Q. All right. In terms of your knowledge of that activity, do you know whether or not you have additional capacity in your saltwater disposal system so that if you're allowed to operate the spacing unit, including your choice of well location, that you'll have the ability to do that effectively and efficiently?

A. Yes, we will. Mr. McDonald has exhibits to verify this, but we have capacity in our system and all of our wells are Devonian disposal wells.

We have a water line at the Ross Ranch 22 Number 2, which is very close to our proposed location. We simply connect it and send it over there into the Devonian.

Q. Apart from expressing your concern about losing committed leases that are now held by Nearburg from Kerr-McGee --

A. That's correct.

Q. -- are there other items from the land perspective that you wish to share with the Examiner concerning his decision in this case?

A. Well, I don't believe the ownership being, you know, virtually 1.5 percent is a material fact. We have facilities and everything in the area.

I believe we ought to have the opportunity to take the commitment to drill the well and protect our own rights under the leases that we have that are expiring.

Q. All right.

A. And I'm not convinced that I think Yates is prepared to go out and drill this well and in our behalf do it by the time our leases expire to protect our expiring lease.

Q. Do you have any information or degree of confidence with regards to how you wish to handle Conoco's participation?

The issue here today is between you and Yates as to Conoco. Would you afford them the chance to join and sign your agreements if the Division allows you to operate in the same fashion without --

A. Absolutely, we've had many conversations with Conoco, with Warren Richardson, the landman that runs this area for them. And we know, and I'm sure Yates knows too, Conoco is going to participate in whatever well is selected. If it's our well they'll go with us, if it's Yates' well they'll participate with Yates.

MR. KELLAHIN: That concludes my examination of Mr. Shelton.

I'd like to move at this time the introduction of his Exhibits 1 through 12.

EXAMINER CATANACH: Exhibits 1 through 12 will be admitted as evidence.

Mr. Carroll?

CROSS-EXAMINATION

BY MR. ERNEST CARROLL:

Q. Mr. Shelton, you made a comment a moment ago that until this hearing you didn't know what location Yates wanted to drill.

Didn't the filing of this Application in March of 1995 tell you that Yates wanted to drill the proposed location in its Application?

A. It did, but it -- The confusion was by being sent the Rodke application, which was the same as our Alto 22 Number 2, with two proposals. We quite frankly weren't sure which one was --

Q. Well, isn't it also true, Mr. Shelton, that you've had numerous conversations with Mr. Patterson, in which Mr. Patterson unequivocally told you that they wanted to drill the proposed -- the location in the Application first because of its being closer to production?

That statement has been made more than once by Mr. Patterson to you, hasn't it?

A. Well, I know we talked about drilling a well in the proration unit. I don't think we ever -- Randy Patterson and I ever discussed which one. I think we all

agreed that one needed to be drilled in here. I --

Q. Well, then, are you telling me also, Mr. Shelton, that you never asked that question of Mr. Patterson?

A. No, I don't remember talking to him about which location we would drill, no.

Q. In other words, it wasn't that important to you, was it?

A. Well, with two proposals, we didn't know -- We knew which one we wanted to drill.

Q. Now, also with respect to the participation of Conoco with you, have you had conversations about your location with Conoco and got their approval to go with you?

A. No, we've sent them the same proposal that we sent Yates. We sent them an operating agreement with an AFE.

They have not returned those, but I do know from conversations that they will participate in a well in this proration unit. They're not looking to farm out or go nonconsent or make some other arrangement.

Q. And your proposal was set out about the same time that the Yates proposal was originally sent out back in March; isn't that correct?

A. Probably so. Let me see, proposed Alto --

Q. And to this date, Conoco has never sent a signed AFE back to you, have they?

A. No, they have not. And we proposed the well in March.

Q. On your Exhibit Number 4, the fifth notation, it says, "Yates advises NEC it will farm out its interest..."

Isn't it true that Yates said it would consider farming out, and then some 20 days later it sent you the proposal to drill the well which we are here before -- under Yates' Application?

A. Yeah, they said that they would -- at the location that was before everybody at that time, they would probably farm out.

And then rather than doing that, we got another proposal at a different location, that is correct.

Q. Well, the point is that the notation in your Exhibit Number 4 is incorrect. They never did commit the farmout to you, did they?

A. No, they did not commit, they were -- I would have taken that as a very strong suggestion that they were going to -- wanted to farm out and that they would farm out at that location.

Sending another well proposal to us, it's obvious that they decided to drill at another location and not farm out, that's correct.

Q. The very first well that Nearburg proposed to be drilled in this proration unit was the actual location of

the Osage well, wasn't it?

A. That's correct.

Q. The motivating factor at that time that it was proposed -- and -- I don't suppose you know why you overlooked that being a water disposal well, do you, that had been in place for some six or seven years?

A. I don't know that we did overlook it.

Q. Okay. Wasn't it the motivating reason that you picked that Osage, was that that was the closest location to known production at the time?

A. No, I can't address that. Our geologist would have to address why that location was selected.

MR. ERNEST CARROLL: No other questions.

EXAMINATION

BY EXAMINER CATANACH:

Q. Just one, Mr. Shelton. The expiring lease --

A. Uh-huh.

Q. -- are you -- is there any possible way to get an extension on that drilling deadline?

A. We've tried to talk -- I have talked to Kerr-McGee about that, and we have gotten no extension on that oil and gas lease.

Recently there's been a lot of wells that they've farmed out in the north half of 28 that have come in as good wells.

They're looking at this area very closely, and -- You know, I mean, we're prepared to drill by that date if we get the appropriate authorization.

Q. If Yates is awarded the operatorship of this unit and they have 90 days to drill or to spud the well, and -- If the well is not spudded within the September 14th deadline, what's your understanding of what happens to those leases?

A. Those leases would expire, and Conoco would then become a working interest owner who -- I don't know the effect of this pooling whether they would be pooled or not. They may be a totally uncommitted interest.

Q. Conoco or Kerr-McGee?

A. Kerr-McGee. I mean, I think the only way to keep them committed is to make the deadline.

Q. Are you making any such request, that if Yates is awarded operatorship, that they be required to drill by that date?

A. Yes, sir, we are.

We request that the Order require them to commence the well on or before that date.

EXAMINER CATANACH: I have nothing further of the witness.

He may be excused.

MR. KELLAHIN: Jerry, are you all set?

JERRY B. ELGER,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Sir, would you please state your name and occupation?

A. Jerry Elger. I'm a petroleum geologist for Nearburg Producing Company.

Q. Mr. Elger, on prior occasions have you testified before the agency and qualified as an expert --

A. Yes, I have.

Q. -- in the area of petroleum geology?

A. Yes, I have.

Q. Did you make the geologic study and investigation on behalf of Nearburg with regards to this well proposal?

A. Yes, I did.

MR. KELLAHIN: We tender Mr. Elger as an expert witness.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Mr. Elger, let's take your first display, Exhibit 13, and use it by way of illustration to have you describe for me your ultimate geologic conclusion as to which location should be drilled first.

A. The optimum location is Nearburg's proposed location in Unit A of Section 21.

Q. How do you reach that conclusion?

A. Because it structurally is the highest location, on the top of the Canyon dolomite reservoir.

Q. Mr. May's desire, one of the components of his position, was to be higher structurally than the disposal well.

A. My map departs from his interpretation in that, and when we get to the cross-section the explanation for why the Yates location is structurally low to the Nearburg location will become apparent.

Q. Mr. May expressed concerns about the proximity of these locations to either one or both of the disposal wells. What's your attitude and feeling about that topic?

A. From a geological perspective, since most of the disposal water occurred in the Yates Osage well, the 6.5 million barrels, the Nearburg location, proposed drill site, is situated optimally to be away from any damage that may have occurred due to that disposal in that proration unit.

Q. All right. Let's set aside the structure map for a moment and look at the cross-section so that we can see the bases for your conclusion.

You've duplicated the structure map to a smaller

scale, and you have put it on your structure map, have you not -- or your cross-section?

A. Yes.

Q. All right. Let's address the first issue of your conclusion about the Nearburg location being higher structurally than the Yates location. Can you quantify that for us in terms of a distance or a thickness or a --

A. Well, this -- The cross-section is a structural cross-section, unlike the cross-section that Yates incorporated in their testimony, so that you can see from well to well where the top of the dolomite is relative to each of the wells across the area.

Q. Are you and Mr. May using the same top of the Canyon dolomite as the marker point?

A. Basically, yes.

Q. So that if he was to prepare a structural cross-section, as you have done, there would be no disagreement between you on where you were picking and correlating these logs?

A. That's correct.

Q. All right. So what does it show you?

A. Well, I'd like to start through this cross-section from -- on the left side at A, which incorporates two wells situated in the southwest corner of Section 16.

Q. Now, you're using two additional wells that

weren't utilized by Mr. May in his cross-section?

A. That's correct.

Q. Why have you chosen to do this?

A. Well, because they show the relationship of the reservoir rock and lack of reservoir rock in the area proximal to where Yates is proposing to drill their well.

Q. All right. Lead us through your conclusions, then, as we go from A to A'.

A. Okay. The Yates Amole State Com Number 1 was drilled in 1993 at a footage location 660 from the southwest corner of Section 16.

Q. That's the first well on the left side of the cross-section?

A. Yes.

Q. Okay. What does it show you?

A. Well, that well was perforated in the dolomite reservoir that's indicated in the depth column on that well log, and you'll see that on this presentation, dolomite reservoir rock has been shaded orange.

The separation between the density and neutron curves is a good indicator -- that in conjunction with the PE curves are good indicators as to where the Canyon formation is dolomite versus a limestone section. You'll see --

Q. The hydrocarbons are going to be in the dolomite,

as opposed to the limestones in this reservoir?

A. That's correct. The limestone is a nonreservoir facies.

Q. So in this first log on the first well, there is a break in the dolomite that you define to be limestone?

A. That's correct.

Q. Okay. What happens next?

A. Well, Yates perforated that well and completed that well as a Canyon producer, and over a period of two years its cum production has been roughly 33,500 barrels of oil, 67 million cubic feet of gas.

Q. Those notations are at the bottom of the log section on the display?

A. Yes, they are.

Q. All right, continue.

A. Nearburg has an interest in this well, and the cumulative production over the life of this well is projected to be roughly 40,000 barrels of oil, which is really not a commercial producer.

A second well was drilled in that same proration unit two years later by Yates Petroleum as the Amole State Com 2 Number 1 well. That well was situated 17- -- read it on -- it's on the log header -- 1780 from the south line and 1980 from the west line.

That well -- The relationship between those two

wells is that you're moving into an area where there's a lot less dolomite reservoir rock available within the hydrocarbon column of the Canyon formation, as is evidenced by the increase in the thickness of the limestone section that's displayed on the cross-section.

The well was completed from perforations, again indicated in the depth column, and potentialed fairly recently, in mid-July, for 162 oil and 665,000 cubic feet of gas.

Q. When you look at the log on this second well in the cross-section, what has now happened to the thickness of the limestone interval as shown on the log?

A. Two things. On the top of the dolomite -- The top of the dolomite reservoir rock has dropped structurally. And the amount of dolomite rock that's available to contain hydrocarbons, or be reservoir rock, is limited, or it's decreasing.

Q. All right. So when we look at the top of the dolomite marker point, we can see that that has dropped structurally down as we've moved to this well?

A. Yeah, and one of the main reasons for that is because there's about a 25-foot limestone member immediately at the top of the Canyon bank system itself that is nonreservoir limestone, then you get a little segment of dolomite, and then a massive segment of

nonreservoir limestone.

Q. How does this data affect or influence the Yates location as you have projected it as the next item of information on the cross-section?

A. Well, if I may proceed all the way to the Yates Osage SWD well, which is situated in the southwest corner of the northeast corner of Section 21, there still is a remnant of that upper limestone segment that extends all the way from that Amole Number 2 down to this location. And it appears to me that the continuity of that limestone section probably thickens somewhere between the Yates Osage well and the Amole 2, right where Yates is proposing to drill their Ross AG Number 14 location.

Q. Let me understand your method. If you orient the cross-section from northwest to southeast, you have data points northwest of Yates' location, and one south of that location. You make the correlation and put it on the structure map, and you determine, then, from the data what about the Yates location?

A. That there's a very good probability that the top of the dolomite will be low relative to the top of the Canyon, as it is in the Osage, and the well that Mr. May displayed on his cross-section, for instance, so that the top of the dolomite would be structurally low to the Osage well --

Q. By Mr. --

A. -- to Yates' Osage well.

Q. By Mr. May omitting the two control points you utilized in your cross-sections, then, he has not been able to see this limestone portion of the reservoir that is nonproductive?

A. That's correct, that in conjunction with the fact that the massive limestone member that exists in the Amole State Com Number 2, which is some 50 to 60 feet thick, that member is not present in the Yates Osage SWD well in Section 21. So there's a pinchout -- or there's a facies change from limestone to dolomite that exists somewhere between those two wellbores, and there's a good possibility that extends across the Yates-proposed drill site, the EG 14.

Q. In addition to the risk introduced at the Yates location because of the presence of limestone, where are they structurally when you compare the top of the dolomite in their location to that in the Osage disposal well that they operate?

A. They're low.

Q. How much low?

A. Approximately 30 feet.

Q. All right. Let's continue across the cross-section. You have begun to describe the Yates-operated

Osage disposal well. Describe for us what you see on the log of that well.

A. On the log of the Yates Osage well?

Q. Yes, sir, and in the additional information you know about that well in terms of whether or not, had this will be drilled in current technology, that it would have been a producer.

A. Yes, I think if this well had utilized a submersible pump to production-test the upper part of the dolomite segment in this well, it would have been a commercial producer.

Q. As we move then, to your location, let's skip your location and pick up your next control point, which is the Ross Ranch 22 Number 2 well, is it?

A. Yes.

Q. All right. Show us your interpretation of that log -- let's tie it back to the disposal well -- and give us your conclusions about where you've projected your well and its location.

A. Okay, our well, our proposed location, falls on a structural nose relative to the top of the dolomite.

The Yates -- The Anadarko Osage SWD and the Nearburg Ross Ranch 22 Number 2 well, both of those wellbores contain -- The Canyon section is entirely dolomite, there's no limestone, nonreservoir limestone

stringers, that exist in either of those two wellbores.

The Nearburg Alto 21-2 proposed location is proximal to this area where the entire Canyon is reservoir rock, versus the Yates-proposed location which has limestone fingers which limit the amount of reservoir rock.

Q. All right. When you're taking the log of the Ross Ranch 22-2 well, that's what? A November -- I'm sorry, a fall of 1994 vintage? I forgot the dates on that well.

A. Yes, October, 1994.

Q. All right. You're utilizing that log information, tying it back into the Yates disposal well. Are you omitting any important information by not utilizing the old logs from the Anadarko disposal well in trying to find the top of the dolomite?

A. No.

Q. So its omission from here is not going to be a deletion of relevant information?

A. No, it's not.

Q. When you tie the Ross Ranch 22-2 log back to the Osage disposal well that Yates operates, where does that put you structurally at your proposed location? Are we going to be high to the disposal well or low to the disposal well?

A. I think as the structural cross-section display

shows, we would be probably a little bit high to the Nearburg Ross Ranch 22 well and probably a little bit low to the Yates Osage Number 1 well.

Q. So when I'm comparing locations in terms of where they're structurally related, what's the number between the Nearburg Alto 21 and your understanding or conclusion about its structural advantage over the Yates well location?

A. Well, it would be 30 feet -- 25 to 30 feet high to the proposed Yates well.

Q. Is that important to you?

A. Yes, it is.

Q. Why?

A. The combination of the amount of reservoir rock available in both wellbores is important, because obviously the more -- the greater the thickness -- Your basic reservoir statistics tell us that the greater the thickness of your pay and structurally the higher it is, when you're dealing with an oil-water contact that's somewhere in the middle of this reservoir section, it translates into more reserves.

Q. In terms of assigning a percentage risk factor, either location justifies the maximum risk, does it not?

A. It does.

Q. In terms of choosing between either location, though, in your opinion, structure matters and therefore

your location is less risky?

A. That's correct.

Q. What about the proximity argument that Mr. May had as to being physically closer to a combination of two disposal wells, rather than his location, which is only close to the high-volume disposal well?

A. Well, I'm just looking at it from the perspective of how much water has been disposed in the Canyon and where it's been disposed in the Canyon.

The Anadarko well is disposed in the lower section of the Canyon, and it's an unknown as to the effects of the upper part of the Canyon. We do know that 6.5 million barrels of water, which is nearly triple what Anadarko put in their wellbore, was disposed of in the Yates Osage well. Therefore it's more critical, in my opinion, to move farther away from that wellbore.

So you have the Nearburg proposed location being drilled farther from that 6.5 million barrels, therefore less risky from that perspective. You have the well in an area where the Canyon section appears to be reservoir rock and not stringers of nonreservoir rock. And you have the fact that the top of the dolomite section, which should occur in our proposed location right at the top of the Canyon, puts it structurally high to the Yates-proposed location.

All those factors go into why Nearburg is here for its Application to drill this Alto 21-2 location.

MR. KELLAHIN: That concludes my examination of Mr. Elger.

We move the introduction of his Exhibits 13 and 14.

EXAMINER CATANACH: Exhibits 13 and 14 will be admitted as evidence.

CROSS-EXAMINATION

BY MR. ERNEST CARROLL:

Q. Mr. Elger, would you find Yates Exhibit Number 8? It should be there on your table to the left.

A. Which one?

Q. Eight, it's the structure map.

A. Yes.

Q. Yeah, the yellow one. And I'll be talking about your Exhibit Number 14. I think it has all the information I need to discuss. Do you have both of those out, the cross-section?

As I understand your testimony, Mr. Elger, the structural advantage at the Nearburg Alto well is in the approximate range of 25 to 30 feet; is that correct?

A. Over the Yates --

Q. Over the Yates --

A. Right.

Q. -- 14, Ross 14.

Now, Mr. Elger, I'd like you to look at the -- at your -- You've reproduced your structure map here, up in the corner of Exhibit 14. And we start with the Ross Ranch well over in Section 22. You have picked the top of the dolomite at -- Well, you've used the number 4170; is that correct, on your --

A. Yes.

Q. And on Yates Exhibit 8, the number is 4172; is that correct?

A. Yes.

Q. Only a difference of two feet; is that correct?

A. Yes.

Q. Then you go down in the bottom of Section 21, starting from the right side of that section, where you have "new well", there's only one foot of difference -- is that correct? -- between your interpretation and Yates' interpretation?

A. Yes, right.

Q. The next well to the left, you've picked exactly the same; is that correct?

A. Yes.

Q. The next well, there's approximately six feet difference; is that correct?

A. Yes.

Q. The next well, right on the same, right?

A. Yes.

Q. Then you go up, five feet difference, correct?

A. Uh-huh.

Q. The next one, right on the same, correct?

A. Yes.

Q. The next one above that, which would go up into Section 16, again you pick exactly the same top; is that correct?

A. That's correct.

Q. The only well that you have picked with any appreciable difference is the next one up there in Section 16 where you pick a -- There's a 23-foot difference.

That 23-foot difference is the most critical number to your interpretation that you arrive at that the Nearburg location is higher structurally, isn't it?

A. There is a difference in the two picks on that well.

Q. In fact, if you had picked the same top that Yates did on that one well, then you would have to agree with Yates' interpretation concerning the structural elevation of the two wells?

A. That's correct.

Q. And from looking at your -- from your exhibit here, Yates even perforated in that stringer that you will

not -- that you do not give credit to; is that correct?

A. Yes, they did.

Q. Mr. Elger, wasn't this a purposeful interpretation here, just to purposely show or give advantage to the Nearburg location?

MR. KELLAHIN: Object to the question. It's argumentative, Mr. Examiner.

EXAMINER CATANACH: I'll agree with Mr. Kellahin.

MR. ERNEST CARROLL: All right, I'll withdraw the question. I think the point is made.

Q. (By Mr. Ernest Carroll) Mr. Elger, you also made one other statement that I would like to talk about.

I think you said it was critical to move as far as you could away from the wellbore of a saltwater disposal well; is that correct?

A. That's correct.

Q. Then why did you drill the Ross Ranch Number 2 that close to the Anadarko saltwater disposal well?

A. Because the Anadarko well was situated at a structurally optimum location that contained hydrocarbons, and we felt the upper part of the Canyon would contain hydrocarbons at that location.

Q. And you were proven wrong, weren't you?

A. Well, it's made some hydrocarbons. Obviously there's hydrocarbons in the dolomite across this area.

Q. Well, Mr. Elger, the key factor here is, you don't know where the water went that was put into the Yates Osage saltwater disposal well, do you?

A. No, that's why it's so extremely important to stay as far away from it as you possibly can.

Q. It's also important to stay as close to production as you can, isn't it, when you're stepping out and trying to expand a field?

A. Well, it depends on the geological factors that go into that particular decision. It's important to get as much reservoir rock and have that reservoir rock as structurally -- in a structurally advantageous position as it is -- it's as important to do that as it is to drill just proximal to good wells.

MR. ERNEST CARROLL: I have no other questions, Mr. Examiner.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Elger, that 23 feet of difference in that one well in Section 16 --

A. That well is on a log, and if you would like, I can certainly address the difference in my pick versus Mr. May's pick.

Q. Yes, I would.

A. All right. The little section we're talking

about, there's a little indication of about five feet of interval, and that interval is between 76- -- roughly -51 and -57, -56 or -57, on the Amole Number 2.

The PE curve is reading a slightly more dolomitic lime section in there, versus a true dolomite. But if you look at the actual density neutrons on that log, there's hardly any separation between the two curves, which are consistent with dolomite, especially reservoir rock dolomite. Therefore, I don't believe that that section is 100-percent dolomite. It's probably more of a limy dolomite or a dolomitic lime. And that's the reason the PE curve is reading what it is.

But in terms of being actual reservoir rock, I don't believe that that little five- or six-foot interval is actually reservoir rock. I think it's nonreservoir rock. They put a hole in it, but I don't believe it's contributing to the reserves of that particular well. Therefore, the true top of the dolomite in that well is down where I've got it marked on that log section.

EXAMINER CATANACH: That's all I have of the witness.

MR. ERNEST CARROLL: That's all I have.

EXAMINER CATANACH: You may be excused.

(Off the record)

MR. KELLAHIN: Tim, you're up to bat.

TIM McDONALD,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Please state your name and occupation.

A. Tim McDonald, I'm a petroleum engineer for Nearburg producing company.

Q. Mr. McDonald, on prior occasions have you testified before the agency and qualified as a petroleum engineer before the Division?

A. Yes, I have.

Q. As part of your duties, have you made an analysis and a comparison of the various AFEs that were circulated among the parties?

A. Yes, I have.

Q. In addition, are you knowledgeable about the operational facilities of Nearburg Producing Company?

A. Yes, I am.

Q. Based upon that study, have you prepared certain exhibits for the Examiner to consider?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. McDonald as an expert petroleum engineer.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) You had three AFEs to work with, did you not?

A. Right.

Q. You had the Yates AFE from February 23rd on the Ross EG Federal 14 well as one AFE, and that had a total AFE cost of about $508,000, was it?

A. That's correct, yes.

Q. And then Yates had a second AFE; it's the March 6th AFE for the Rodke Com well --

A. That's right.

Q. -- which moves it over to Unit Letter A. And based on that AFE, the cost is $685,700 on that proposal?

A. That's correct.

Q. And the third AFE you worked with was Nearburg's AFE for the Alto well, which is the March 13th AFE, and it had a total cost of about $723,000?

A. That's correct.

Q. When we look at Exhibit 15, which of those three AFEs are you comparing?

A. I was comparing the Nearburg Alto 21 Number 2 and the Yates Rodke AOY Com Number 1.

Q. All right, we're comparing the AFEs at the --

A. -- same location --

Q. -- Nearburg preferred location in Unit Letter A?

A. Right.

Q. Show us how you've set up the spreadsheet so we can understand the comparison.

A. What I did was, I incorporated their numbers, their categories, the best I could into our AFE format.

And it shows in the first column, it just shows the item, and then it shows the Nearburg cost, the AFE cost, the Yates cost, before casing point.

In the third column it shows the Nearburg cost and the Yates cost and the after-casing point, and then it shows the Nearburg total and the Yates total.

And the last column is the difference.

Q. If the difference is in parentheses, that indicates that Yates' cost for that row is higher?

A. That's right.

Q. All right, let's go to the second page. We'll look at the last row of the spreadsheet before the sub-block at the bottom. It says "Estimated total well costs".

A. Right, it shows that -- In the "Total" columns it shows the Nearburg total of $722,985 and the Yates total of $685,700, for the difference of a positive $37,285, which means Yates' AFE was that much less than ours.

Q. All right. When you go up the "Difference" rows on the last column there, to what do you attribute all that difference?

A. A lot of the difference is that the -- Well, it

varies. It varies, because there's tank battery difference, there's separator heater treater differences.

But it looked like the main difference, or a large difference, to me, like Yates stated, was really the contingency. We normally -- which is somewhat standard for the industry that I've been around -- we put in about a 10-percent contingency factor, where Yates put in much less. And our total contingencies were $38,855 and Yates' were $4500.

If you take the difference of those, you get $34,355, which, comparing the AFEs again, without the contingencies, Yates is $2930 less. So they're virtually the same.

Q. Do you have an opinion within the background of your expertise as to whether that kind of difference after your analysis should make a matter of significance when he decides this case?

A. I don't think it's significant.

Q. All right. Let's go to the next exhibit. You've got a comparison on Exhibit 16, and of the three AFEs what are you comparing now?

A. I was comparing the two Yates AFEs that we received for this 160-acre unit.

Q. All right. Mr. Fant described some of the things that you had seen in your analysis, had he not?

A. Right. I did this --

Q. Summarize those for us.

A. Yeah. Mainly it looked to me like that one of them was a proposal for an original well in a section -- or in a spacing unit, that included tank batteries and flow lines and those items, and the other one was for a second well. We did include all those facilities.

Q. All right. If you look at the Ross EG Federal 14 AFE, which is their first proposal for their location of preference, it's a lower AFE?

A. That's right.

Q. And it should be higher, because it would have been the first well in the spacing unit?

A. That's why I was confused. That's why I did this exhibit, to figure out what was going on.

Q. All right. In fact, you would reverse it if you were Yates?

A. Certainly.

Q. All right. Let's talk about recent costs. Mr. Fant had some comparisons of recent costs, and his argument was that historically now, with all these averaging and histories, Yates is still about $55,000 cheaper than you are. You heard all that?

A. Right.

Q. All right. What's your recent experience with

regards to costs for wells that you drill and operate?

A. The last two wells that we drilled, I don't have the exact numbers but I know that -- I had seen the final accountings. They're both just under $700,000. So as we drill more wells out here and become more experienced, our costs are dropping also.

Q. Your ultimate conclusion about how to decide this case in terms of selecting an operator based upon AFEs is what, sir?

A. I see very little difference in AFEs. I don't see any difference.

Q. Do you have the facilities available to operate and dispose of water produced out of this well or any other well in the spacing unit?

A. Yes, we do.

Q. Do you have a summary that shows us how you've analyzed that issue?

A. Right, Exhibit Number 17 shows our two disposal wells, their location, the Devonian formation they dispose in, our current capacity in barrels per day, just an average over the past month. And then it shows -- that's the capacity that we have now, with the equipment that are on the wells.

And then it shows our current utilization, which is the average of the last 30 days. And it shows that we

have 28,000 barrels' worth of capacity, and we're using about 19,000 of it.

Q. And your disposal system is hooked into Devonian disposal wells?

A. That's correct.

Q. Mr. Fant utilized a couple of displays, the numbers of which I have forgotten, but the point was, he had calculated some oil-water ratios and then he had plotted them on that colored display.

He attributed the plotted curve to the fact that the operators, and principally Yates, were becoming more efficient in the method by which they were completing the wells?

A. That's correct.

Q. Do you agree, disagree or have any comments on that opinion he shared with us?

A. I just have a comment. I feel like part of it may very well be attributed to that.

But also, I think in this type of reservoir, as we see this stage of depletion that we're in now, we see some flattening of some of the oil declines versus the water, and I think that the ratio is adjusting over time as the reservoir is depleting.

Q. Either you or Yates is using current available information and skilled personnel as which to make your

best judgment on how to minimize water production?

A. That's correct. We're also working with Schlumberger on a program out here -- in fact, we're starting to run. We're running FMIs and what they call spot elan analysis, which is very recent technology which we feel like is very useful in helping us to find a lot of the parameters about the reservoir that we weren't able to find using conventional logs.

Q. Did Mr. Fant's water-oil ratio map afford any information or data to you as an engineer by which you could make decisions over which location was the optimum location to choose?

A. Not really between these two, no, not in a complicated reservoir like this.

MR. KELLAHIN: Thank you, Mr. McDonald.

We move the introduction of his Exhibits 15, 16 and 17.

EXAMINER CATANACH: Exhibit Number 15, 16 and 17 will be admitted as evidence.

CROSS-EXAMINATION

BY MR. ERNEST CARROLL:

Q. You mentioned two wells, recent wells that Nearburg drilled and that were just slightly under $700,000.

Was Yates Petroleum -- Did they own an interest

in either of those two wells?

A. No, they didn't. They were in Section 27.

Q. Were those 100-percent owned by Nearburg, those wells?

A. Yes, they were.

Q. Your comment about -- that as this reservoir reaches the stage of depletion that it is, you could see the flattening of the oil-water ratio -- You are aware that the peak of the production from this field peaked back in the realm of 1992, 1993, aren't you?

A. Volumewise, you mean?

Q. Yeah.

A. Volumewise, yeah.

Q. And you're also aware that for several years after that point -- in fact, it's depicted on Mr. Fant's Exhibit 13 -- that the oil-water ratio kept going up, even though the oil had peaked and began to deplete, to use a term that you used.

A. Yeah, I think a lot of it has to do with where the well's being drilled, whether it's being spaced within a drilled-up area or if they're stepout wells. You have to take all of it into account. I think it's much more complicated than just --

Q. Well, it's much more complicated than your statement, though, isn't it?

A. Right, that's why I just commented. I said I feel like it's probably a factor of both their completion techniques and the reservoir.

MR. ERNEST CARROLL: That's all I have.

EXAMINATION

BY EXAMINER CATANACH:

Q. Just one. Mr. McDonald, what is typically charged for -- What's the disposal rate charged in these -- in your disposal wells?

A. Both Yates and Nearburg and Conoco all charge 25 cents a barrel.

EXAMINER CATANACH: Twenty-five cents a barrel.

I don't have anything else. The witness may be excused.

Mr. Kellahin?

MR. KELLAHIN: That concludes our presentation, Mr. Examiner.

EXAMINER CATANACH: Okay. Would you like to make brief statements, or do you want to waive them?

MR. ERNEST CARROLL: I'd be inclined to waive them. I think you've heard this argument before.

EXAMINER CATANACH: Several times.

MR. KELLAHIN: What I'd like to suggest to you, Mr. Examiner, is that you provide us a chance to give you a draft order.

I will share with you the only item that I think is of concern to me at the immediate moment, is the timing of your action.

In this case we have a time component of importance to Nearburg, which is often not in our disputes, and we do often have the luxury of being able to decide these without being driven by expiring leases.

The Kerr-McGee lease expires. It's a 7-1/2-percent attributable to Nearburg. And if you should award operations to Yates, we need to fairly carefully consider commitments on how they'll commence the well in time so that we don't lose a substantial interest.

Mr. Shelton, in response to a question, said, so long as Yates were to commence the well on or before that September date, it would work. But we all know as a practical matter, putting that deadline in the Order gives no room for error by anybody. And while we think we're entitled to prevail, should we not, we would like to have an expedited Order that had enough time components in it that if Yates operates, we don't lose our lease.

EXAMINER CATANACH: How soon would you like to submit rough-draft orders?

MR. KELLAHIN: I can do it tomorrow.

MR. ERNEST CARROLL: I can't.

MR. KELLAHIN: We've got to fix you up. Next

week sometime, can we do it next week maybe?

MR. ERNEST CARROLL: My real problem is, one, I'm getting hearing aids tomorrow, so I can hear him talking behind my back.

And the second thing, I have a trial that was postponed -- it's about five years old, when Galemy had his heart attack -- and it starts on Wednesday.

MR. KELLAHIN: I'll write your order and mine too.

MR. ERNEST CARROLL: I know you will. That's what I'm afraid of.

That's my only concern, and I am really covered, really covered.

But I don't disagree with what Mr. Kellahin said on the contingency of the problem, and I'm not so sure that it's that important that we get a draft order. This is a pretty open and shut thing, and I understand his concerns. And Yates cannot and will not deny the fact that there's a lease expiration.

But we don't know whether or not they could get it extended, and that's something that, you know, I'm not sure about.

EXAMINER CATANACH: Well, I'll tell you what. I will wait till next Thursday, if I -- to get a rough draft order. If you choose to submit one, Mr. Carroll, you can.

If you don't --

MR. ERNEST CARROLL: All right.

EXAMINER CATANACH: -- you don't have to.

MR. ERNEST CARROLL: I appreciate it. I'll see if I can do it, but I just can't --

EXAMINER CATANACH: After that time, I'll start working on the Order.

Okay, there being nothing further in these cases, Case 11,263 and 11,265 will be taken under advisement.

And this hearing is adjourned.

(Thereupon, these proceedings were concluded at 6:00 p.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11263 11265 heard by me on July 27 1995.

David R. Catanach, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL August 7th, 1995.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998