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:

APPLICATIONS OF YATES PETROLEUM CORPORATION AND NEARBURG EXPLORATION COMPANY

CASE NOS. 11,310
11,311
(Consolidated)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

ORIGINAL

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

August 10th, 1995

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, August 10th, 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

August 10th, 1995
Examiner Hearing
CASE NO. 11,310, 11,311 (Consolidated)

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E X H I B I T S

Yates	Identified	Admitted
Exhibit 1	8	20
Exhibit 2	10	20
Exhibit 3	13	20
Exhibit 4	14	20
Exhibit 5	16	20
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* * *

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A P P E A R A N C E S

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By: W. THOMAS KELLAHIN

* * *

WHEREUPON, the following proceedings were had at 1:10 p.m.:

EXAMINER STOGNER: Hearing will come to order.

At this time I'm going to call Case Number 11,310.

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

EXAMINER STOGNER: At this time I'll call for appearances.

MR. ERNEST CARROLL: Mr. Examiner, I'm Ernest Carroll of the Artesia law firm Losee, Carson, Haas and Carroll, and I'm here representing Yates Petroleum, and I will have three witnesses. Two of them are here, one of them is checking out of his motel and will be here shortly, Mr. Bob Fant.

EXAMINER STOGNER: Okay. Any other appearances?

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

We would request that you call the next case, 11,311, and have these two matters consolidated for hearing purposes.

EXAMINER STOGNER: Any objections, Mr. Carroll?

MR. ERNEST CARROLL: No, Yates would join in that

request.

EXAMINER STOGNER: Okay, in that case at this time I'm going to call Case Number 11,311.

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

EXAMINER STOGNER: Other than Yates Petroleum and Nearburg Exploration Company, is there anybody else here to enter an appearance in either one of these cases, or both?

Mr. Kellahin, how many witnesses do you have?

MR. KELLAHIN: I have three, Mr. Examiner.

EXAMINER STOGNER: Okay. With that, at this time I'd like for the three witnesses to please stand -- or the six witnesses, I should say.

(Thereupon, the witnesses were sworn.)

EXAMINER STOGNER: Since Yates Petroleum Corporation's case is first, I would allow them to go first.

Is there any need for opening statements at this time?

MR. KELLAHIN: We waive an opening statement.

MR. ERNEST CARROLL: We would waive opening statements.

EXAMINER STOGNER: Okay. In that case, your first witness?

MR. ERNEST CARROLL: We call Janet Richardson, Mr. Examiner.

JANET RICHARDSON,

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, place of residence and place of employment for the record?

A. I'm Janet Richardson. I live in Artesia, New Mexico, and I work as a landman for Yates Petroleum Corporation.

Q. Ms. Richardson, have you had an opportunity to testify before the New Mexico Oil Conservation Division and have your credentials accepted as a petroleum landman?

A. Yes, I have.

Q. And are you familiar with the case that is now presently -- or the two cases that are presently being heard now before the Examiner?

A. Yes.

MR. ERNEST CARROLL: Mr. Examiner, I would tender Janet Richardson as an expert in the field of petroleum land management.

EXAMINER STOGNER: Are there any objections?

MR. KELLAHIN: No objection.

EXAMINER STOGNER: Ms. Richardson is so qualified.

Q. (By Mr. Ernest Carroll) Ms. Richardson, you have prepared certain exhibits for presentation today, have you not?

A. Yes, I have.

Q. Would you turn, first of all, to your Exhibit Number 1 and identify what that exhibit is for the record, and then if you would explain its significance.

A. Exhibit Number 1 is a leasehold plat, and it just shows the area in question in Section 16 of Township 19 South, Range 25 East that we are interested in force-pooling.

The southeast quarter of 16 is the spacing unit for this hearing, and our location is in the northwest quarter of the southeast quarter.

The solid yellow depicts acreage that Yates Petroleum and its in-house companies own 100 percent.

Outlined yellow acreage is where we only have a partial interest.

Q. All right. Now, Ms. Richardson, the competing Application, Nearburg Petroleum, is -- Where is their location? It's different or other than the one that Yates Petroleum is advancing in today's case?

A. Yes, the Nearburg location is in the southeast

quarter of the southeast quarter of Section 16, but the same spacing unit.

Q. All right. Now, you've got numbers around. There's actually been four -- On this exhibit there are four locations that are marked; is that not true?

A. Yes, these are locations that we have staked and filed for permit. The only location that we have proposed, however, is the northwest quarter of the southeast quarter.

Q. All right. And is it Yates' position that this is the appropriate location that should be drilled first --

A. Yes.

Q. -- with respect to this proration unit?

A. Yes.

Q. Now, the Application of Yates Petroleum that was filed by me on behalf of your company says the location is 1980 and 1980; is that correct? Or has that location had to have been changed?

A. Yeah, we proposed it at 1980-1980. However, I -- and I'm not sure if it's due to topography or due to a pipeline. They had to move it to 1880 from the south and 1880 from the east.

MR. ERNEST CARROLL: Okay. Mr. Stogner, I do not believe that there is any problem with the advertisement that went out in this case, but I do want to call it to your attention that that location had to be moved basically

100 feet because of some topographical involvement out there.

EXAMINER STOGNER: Actually, the Application is for a well to be drilled at a standard location, and that is a standard location.

MR. ERNEST CARROLL: It is, still, yes, sir.

Q. (By Mr. Ernest Carroll) All right. Now, if you would, let's turn to your Exhibit Number 2. Would you again identify what this is for the record, and then if you could then discuss its significance.

A. Okay, Exhibit Number 2 is again -- Well, it's almost an ownership plat. Again, it centers around Section 16, as Exhibit Number 1 did. The numbers in the northeast quarter of each quarter section is the percentage that Yates, *et al.*, controls.

Q. Now, there is -- What we're looking at is that there is numbers in the cross-hatched -- a little triangular cross-hatched. Some of them are red, some of them are green; is that correct?

A. Yes.

Q. And in looking in the quarter section that we're talking about, there is a number 37.5. Is that --

A. Yes, that 37.5 is the percentage that Yates Petroleum Corporation owns.

Q. Okay. Now, down in the opposite corner, there's

also a number, and in this particular proration unit, 37.5. What is that?

A. Yeah, the southwestern number in each is approximately what Nearburg's interest is in that 160.

Q. All right. And for example, the proration unit directly to the east of this proration unit, where we are having the two wells proposed, there is only one number in the bottom corner, and that being 100. Would that mean that Nearburg owns 100 percent of the offset to the east?

A. Yes.

Q. And also 100 percent to the northeast, then?

A. Yes.

Q. With Yates owning 100 percent to the due north?

A. Yes.

Q. And 81 to the west?

A. Yes, that's correct.

Q. All right. This also shows the completed wells in this particular area; is that correct?

A. Yes, it does.

Q. And in this proration unit it shows four locations, the one that we are proposing and then three more; is that correct?

A. Yes, it does.

Q. Okay. Apparently -- Has it been Yates Petroleum's policy out here after the change in the rules

which would allow more than one well on a proration unit to do this sort of thing, stake all the wells?

A. Yes, it is.

Q. Anything else you would like to call to the attention of the Examiner with respect to this exhibit?

A. The only other thing is just for informational purposes. The blue locations are wells that are operated by Conoco. Black are wells that are operated or proposed by Yates Petroleum. The purple are wells that are proposed by Nearburg. And I believe yellow are just other people, just miscellaneous other people.

Q. So in the -- Most of the producing wells, then, in this area, are operated by Yates Petroleum; is that correct?

A. Yes.

Q. In fact, I only see one -- at this time, one purple circle, which would mean a producing well that is operated by Nearburg; is that correct?

A. Well, it looks like there's a purple oil well in the northwest corner of Section 22, but there also is a gas well in the northeast quarter.

Q. That would be a Morrow well, probably?

A. Yes, it may.

Q. All right. Would you turn, then, to your Exhibit Number 3?

A. Exhibit Number 3 is just a schedule showing the interest owners and how much interest they hold.

What I also did was, I split it out and showed the percentage that had joined versus the percentage that had not joined. And right now, we have joined to our proposal 37.709216 percent, and not joined we have 62.290784 percent.

Q. And Nearburg Petroleum is in that 62.2 percent that is unjoined; is that correct?

A. Yes, they are.

Q. Now, there is one other large interest holder in this, and this is Unit Petroleum; is that correct?

A. Yes.

Q. And Unit Petroleum has not elected to join in your proposal at this time; is that correct?

A. No, they haven't. And when I spoke with them yesterday, they were still undecided as to what they wanted to do.

Q. All right. We'll deal with this a little later.

All of these people that are shown under the interest owner, these are the people that have been given notice of this hearing by Yates Petroleum; is that not true?

A. Yes.

Q. All right. With respect to the people that have

joined, have they actually joined in a joint operating agreement with you? Is that what you mean by that when you say they're joined?

A. Yes, they have all executed a joint operating agreement, and that is --

Q. All right. Is Exhibit 4 a copy of the joint operating agreement that you have been using in this endeavor?

A. Yes, it is. And I have also included copies of the signature pages that we have obtained from these owners.

Q. Now, with respect to the -- This joint operating agreement has in it an amount set aside for the operating overhead; is that not true?

A. Yes, it does. It's $4500 for the drilling well rate and $450 for the producing well rate.

Q. That appears to be somewhat less than what other operators are using in the area, that I have seen; is that correct?

A. Yes, this is an agreement that we had previously used and are still using with Nearburg, that had been acceptable to both parties.

Q. Okay. Well, is Yates Petroleum, at least at this time, willing to accept the $4500 and $450?

A. Yes.

Q. All right. And since you've also agreed to charge those rates with the parties that have joined with you, is that the overhead operating costs that you would like -- that you're asking this Commission [*sic*] to adopt if they grant the Application for compulsory pooling?

A. Yes.

Q. The penalty section of the operating agreement, the nonconsent penalty provisions, they are -- in your operating agreement, are more than what the Commission is authorized by law to grant; is that correct?

A. Yes, they are.

Q. However, is Yates Petroleum asking for the normal 200 percent, cost plus 200 percent, for the force-pooled entities in today's hearing?

A. 200 percent?

Q. The 200-percent penalty --

A. Yes.

Q. -- plus cost?

A. Yes.

Q. That's what you are asking the Commission --

A. Yes, that's what we're asking.

Q. Even though you've got somewhat higher in the operating agreement?

A. Yes.

Q. All right. Is that the -- Is at least a 200-

percent penalty or higher the norm in the Dagger Draw area, to your information?

A. Yes, it is.

Q. And do you feel that that would be a fair and a reasonable penalty, given the -- your information concerning the nature of this well in this area?

A. Yes.

Q. Now, this operating agreement, I notice that it has the 1980 from the south and 1980 from the east location for the initial well, but you've advised your parties it is going to have to be changed; is that correct?

A. Well, I have not advised the parties yet, but I will.

Q. Do you anticipate that that will then create any problem with the parties that have joined with you?

A. No, I do not.

Q. All right. If you would turn, then, to Exhibit Number 5.

A. Exhibit Number 5 is just our authority for expenditure for drilling this well. The dryhole costs are $253,700, and the completed well costs are estimated at $595,700.

I've gone ahead and copied the signature pages for each of the parties that have signed up on it, and they're the same ones that signed the operating agreement.

Q. All right. Was this AFE sent out to all of the parties on the ownership list, including Nearburg?

A. Yes.

Q. Exhibit Number 6, would you identify that?

A. Yes, Exhibit Number 6 is a certificate of mailing where the notices for this hearing have been mailed out. If you'll notice back -- yeah, it shows where -- the certified card -- you know, the receipt came back signed from each of the parties.

But on -- On the next to the last page, it shows two parties who this notice had gone to, but the Post Office tried to deliver it and it just kept coming back, so they sent it back.

Q. Okay, and this is the -- it looks like F.G. Holden Testamentary Trust, Betsy H. Keller?

A. Yes. Oh, and there's --

Q. And also on the next page --

A. -- a third one, Sanford J. Hodge --

Q. All right.

A. -- all of which came back unclaimed.

Q. All right. Have you been able to locate any better address for these individuals?

A. No. And you'll see that they came back unclaimed; they didn't come back saying that that was not their correct address anymore.

Q. Okay. Have you --

A. And also -- Oh.

Q. Have you ever had a -- Have you been able to deal with these people or get any communication to them in the past?

A. No, we have not.

Q. And this is the last known address that you've been able to get from the court records or whatever, county clerk records, for these people; is that correct?

A. Yes.

Q. Now, there's one other individual here on that last page, Adolph P. Schuman.

A. Yes.

Q. What about him?

A. This was sent to him. We had the Post Office checking the records, trying to find out. We never got the green card back. Our assumption is that the Post Office went ahead and delivered it, did not pull the green card off, and --

Q. The letter has not come back either?

A. No, the letter has not come back either.

Q. Now, you have had -- When you conveyed the original AFE and proposal to all of the individuals, you did have that letter accepted by Mr. Schuman at the address that you've been using for him; isn't that correct?

A. It was accepted.

Q. And a green card --

A. And a green card was returned. I don't believe it was Adolph's signature on it, though. Somebody accepted it for him.

Q. All right.

A. And that was back in March.

Q. You never received any contrary information that that was not the address of Mr. Schuman; is that --

A. No.

Q. And you have examined the papers of Nearburg Producing, and they're using the same addresses, are they not, for these individuals?

A. Yes, that's what was on their address list.

Q. Okay. Exhibit 7, what is that?

A. Exhibit 7 is a compilation of waivers that were received from some of the people in the -- on the compulsory pooling.

Q. All right. These waivers were sent out with the notice of the Application; is that correct?

A. Yes, they were.

Q. And these are the group that have returned; is that correct?

A. Yes.

Q. With respect to the proposed well, Yates

Petroleum has received -- already has an application for a permit to drill that has been approved; is that correct?

A. Yes, we do.

Q. All right. We did not make that an exhibit, but Yates does have the 1880 application, APD, approved; is that correct?

A. Yes.

MR. ERNEST CARROLL: Mr. Examiner, I would at this time move admission of Yates Petroleum Exhibits 1 through 7.

EXAMINER STOGNER: Any objection?

MR. KELLAHIN: No objection.

EXAMINER STOGNER: Exhibits 1 through 7 will be admitted into evidence.

MR. ERNEST CARROLL: I would pass the witness, then, at this time.

EXAMINER STOGNER: Thank you, Mr. Carroll.

Mr. Kellahin?

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q. Ms. Richardson, I may have missed it when you were testifying but I can't find a copy of Yates' written proposal by which they propose the formation of the spacing unit in the southeast quarter with the commitment to dedicate that spacing unit to the Boyd X 9 well in Unit

Letter J. Did I miss it?

A. No, now that you bring it up, I do believe it is not here.

Q. All right.

A. We can get you a copy of that, however.

Q. All right. The well proposal by which Yates proposed to the other working interests in the spacing unit for the Boyd X 9 well is at Unit Letter J within the spacing unit, right?

A. Yes.

Q. Northwest-southeast?

A. Yes.

Q. Okay. The other three locations in the 160 that have been staked and for which you have filed for an APD, none of those have a proposal yet by Yates to the other working interest owners along with an appropriate APD; is that correct?

A. Correct.

Q. Okay. You've indicated to us that you already have an approved APD for the Boyd X 9 well in Unit Letter J --

A. Yes, we do.

Q. -- from the Oil Conservation Division in Artesia, I guess?

A. Yes.

Q. When was that filed, and when did you get approval? Don't know? Don't remember?

A. Can I look?

Q. Absolutely.

A. This was filed on March the 30th, 1995, and approved April the 3rd, 1995.

Q. And do you have approved APDs on the other three locations in the spacing unit?

A. I know of one that is approved in the southeast quarter, southeast quarter, and I know that we have filed for the other two, but I have not checked to see that they are actually approved. One would be in the northeast of the southeast, and the other would be in the southwest of the southeast.

Q. What's Yates' reason to, as a working interest owner, file for an APD and get that APD approved before you have consolidated, either on a voluntary basis or by a force-pooling application, the other interest owners within that spacing unit to commit them to the well?

A. I think it was just a -- they were trying to, you know, I guess stay one step ahead. Once the spacing -- You know, where you could drill four wells on a 160, they were anticipating the possibility of actually having four wells.

Right now, I do believe that the reason they have not proposed it to any of the other parties is, they think

that the northwest of the southeast is the best location at this time to be drilled.

Q. Was that done in order to preclude any other working interest owner in the spacing unit from also filing and getting an approved APD for that spacing unit?

A. No, it was not.

Q. Do you know that it's Division practice in Artesia to not issue further APDs to any other working interest owner if you, in fact, already have one? Did you know that happens?

A. I do believe that happens.

Q. The risk factor penalty under the joint operating agreement, that language is a penalty with regards to subsequent operations within the acreage committed to that joint operating agreement, isn't it?

A. Yes.

Q. It has nothing to do with the cost or the risk involved in drilling the initial well; isn't that true?

A. Under the nonconsent penalty?

Q. Yes, ma'am.

A. Yes, that is correct.

Q. The AFE that is presented as Exhibit 5, explain this to me. This is the AFE Yates is proposing for this well?

A. Yes, it is.

Q. It's a March 15th date, is it not?

A. Yes, it is.

Q. And at this point, it's your information that Unit Petroleum, with their share, has not committed to Yates?

A. No, they have not committed to Yates.

MR. KELLAHIN: I have no further questions, Mr. Examiner.

EXAMINER STOGNER: Thank you, Mr. Kellahin.

MR. ERNEST CARROLL: Mr. Examiner --

EXAMINER STOGNER: Mr. Carroll?

MR. ERNEST CARROLL: -- may I -- I forgot to ask just a couple of questions, I apologize.

FURTHER EXAMINATION

BY MR. ERNEST CARROLL:

Q. Ms. Richardson, after Yates Petroleum proposed the Boyd X 9 at the location that's being advocated here before the Commission, did Nearburg send you a proposal?

A. Yes, they have.

Q. And did they send a proposed joint operating agreement?

A. Yes, they did.

Q. And was that operating agreement -- did you detect a significant difference that Yates Petroleum does not agree with and does not want to be made part of any

order of the Commission, should Yates Petroleum not win on one of the two competing Applications?

A. Yes, under their other provisions on page 14, they have added some language that is not anything that we'd ever agreed to before. It's --

Q. What is the language? Would you read it --

A. Yes.

Q. -- so that we know what we're talking about?

A. Yes, it's under Article XV, C, on page 14, and it just says, "Nonoperators authorize operator to receive and direct all product purchasers to pay to operator all proceeds of production from or attributable to the contract area. As evidence of this authority, all product purchasers may rely solely on a copy of this provision authenticated by operator, in lieu of the need for any additional consents or transfer orders from the nonoperators. While operator is receiving all proceeds of production, operator obligates itself to make payments to all working and royalty interest revenues attributable to the interest covered hereby."

Q. This provision would entitle Nearburg to collect all of the moneys from the sale of production and hold them until they disbursed them; is that correct?

A. Yes, that is correct.

Q. And that's what Yates does not agree to, and

that's not the policy that Yates is involved in; is that correct?

A. Correct.

Q. Unless Yates sells the oil for the parties, for the working interests?

A. Yes.

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

EXAMINER STOGNER: Mr. Kellahin?

MR. KELLAHIN: Nothing else, thank you.

EXAMINER STOGNER: Mr. Carroll?

I don't have any questions.

MR. ERNEST CARROLL: We call our next witness, would 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 state your name, place of residence and place of employment?

A. Brent May, I live in Artesia, New Mexico. I work for Yates petroleum as a petroleum geologist.

Q. Mr. May, have you had an occasion to testify before the New Mexico Oil Conservation Division and have your credentials as an expert in the field of petroleum

geology accepted?

A. Yes, I have.

Q. And Mr. May, are you familiar with the two Applications that are now presently being heard, 11,310 and 11,311?

A. Yes, I am.

MR. ERNEST CARROLL: Mr. Examiner, I would tender Mr. May as an expert in the field of petroleum geology.

EXAMINER STOGNER: Are there any objections?

MR. KELLAHIN: No objection.

EXAMINER STOGNER: Mr. May is so qualified.

Q. (By Mr. Ernest Carroll) Mr. May, you have prepared certain exhibits for presentation, have you not?

A. Yes, I have.

Q. Why don't we turn to Exhibit Number 8, and if you would identify for the record what exhibit this is and then discuss the significance to today's cases.

A. This is a stratigraphic cross-section, A-A'.

In the lower right hand corner is a location map showing the trace of the cross-section. The two proposed locations are just due east of this trace.

This is a north-south cross-section with the north on the left. The datum is the base of a shale marker that carries through most of that North Dagger Draw. The top of the Canyon limestone is marked, along with the top

of the Canyon dolomite and the base of the Canyon dolomite.

I might add at this point, the Canyon dolomite is the main objective of both these wells. Canyon dolomite is outlined in purple on the cross-section.

Just starting from the left-hand side with the Yates Petroleum Aparejo "APA" State Com Number 3 located 660 from the north line and 1980 from the east line in Section 16 of 19 South, 25 East, this well was drilled within the last year. We DST'd on the way down in the Canyon dolomite, recovered almost 1100 feet of oil, ran pipe, perforated and IP'd the well for 607 barrels of oil, 648 MCF of gas, and 711 barrels of water per day.

The next well is the Yates Petroleum Aparejo "APA" State Com Number 2, located 2080 feet from the north line, 1780 from the west, in the same section, Section 16.

This well was originally drilled by Roger Hanks. He did set pipe and attempted a completion in the Canyon dolomite, back in the 1970s. He did perforate the upper part of the dolomite, and it's shown graphically on the log. He IP'd the well for 16 barrels of oil and 346 barrels of water. He did not have a sub pump in this well, and that's an important matter on this well.

Yates -- He plugged the well in late 1979 then. Yates re-entered the well earlier this year, re-acidized only that top set of perforations, and IP'd the well for

169 barrels of oil 547 MCF and 1670 barrels of water.

The next well is the Yates Petroleum Amole "AMM" State Com Number 2, 1780 from the south line, 1980 from the west line, in Section 16 of 19 South, 25 East. Again, this well was drilled down by Yates Petroleum. We set pipe and perforated, IP'd the well for 162 barrels of oil, 665 MCF and 3252 barrels of water. This is an important well.

Note that the first two wells I talked about had a fairly good section of limestone before you got into the Canyon dolomite. In this Amole, you're starting to get actually fingers of dolomite appearing where there was lime in the other two wells. Part of an explanation for this is, as you go towards the north from the Amole Number 2, you're going away from the center thick of the dolomite. So you're going towards the edge, you're starting to lose dolomite, and you're especially losing it on the top.

And you look over to the right-hand side of the next well, and you basically have Canyon dolomite all the way through. And that well is centered more in the thick of the dolomite.

Another important matter that I need to point out is that I have picked the top of the dolomite at around 7649, and it's colored in purple with that thin streak of dolomite there. That is, in my opinion, a productive dolomite stringer that is tied into the rest of the main

body of the dolomite.

A couple of weeks ago, in another hearing, Nearburg testified that they believed that even though this was dolomite, they felt it was nonreservoir rock. And if I could proceed on to the next exhibit, I'll even expand upon that further.

Q. All right, that would be Exhibit 9.

A. Yes.

Q. Identify what Exhibit 9 is for the record, Mr. May.

A. This is a partial mud log of the Amole State Number 2.

Take the -- And I guess I ought to orient the mud log first. On the far left-hand side is drill time, going from zero to six minutes a foot. The drill time over to the left means faster, and to the right is slower.

In the center is a lithology column. I have colored in the dolomite purple.

The display on the right of that is a gas -- the hot-wire gases, the chromatograph gases, are shown.

And on the far right is a sample description.

Note, I have what we call a drilling break at around 7665. I've outlined it in red. That correlates to that finger of dolomite. In fact, there's an orange line on the mud log and an orange line on the cross-section.

You can line those up, and that's how they correlate.

Note that that drilling break drilled less than a minute a foot. In fact, it's close to three-quarters of a minute a foot. In fact, it's the best drill time in the dolomite in this well.

Drill time is an indicator of usually porosity, and so I believe this zone has good porosity. It's thin, but it does have good porosity. We did perforate it. I do believe it's reservoir rock, and there's no doubt in my mind it's dolomite. The PE curve backs that up too, on the electric log.

Also, looking at the neutron density curves through that section on the Amole log, the density is showing some porosity but the neutron doesn't show much. And I feel the reason for that is that this zone may be a little gassy. Gas suppresses the neutron curve, and that's my explanation for that.

So I do believe, strongly believe, that that is reservoir rock. That is why I picked the top of that dolomite there, for my top of dolomite. I have a feeling Nearburg will pick lower down on that next finger of dolomite and not include this finger of dolomite in their structure map.

Q. Mr. May, properly picking the top of the dolomite and the reservoir rock, with respect to this Amole well, is

it critical to properly determining what the structure is and the potential of the two competing Applications now before the Division?

A. It helps, let me put it that way. It helps, because the more dolomite you have, the more potential for hydrocarbon column, and this is in the top where the hydrocarbon column would be. And again, as I stated, I definitely believe this is reservoir rock, and this finger is probably tied into the main body of the dolomite.

And it's hard to predict how far away you can get from the Amole State 2 and have that finger thicken up. It could be real close, or it could be a little further away. But in my experience in Dagger Draw, things can happen real quick in Dagger Draw.

Q. All right. We -- I may return to this in a moment, but let's go on to your structure map, Exhibit Number 10, if you would. Or are you through?

A. I was wondering if I could go ahead on to the last log on the right-hand side --

Q. Oh, okay, be fine. I'm sorry, I forgot that we didn't do that.

A. This is the Yates Petroleum Osage Number 1. It's 1980 from the north line, 1980 from the east line in Section 21 of 19 South, 25 East.

This well is an SWD into the Canyon dolomite, and

this has an important bearing on the case too. You might note -- Well, let me just say, Coquina originally drilled this well in 1973. On the way down they ran a couple of DST's. The first one, the upper one, they recovered 840 feet of oil and 930 feet of sulfur water. The next one recovered nothing but water. They plugged the well.

Anadarko, in late 1982, re-entered this well, ran pipe and attempted a completion in the Canyon dolomite. They initially -- Their initial pumping rates were around 75 barrels of oil and 870 barrels of water, and they -- I think by the end they were pumping about 15 to 20 barrels of oil and 300 to 400 barrels of water. I don't believe they had a sub pump on this. And they subsequently walked away from it.

In 1989 -- And you might note at the bottom of this log there was a typo. That should be -- Under Yates Petroleum convert to SWD, that should be 2 of 1989, which I tried to correct. That is when Yates converted this well to a SWD.

At that time, production in the Canyon dolomite was several miles away, it was updip, and Yates -- plus, with the failure of Anadarko to make a completion in the Canyon dolomite, Yates felt like this was going to be nonproductive. So we converted it to a disposal well.

Around in 1993, as production crept up to this

location, we realized there was a possibility that there may be potential around this well and we drastically curtailed the injection, the saltwater disposal -- I should say, the amount of water we disposed into this well. And I think currently today we're not disposing any into it.

Q. Mr. May, does the location of the Canyon dolomite in this Osage 21 -- it corresponds with the dolomite that you have picked in the Amole, and is basically consistent with your theory that as you move back towards the center of the thick of the dolomite here, or as you're moving toward it, you encounter these fingers of reservoir rock?

A. That's correct. You can encounter these fingers in different spots, but yes, as you move away from the center thick you can encounter them.

Q. All right. Is there anything else that you would care to comment on, your Exhibits Number 8 and 9?

A. I think that's it.

Q. All right. If you would turn to Exhibit 10, would you identify it for the record and then discuss its significance?

A. This is a structure map at the top of the canyon, or as the State calls it, Upper Penn dolomite, as a datum. The contour interval is 50 feet, with the colors denoting 100-foot intervals. Both the Yates and the Nearburg proposed locations are shown.

A structural high trending northeast-southwest and plunging to the northeast is present. The two proposed locations are on the flank of this structure. The Yates location should be structurally higher than the Nearburg location by about 15 to 20 feet.

But both locations should be structurally high enough to produce. In fact, if you look at the current wells in Section 16, especially in the north half of 16, they are all structurally lower than the proposed locations, and they are producing.

I might add, there are two gas wells shown in the north half of Section 16. That is incorrect. Those were recently completed to become -- they are Canyon dolomite producers at this time.

In my opinion, the four possible locations in this proration unit will eventually be drilled and probably will eventually produce. But what concerns Yates is the order in which the locations are drilled.d

To the south of the proration unit, and closest to the Nearburg locations, are two saltwater disposal wells into the Canyon dolomite, the first one, in the northeast of Section 21, the Osage, which I have on my cross-section, and another one operated by Anadarko in the northwest quarter of Section 22.

I want to state that it is unknown how these SWDs

might affect nearby producing wells, or potential producing wells. Yates would prefer to proceed towards these SWDs in an orderly manner and not step out towards them. In other words, we would like to move from current production of 40 at a time, towards them, because we don't know what's going to happen around them. They may be productive, they might not; we just don't know at this time. And the Nearburg location is a definite stepout from current production.

Q. Mr. May, this whole area of development is on the northeast flank of the Dagger Draw -- the North Dagger Draw field, is it not?

A. Yes, it's in more the northern position of North Dagger Draw.

Q. And it is getting into the area -- In fact, to the east of this proposed location, there is no Delaware production is there -- I mean Canyon production, excuse me?

A. East of here, there's one in Section 22 that Nearburg produces, and it has a very high water cut. And there's one other well down in -- oh, the -- Section 24, that Nearburg operates. That's several miles off to the east. And that's it.

Q. But those are locations that are southeast --

A. Yes, southeast --

Q. -- of the current location?

A. -- up in this area. Due east, there are no

current producers in the Canyon dolomite.

Q. Now, you mentioned the hearing that was held two weeks ago. The wells that we're talking about in the -- The producing wells, where you have picked the tops -- and you're showing tops here on the wells, the Amole and the other well in the southeast corner of Section 16, and then these producing wells that ring the -- excuse me, southwest corner of 16 -- and then the wells that are along the west side and the east side of Section 21 and in this Ross Ranch 22 well.

All of these tops were shown in the hearing before, with one exception, that being this Amole well. You and the Nearburg geologists agreed to the picking of the top; isn't that correct?

A. That's correct.

Q. And really, what's critical to the differing picture of the structure maps out here between Yates and Nearburg is where you picked the top on this Amole; isn't that correct?

A. It does have an effect, yes, because they show similar data that they did in the first hearing. They will pick the top on the Amole 2 a little bit lower than what I did.

Let me just state now, the Amole is in that northeast of the southwest of 16.

Q. Right, where you show a minus 4149?

A. That's correct.

Q. And if you pick the top lower in the Amole than what you have picked, then it will change the relative position of the two proposed locations, making the Yates lower -- structurally lower to the Nearburg; isn't that correct?

A. Yes, if you pick it -- Yes, pick that lower dolomite finger, it would lower the structure.

Q. That's the net effect, then, of picking a different top than Yates has?

A. Yes.

Q. All right. Anything else that you would like to state with respect to your Exhibit 10?

A. No.

Q. If you would turn to Exhibit 11 again and if you would identify this for the record and then discuss its significance.

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

The map shows a northeast-southwest trending dolomite, which roughly mimics the structure map. Both the Yates and Nearburg locations should have in excess of 275 feet of dolomite, which is excellent for this area.

Note the wells in the north half section of Section 16 have less dolomite, and there's excellent wells up there, so there's not going to be any problem as far as either well having enough dolomite to produce.

Q. Now, Mr. May, there has been -- Ms. Richardson testified that Yates was asking the Division to approve a 200-percent penalty, cost plus 200 percent, for any of those persons force-pooled. Do you feel that that maximum penalty is appropriate for this particular case?

A. Yes, I do.

Q. There is risk, is there not, that there will be -- that a nonproducer might be encountered in this particular proration unit?

A. There's a slight risk of a nonproducer. I think there's a bigger risk of having a poor producer, possibly.

We have every now and then -- Like I said before, Dagger Draw, this Canyon dolomite can change very rapidly. We had some wells down in Section 20 that did not turn out as well as some of the direct offsets and were marginally economic.

So there's always that risk.

Q. The order in which Yates is proposing the locations be drilled, and that -- starting with the one that they're advancing as being first, were those decisions made with the thoughts that you've just discussed in mind?

A. Yes, they were. We decided to pick our proposed location because it was a direct stepout from the current production.

Q. All right. In your professional opinion, would the choosing of the Yates proposed location over that of the Nearburg location better further or protect correlative rights than choosing the Nearburg?

A. Yes, the Yates -- Yates' position would better fill that.

Q. Would Yates', in your opinion's, position also be more apt to prevent possible waste?

A. Yes, I think so.

Q. Mr. May, is there anything further that you would like to tell these gentleman with respect to this Application of Yates Petroleum?

A. I think that's all.

MR. ERNEST CARROLL: Mr. Examiner, I would move admission of Yates Exhibits 8, 9, 10 and 11 at this time.

EXAMINER STOGNER: Are there any objections?

MR. KELLAHIN: No objection.

MR. ERNEST CARROLL: Pass the witness.

EXAMINER STOGNER: Exhibits 8, 9, 10 and 11 will be admitted into evidence.

Thank you, Mr. Carroll.

Mr. Kellahin, your witness.

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q. Mr. May, when you're developing exploration strategy for picking these wells in the North Dagger Draw, is a critical part of that strategy to find locations that have the greatest net thickness of dolomite?

A. That always helps, and it's --

Q. Why does that help?

A. Well, like I said before, when you have a thicker net pay, you have the potential for having a thicker hydrocarbon column. But it's not essential.

As I pointed out in the north half of 16, those wells had less pay, but they're very good wells. So it's nice to have, but it's not essential.

Q. All right. When you're beginning to develop an exploration strategy, one of the criteria then, is net thickness of dolomite?

A. Yes.

Q. The greater net thickness, the greater storage capacity for potential hydrocarbons, and therefore you lessen the risk if you have an area of greater net thickness?

A. That's definitely one of the pieces of the puzzle, yes.

Q. When I look at Exhibit 11, I'm looking at a net

dolomite thickness map, I guess?

A. That's correct.

Q. How do we get net?

A. Okay, what I did here is basically added up every foot of dolomite that appeared within the Canyon section.

Q. Is there some kind of cutoff value to determine it?

A. No, I did not use any gamma-ray cutoffs or anything like that. It's strictly dolomite.

Q. All right. As we move, then, in this area of the lighter -- There's a greenish blue area.

A. Yes.

Q. I'm not good with the colors, but you see where I'm talking about?

A. Yes, sir.

Q. That is an area of greater net dolomite thickness?

A. Yes, sir, that's correct.

Q. And as we move north into the blue area, we're reducing net dolomite thickness because we're getting these stringers of limestone; is that what's happening?

A. That's correct, as you move towards the edge of the dolomite, the dolomite fans and the limestone -- you get more limestone.

Q. Okay. When I look at the map, show me the net

dolomite value, then, that is the equivalent for the Nearburg location.

A. That would be a little bit over 350 feet, maybe 360 feet of dolomite.

Q. Okay. And when I get to the Yates location, what's the value there?

A. Maybe 295, 290. But let me point out that there's a special case in this one, in this case, because of the SWDs and the possible or unknown effects that they may have.

Q. We'll get to that.

A. Okay.

Q. I'll give you a chance to talk about those.

When I'm looking at the criteria, though, of net dolomite thickness, you will agree with me that the Nearburg location, as to that criteria, is superior?

A. I wouldn't call it superior. It has more dolomite thickness. But as I've stated before, you look at the -- especially the two spots on the north half of the north half of 16. They have less than either one. Both of those wells are still producing around 500 barrels of oil each.

Q. All right, we'll get to those.

When we're looking at the criteria of net dolomite thickness, though, the Nearburg location has

approximately 70 feet better because it's thicker?

A. If that's the only criteria you've used, yes, it's a better location, if that's the only criteria you use.

Q. Let's examine the saltwater disposal infringement issue as a criteria.

You were looking at the Nearburg -- I'm sorry, the Yates-operated Osage SWD well. Where on this Exhibit 11 would we find that well?

A. It would be approximately -- Let's see, it would be in the southwest of the northeast of Section 21.

Q. All right. When I look at Section 21, there is a value of 370 feet?

A. Yes, sir.

Q. Is that the value for the disposal well?

A. Yes, sir.

Q. And Yates over time put 6.5 million barrels of produced water into that well in the Cisco/Canyon formation?

A. Approximately, yes.

Q. All right. And you don't know, and I don't know, and Mr. Fant doesn't know where that water went, do we?

A. Not at this point.

Q. Let's go to the cross-section, which is your Exhibit Number 8. We've got a copy of that Osage disposal

well on the far right side of this display, don't we?

A. Yes, sir.

Q. Okay. Now, the hearing we had two weeks ago when we were discussing with Examiner Catanach where best to locate the well in the northeast of Section 21 --

A. Yes, sir.

Q. -- that dealt with a well proposal for your Ross EG Federal 14, was it?

A. Yes, sir.

Q. And that well would have been located in Unit Letter B of Section 21, to the south of where we're talking about now?

A. Yes, sir. Yes, sir.

Q. All right. In the southeast quarter of Section 16, you're suggesting we should be farther away from the disposal well than the Nearburg proposed location?

A. Could you rephrase that? I'm not sure I --

Q. Yes, sir, I'm not sure I know what I said either. When we're looking at the Boyd X 9 well --

A. Yes, sir.

Q. -- the topic of this hearing --

A. Yes, sir.

Q. -- it is farther removed away from the dispute we had before Examiner Catanach over the north half of the northeast of 21?

A. It's even further away from both of those disposal wells, yes, sir.

Q. All right. In terms of Yates' choice, are we going to drill Section 16 first, before we drill anything in 21?

A. From what I understand, Nearburg has an expiring lease, and we cannot. If I had my druthers, yes, I would prefer to drill in Section 16 first, before Section 21. But because of that expiring lease, I feel that evidently we can't.

Q. Okay.

A. Whoever wins that.

Q. When we look at your cross-section, I'm looking at a stratigraphic cross-section.

A. Yes, sir.

Q. I'm not going to be able to use this as a way to see structural position, at least on this cross-section.

A. Not so well. But even though the wells -- even though this is stratigraphic, they're not too far off structure. But yes, it would better to have a structural cross-section to do that.

Q. We have found on Exhibit 11, as we move north, we're getting into an area where we have more of these limestone stringers which are nonproductive portions of this reservoir?

A. Yes, sir, that's correct.

Q. And you've given us a mud log on Exhibit 9, and it's got an orange line on it that, if we line it up with the orange line on the second log over from the right on Exhibit 8, we can begin to read them?

A. Yes, sir.

Q. All right. What you're telling us, that when you put this log together this orange line on the mud log has a reading over on the right where we're seeing dolomite and limestone, aren't we?

A. That's correct.

Q. What was your criteria in terms of the cross-plot porosity to decide that was the top of the reservoir?

A. On the electric log --

Q. Either one.

A. -- or on the mud log? Of course, the mud log is shown. The mud logger logged dolomite, and I was actually out there and did see the samples. It was dolomite.

On the electric log -- There's a PE curve on the electric log, and it would be the third curve from the right. It's a dashed curve. You notice through all the purple it is deflecting back to the left. When you get into the uncolored line, it deflects back to the right. And in that thin section there is deflection to the left, almost exactly as the rest of the dolomite.

Also, the neutron density profiles suggest dolomite.

The other thing, too, the drilling break -- You rarely get drilling breaks like that in limestone. That's a dolomite drilling break.

Q. All right, let's look at the cross-section, then, on this Amole Number 2 well. We get down where you shaded in purple what is without question dolomite?

A. Yes, sir.

Q. You see that?

A. Yes, sir.

Q. And there's equivalent to a perforation there?

A. Yes. Which part, I'm sorry? Because there's several perforations.

Q. It's the first big perforated section, there's a tiny little perforation up there.

A. Okay, around the 7700 depth?

Q. Yes, sir.

A. Okay.

Q. And let's look at what happens to the curves in that area where you have the larger perforation.

A. Yes, sir.

Q. And there's no disagreement about the dolomite, because look at the density curve that's moved to the right and the neutron curve has gone to the left. Do you see

where I'm looking?

A. Okay, they've both deflected to the left, the density and the neutron.

Q. But the separation is larger.

A. Oh, yes. There is separation, yes, sir.

Q. That separation, then, gives you as a geologist an indication that that's dolomite?

A. That's one of the indicators, yes.

Q. All right. When we move up into this area that's in dispute between you and Mr. Elger, you have got an orange line up above this area, where the neutron curve and the density curve have closed considerably.

A. That's correct.

Q. And that will have closed because we have this infiltration of lime?

A. I disagree. I still stand by that that's dolomite. There is some separation, yes. It's not as much as the section you described lower down. But the reason I feel that's true, the density is in a good spot for the dolomite. It's the neutron that's the problem, and I feel the problem is because it's a little bit gassy. Gas will pull the neutron down. And that's my explanation of why you don't see the good porosity in both curves there.

But when you look over at the mud log and that drilling break, that's the best drilling break in the whole

section of the dolomite, and we log dolomite there. There's also a gas kick. I firmly believe that is dolomite reservoir rock.

Q. Okay, the way this cross-section is oriented, I'm not seeing the picture going from west to east.

A. No, this is just a north-south.

Q. All right. What I want to ask you is, when I look at the Amole Number 2 well, how do you forecast or project what your well location is going to look like in relation to the Amole Number 2 well?

A. There's a possibility it can look similar to the Amole 2. Also, there's a possibility you could move over one 40 and get a complete thick section of dolomite. Changes happen real fast with the dolomite in Dagger Draw.

Q. Is it your preference to be this close to the Amole Number 2 well?

A. Yes, sir, it is.

Q. And at what rate is that well currently producing?

A. That well IP'd for 162 barrels of oil, and I believe the last production I saw, it was still around 130 to 140 barrels a day.

Q. And how does that compare to the productivity of the other wells in this area?

A. It's not as good as some of the others, but it's

as good as some.

Q. It's a poor well isn't it?

A. It's a mediocre well. It's not a great well. I wouldn't call it a poor well.

Q. But you want to be next to this one?

A. Yes, sir, that's correct.

Q. What do you figure is going to be the ultimate recovery out of this well?

A. I don't know. You'll have to ask an engineer that.

Q. We talked about one of the other criteria is structural position.

A. Yes, sir.

Q. And you've got a structure map here, Exhibit 10. Have you help us interpret some values.

If you look at Exhibit 10, will you give us what you consider to be the top of the dolomite at the Yates location and then what you think you're going to find at the Nearburg location, using your interpretation?

A. I would say the Yates -- the top of the Yates location would be around a minus 4160, and the Nearburg location around a minus 4180.

Q. Twenty feet, give or take, difference?

A. Yes, sir, something like that.

Q. And I believe you said that regardless, both

locations should be preferable structural in the reservoir?

A. Yes, sir, That's correct.

Q. And so a structural difference is not going to decide this case?

A. It's real small, so it's not a big deal. Like I said, what worries me is the order in which all these wells are drilled. I still feel like eventually all four wells will be drilled, probably.

Q. When you look at your proposed location --

A. Yes, sir.

Q. -- there's an AFE dated here in March of this year. When did you make a choice of preference as to that being the location?

A. I don't remember, but I'm sure it was -- we proposed, I think -- We looked at spotting all four wells, and if I remember right, we were waiting till we drilled the Amole 2, and that may have been when we made the decision to go with that one, the direct offset. I can't remember exactly. We may have made that decision even before we made the --

Q. Well, and that was my question --

A. So I'm not sure --

Q. -- and you don't know --

A. I'm not sure, I can't remember off the top of my head.

Q. You can't remember if you've picked this location without having data on the Amole 2 or vice-versa?

A. Right.

MR. KELLAHIN: That concludes my examination. Thank you, Mr. Examiner.

EXAMINER STOGNER: Thank you, Mr. Kellahin.

Mr. Carroll, any redirect?

MR. ERNEST CARROLL: No we don't.

EXAMINER STOGNER: Nor do I. I have no other questions.

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

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, place of residence and employment for the record?

A. My name is Robert Fant. I live in Artesia, New Mexico. I'm employed by Yates Petroleum Corporation as a petroleum engineer.

Q. Prior to this hearing, have you had a chance to acquaint yourself both with the Application of Yates Petroleum and the Application of Nearburg, which are Cases

Numbers 11,310 and 11,311?

A. Yes, sir, I have.

Q. Have you had an occasion to testify before the Commission and have your credentials as a petroleum engineer accepted? And I may have -- Did I ask you that question already?

A. No, you --

Q. Okay.

A. Yes, I have had my credentials accepted.

MR. ERNEST CARROLL: All right. Mr. Examiner, I would tender Mr. Fant as an expert in the field of petroleum engineering.

EXAMINER STOGNER: Any objections?

MR. KELLAHIN: No objection.

EXAMINER STOGNER: Mr. Fant is so qualified.

Q. (By Mr. Ernest Carroll) Mr. Fant, you have had an opportunity to review not only the Yates Petroleum AFE for drilling this well but also the Nearburg?

A. Yes, sir, I have.

Q. And with respect to Yates' experience out here in this particular area, approximately how many Canyon wells does Yates operate in the Dagger Draw area?

A. A little over 180.

Q. Do you know approximately --

A. That's North and South Dagger Draw.

Q. Do you know how many that Nearburg is operating at the present time?

A. Approximately 18 to 20. It may have grown, but to my knowledge it hasn't.

Q. Now, because of the large number of wells that Yates Petroleum operates in the Dagger Draw area, both north and south, Yates Petroleum has had an occasion to develop facilities for the disposal of water, have they not?

A. Yes, sir, we have a State CO water system.

Q. Were the Division to approve Yates' Application over that of Nearburg's, does Yates presently have adequate or more than adequate facilities to accept the water that may be encountered in this -- in the drilling of this particular well, the Boyd X Number 9?

A. Absolutely. We recently put on approximately 20,000 barrels a day of injection capacity. Within the next month to six weeks we anticipate placing another well on injection, which should add 6000 to 7000 barrels a day to that number.

So we have more than adequate, plus this State CO water system will come and connect to this well, should we be the operator.

Q. Is that a significant advantage to the working interest owners that would be in this particular well?

A. Absolutely. That -- It makes it to where the working interest owners don't have to pay to get the SWD connection. The State CO water system pays for that connection, and then you simply start paying disposal charges into the system when you start disposing of water into it.

Q. The State CO system, then, is an independent -- While it may be an owned subsidiary, it is run as an independent company out in this particular area?

A. It's an independent property, yes.

Q. Okay. And so by having the availability of this for Yates-operated wells, would it be a significant cost saving that would be available, then, to these --

A. It would be significant if other operators were to charge the partners for hooking up into a water system. You know, we do not charge the partners with those costs.

Q. All right. In your opinion, has Yates gained considerable experience and has this experience been seen in the results with respect to completions out here?

A. Absolutely.

Q. Would you explain what you mean by that?

A. Well, there's two things. There's the costs. We have been striving to reduce the costs out here. Dagger Draw wells are not cheap. We've been striving to drive that down, and I have some testimony, some exhibits that

will demonstrate that.

But furthermore, we reorganized and we have a different gentleman doing -- different engineer doing the completion work on these, and he has done a phenomenal job in the completions. We are completing some of the lowest water-oil ratio wells in the history of Dagger Draw. We have one that was recently completed that produced over 90 percent oil, which is an extremely unusual occurrence in Dagger Draw.

Q. Now, why don't you -- You have prepared an exhibit, Exhibit 12. I think at this point it would be appropriate for you to discuss that exhibit, and then after we've discussed it, I'll ask you to discuss the actual AFE that has been prepared by Yates Petroleum for the well.

A. Okay, what I've contended for several hearings now is that AFEs are nice things to estimate costs, but they're exactly that, they're estimates.

If we want to know what -- If we have data on what companies spend on wells, that to me is most probably a better estimate of what's going to be spent on the well, drilling these types of wells.

And what I have here is a compilation of the costs of recent wells. These are wells that Nearburg -- The top half of Exhibit 12 shows wells that Yates Petroleum operates that Nearburg Petroleum is a partner in. And the

wells at the bottom are wells that Nearburg is an operator and Yates Petroleum or one of the entities that's owned by the Yates families are partners in it. So we have a common data pool.

And I just -- I pulled all of these to look at what are the costs between the two companies, what have the two companies spent? And you've got these, and I -- There's a date out to the right, and that's basically the completion date of the well. So you can look at the chronology of them.

But what this shows me is when you average them for Yates Petroleum, you're looking at $665,000 on what we have spent drilling wells, versus the same data pool showing $719,000, almost $720,000, for Nearburg.

The interesting thing to note, when you look at the wells that have been completed in 1995, the -- When you look at the wells that have been completed in 1995, they are much less than the average. There's one of them, the Patriot Number 10, that's over the average, but the others are below the average. And in fact, the last well, the Tackitt Number 3 on this list, is within $438 of the AFE that we have written.

You know, normally I don't take the numbers written in AFEs as being that great. I'd rather look at what's the historic costs that a company has spent. And

that's what I think this shows, is that Yates Petroleum has historically drilled the wells for less money than Nearburg.

Q. All right. Now, if you would address that, the -- You've also had an opportunity to look at the AFE that Nearburg proposed for its competing Application in this proration unit?

A. Yes.

Q. Would you turn to Exhibit 5, which is -- was introduced during Ms. Richardson's testimony, that being the Yates AFE, and if you would basically, from what you -- from your examination, give the benefit of your comparison and what your thought processes when you examined --

A. Well, this is Yates' AFE, and in some instances somebody might say that this AFE is a little bit low. That might be considered.

I consider -- For this particular well, in this particular case, I consider this thing to be pretty accurate, because in speaking with our production superintendent, our intentions are to commingle -- surface commingle the production from this well, with the proration unit to the west, the Amole proration unit.

You know, that's subject to approvals, administrative approvals and things of that nature. But our intentions are to use existing facilities where we can,

and I think that's a big -- that's an advantage that we have and that we intend to take care of.

And the partners benefit from that also, because we don't have to go out there and build a tank battery right off the bat, because it wouldn't really be necessary. The Amoles are not high-volume oil producers, and therefore there's capacity at that tank battery.

Q. All right. In your opinion, Mr. Fant, would you recommend to the Division to approve Yates' Application over that of Nearburg's Application because it would better protect the correlative rights of the parties involved that are being force-pooled here?

A. Oh, yes. You know, it will protect their correlative rights.

Q. And in your opinion, does it have a distinct advantage over the Application of -- that of Nearburg's for the reasons that you just got through discussing?

A. Absolutely. The cost to the partners should be less. Nearburg's estimate, I believe, is $722,985. That is in complete agreement with the average cost for the wells that they've drilled. I mean, I do not dispute their numbers in the least.

Q. And with respect to the concept of trying to prevent unnecessary waste, which could be the drilling of unnecessary wells or even the expenditure of unnecessary

costs, do you believe that Yates -- would you recommend to the Commission Yates' Application over that of Nearburg?

A. Absolutely.

Q. Is there anything further that you would like to discuss with the Examiner concerning Yates' Application on the exhibits that you've presented?

A. No, sir.

MR. ERNEST CARROLL: I would move at this time the admission of Yates Exhibit Number 12.

EXAMINER STOGNER: Any objection?

MR. KELLAHIN: No objection.

EXAMINER STOGNER: Exhibit Number 12 will be admitted into evidence.

MR. ERNEST CARROLL: I would pass the witness. Thank you.

EXAMINER STOGNER: Mr. Kellahin?

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Fant, on your AFE, did I understand correctly that this total cost of $595,700 --

EXAMINER STOGNER: Mr. Kellahin, go ahead.

Q. (By Mr. Kellahin) -- that the cost on the AFE that Yates is using for the Boyd X 9 well presumes a cost savings because there is an existing tank battery that you want to utilize for that production, and you achieve some

cost savings thereby?

A. I don't know that that was exactly the specific intent in the beginning, but I discussed it with our production superintendent and it is a common practice in Dagger Draw to surface commingle, and I thought this would probably be an instance where that would be used.

Q. And this AFE reflects that idea?

A. The costs -- My support of this AFE reflects that idea, yes.

Q. Okay. When we look at the adjoining spacing unit by which to reduce costs for the Boyd X State Com 9 well, we would have to get approval to commingle that production with the adjoining spacing unit's facilities, which are under different ownership?

A. Absolutely, as I said before.

Q. That's the assumption made in this AFE?

A. Yes.

Q. Okay. And when you look at Exhibit 12, if you look at the Tackitt well that Yates has got the costs on, which is your last entry, the May of 1995 entry --

A. Yes.

Q. -- that well is a well that has a tank battery in common with adjoining facilities, and therefore the actual cost for this well is less?

A. That -- Yes, that is the third well on that

particular proration unit.

Q. And so when I look at the next one up, the Patriot, that's also true. The costs for this well as reported don't include a complete surface facility, including tank battery, because it's being shared with another well that paid for those costs?

A. That may be the case in that one, yes.

Q. All right. And that's true of the Hinkle well, which is the next one up, isn't it?

A. Yes.

Q. And it's true of the Boyd X State Com Number 6 well, isn't it?

A. I can't speak for the Boyd Com 6 because of its particular location with relation to -- There's a draw that runs through there, and it creates -- it cuts through those proration units -- that particular proration unit. And for some reason, I want to say that they had to build one for that. I'm not positive on that, but there is a draw that runs through there that causes different wells to go to different tank batteries.

MR. KELLAHIN: I have no further questions, Mr. Examiner.

EXAMINER STOGNER: Thank you, Mr. Kellahin.

Mr. Carroll?

MR. ERNEST CARROLL: Nothing further.

EXAMINER STOGNER: Let's take a ten-minute recess at this time.

You may be excused.

(Thereupon, a recess was taken at 2:30 p.m.)

(The following proceedings had at 2:45 p.m.)

EXAMINER STOGNER: Hearing will come to order.

Mr. Kellahin?

MR. KELLAHIN: Thank you, Mr. Examiner. We call as our first witness, Mr. Bob Shelton.

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, for the record would you please state your name and occupation?

A. Robert G. Shelton. I'm a landman for Nearburg Exploration Company.

Q. On prior occasions have you qualified before the Division as an expert in matters of petroleum land management?

A. Yes, sir.

Q. And has it been your responsibility on behalf of Nearburg Exploration Company, as well as its operating company, to negotiate with Yates and to propose a well in

the southeast quarter of Section 16?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Shelton as an expert petroleum landman.

EXAMINER STOGNER: Mr. Shelton is so qualified.

Q. (By Mr. Kellahin) Mr. Shelton, would you identify and direct your attention to what we've marked as Exhibit Number 1?

A. Exhibit Number 1 is a location map of the area which we are requesting be pooled, the southeast quarter of Section 16, as shown in red, and our location for the well, which is in the southeast quarter, southeast quarter, of Section 16.

Q. That's identified by the square that's outlined with the black --

A. The black square references and locates the northeast quarter of Section 21, which was the subject of a compulsory pooling held July 27th before the Division.

Q. All right. So we're moving in through the next spacing unit north of the one we had the hearing before Examiner Catanach a few weeks ago?

A. That's correct.

Q. Have you tabulated the interest owners within the spacing unit that would constitute the southeast quarter of Section 16?

A. Yes, I have, and they're reflected on Exhibit 2. The interest of Nearburg, Yates and Unit Petroleum constitute the majority of the interest. There is no disagreement with what Ms. Richardson said about the ownership. We have title opinions that have been done, and we all agree, I think, on the ownership.

Q. I believe she indicated that they had received a joinder from at least Bunn, and maybe another name I have forgotten.

A. That's correct.

Q. Have you also received some commitment from those same parties --

A. Yes.

Q. -- as to participating with you?

A. Actually, we have. We've got a signed operating agreement and an AFE from the Bunn people also, so there's some confusion by those parties as to what's going to be drilled and what's going to be done. I doubt they're very sophisticated oil and gas investors, and so there is some duplication of commitment in this case.

Q. All right. At this point, as it stands in terms of rounding off some numbers, Nearburg Exploration controls about 37.5 percent of the spacing unit, Yates controls an equivalent amount, and we have Unit with the next big interest, and Unit is standing on the sidelines at this

point?

A. Yes, I talked to Unit today, and as Ms. Richardson testified, they're not supporting either party as operator. They have indicated a desire to drill a well located in the south half of the southeast quarter. They have not committed their interest to either party, though.

Q. Let's turn to the first written communication you had with Yates and the other working interest owners in which Nearburg Exploration proposed the drilling of what we've identified as the Arroyo 16 Number 1 well.

A. That's correct.

Q. When did that take place and how have you documented that?

A. The Exhibit Number 3 shows a letter sent certified mail, dated May 21, 1995, proposing our Arroyo 16 Number 1 to the working interest owner as identified on Exhibit Number 2, and we furnished them with an AFE and an operating agreement and asked for an election to participate.

Q. All right. Please turn to Exhibit Number 3 and identify and describe that.

A. Additional Exhibit Number 3 is the operating agreement which -- for the Arroyo 16 prospect, dated May 19th, 1995, covering the southeast quarter of Section 16. It provides for the commencement of our well that we've

dubbed the Arroyo 16 well in the southeast quarter, southeast quarter.

Q. Are you and Ms. Richardson in agreement about the overhead rates that you're each recommending to the Examiner, regardless of which company is awarded the operatorship?

A. Yes, we agree to the same rates which they testified to.

Q. And in addition, the 200 percent as a nonconsent penalty for this well is acceptable to you, regardless of who is the operator?

A. That is correct.

Q. So that's not an issue for you?

A. That is correct.

Q. Let's turn to Exhibit -- As part of Exhibit 3, you have some certificates of mailing, and I think they're also numbered Exhibit 3?

A. That's correct.

Q. Describe those for me.

A. The certificates of mailing are -- The first part are several exhibits which were sent out, which were signed and returned with the green card. As you can note, most all of the people did receive and return -- receive and acknowledge receipt, and the green cards were returned.

There is a few, which is the second paper-clipped

group of Exhibit 3, which are some that were returned unsigned for. That's Joseph Hodge, Sanford Hodge, then we've got Nautilus Ventures, Isaac Kawasaki -- I've got several of them that were returned to us using the same address forms that Yates used on theirs.

Q. You and Ms. Richardson ended up with about the same results in your effort to contact and get these people to at least accept the service?

A. Yeah, they got -- Actually, they got a few more of them returned with green cards than what we did. We had a few more of them returned undelivered.

Q. All right. Let's turn to Exhibit 4. Would you identify and describe that for us, please?

A. Exhibit Number 4 is the election by Mrs. Bunn that we've received. It shows a signed AFE, signed operating agreement necessary to commit her interest to Nearburg Producing Company.

Q. All right. And the same party has already committed her interest to Mrs. Richardson's proposal, so she's committed both ways?

A. That's correct.

Q. All right. Let's turn now to Exhibit Number 5. What have you compiled here, Mr. Shelton?

A. This is a list of wells, of some 38 well proposals that were made by Yates Petroleum Corporation to

Nearburg between the period of time of February 23rd and March 22nd, approximately a period of a month, that swept most of the locations in the general area and to the south and east of the proposed location.

Q. These are well proposals by Yates with regards to North Dagger Draw?

A. That is correct.

Q. And within this period of time, how many well proposals did you receive from Yates?

A. Thirty-nine.

Q. And as you understand it, it represented AFEs in which Nearburg had an interest within each spacing unit for each of these wells?

A. Within -- More than just each spacing unit, one location; it was really all the drillable locations on a 40-acre basis within all the proration units that were not yet drilled.

Q. So what we're looking at is a total of 38 AFEs which would have been an infill density drilling for the 160 as to 40 acres?

A. That is correct.

Q. With response to all these AFEs, what action did Nearburg take?

A. Nearburg reviewed all of these AFEs geologically, using the merits of the geologic information that we had.

We timely made elections on all these well proposals. Some of them we operate, some of them that Yates operates. Some of them, obviously the subject of this and the last hearing, were not yet committed to an operator. We elected to participate in all of them except for two.

Q. What was the reason by which you elected not to participate with Yates's AFE proposal?

A. The only two that we elected not to participate in was based just simply on the geologic evidence that we had in house that we reviewed.

Q. And one case was heard by Mr. Catanach two weeks ago, and this is the other case?

A. We have -- Well, we elected to participate in these wells, but these -- the ones that are before us now were on proration units where an operator had not yet been established.

Q. I understand, okay. Does your company have available to you and do you operate a saltwater disposal system for water produced by these Cisco/Canyon wells in North Dagger Draw?

A. Yes, we do, we have salt water disposal systems which dispose of water into the Devonian formation. They're in close proximity to the location which we're proposing here, and we have the availability to take the water from this spacing unit into our system to be disposed

of into the Devonian.

Q. Do you understand there to be any major financial difference between a commitment of wells to the Yates system, as opposed to the Nearburg system, in terms of cost per barrel or any other component?

A. None at all. I don't think there's any difference. We have the available space. Both operators charge 25 cents per barrel for disposal, and there's no difference at all.

Q. Okay. With regards to your proposals to Yates for the drilling of the Arroyo 16 Number 1 well down in Unit Letter P, have you had any conversations or correspondence or response from Yates?

A. Discussions, no return -- no election to participate.

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

We move the introduction of his Exhibits 1 through 6.

EXAMINER STOGNER: Any objections?

MR. ERNEST CARROLL: No.

EXAMINER STOGNER: Exhibits 1 through 6 will be admitted into evidence.

Thank you, Mr. Kellahin.

Mr. Carroll, your witness.

MR. ERNEST CARROLL: I may be confused, but could you tell me what Exhibit 6 was, Tom? I go from 5 to 8 in this group, and --

MR. KELLAHIN: I'm sorry, I may have -- I have misspoken. It's 1 through 5, Mr. Examiner. 6 is a geologic display.

MR. ERNEST CARROLL: Oh, okay.

MR. KELLAHIN: You're quite right.

MR. ERNEST CARROLL: Okay.

EXAMINER STOGNER: My apologies too. Exhibits 1 through 5 will be admitted into evidence. Strike Number 6 previously.

Okay, Mr. Carroll.

MR. ERNEST CARROLL: Thank you.

CROSS-EXAMINATION

BY MR. ERNEST CARROLL:

Q. With respect to the Exhibit Number 5 that you prepared, Mr. Shelton, during the same time that Yates Petroleum was proposing all of these wells, Nearburg was likewise proposing a good number of wells, were they not?

A. We made well proposals during the same period of time, that is correct.

Q. Do you remember the number of those that Nearburg proposed?

A. No, I do not.

Q. In excess of ten?

A. Yes.

Q. The wells that you have listed here, am I correct in understanding that only two of those listed on Exhibit 5 -- only two of them were not already covered by pre-existing joint operating agreement; is that correct?

A. No, only two of the wells that are listed here did Nearburg go nonconsent on.

Q. Okay.

A. There were several -- Many of the wells that are listed here were not in spacing units which were dedicated to an operator.

Q. Okay. Some of these were, though; is that correct?

A. Some of these were, that's correct.

Q. And then Nearburg made an election on the ones that there was not already a pre-existing operating agreement, to join in; is that --

A. Well, we made an election on all of them, even under operating agreements, where we had the election to participate or go nonconsent.

Q. Okay. When you were -- The last questions that Mr. Kellahin asked you about was the cost of hooking up to your water system. You said, basically, there was no difference between Nearburg and Yates about the costs.

But is it your testimony that when it comes time -- Let's suppose that the Nearburg Application is granted, as opposed to the Yates. At the time that the water system is hooked up, are you testifying to this Commission that there will be no charge for hooking up to the water system?

A. I'd defer that to our engineer, who will address that when his testimony comes up.

Q. All right. So your testimony a moment ago needs to be at least qualified to the extent that you don't know anything about what the cost of hooking up to the system would be; is that correct?

A. I testified to the cost of the disposal, not to the cost of hooking up.

Q. And you will agree with me that Mr. -- the comments that Mr. Fant made directly dealt with the cost of hooking up, which is something different than what you're qualified to testify?

A. That is correct.

MR. ERNEST CARROLL: I pass the witness.

EXAMINER STOGNER: Mr. Kellahin, any redirect?

MR. KELLAHIN: No, sir.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Shelton, you testified that the overhead

charges were the same, but when I open up the COPAS agreement in Exhibit Number 3, or your second Exhibit Number 3, I show that the figures are different in here. Is --

A. Yeah, we will agree to those figures, as testified to.

Q. Okay.

A. That's correct.

EXAMINER STOGNER: I have no other questions of this witness. You may be excused.

MR. KELLAHIN: Mr. Examiner I call at this time Mr. Jerry Elger. Mr. Elger is a petroleum geologist and an expert witness for Nearburg.

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. For the record, sir, would you please state your name and occupation?

A. Jerry Elger. I'm a petroleum geologist for Nearburg Producing Company in Midland, Texas.

Q. Mr. Elger, on prior occasions have you testified about geologic interpretations and proposed well locations in the North Dagger Draw pool?

A. Yes, I have.

Q. Give us a background and an understanding about how you go about this task. What is it that you do?

A. Evaluate -- In the case of the Dagger Draw and in the case of the Application here, evaluate the geological parameters that go into dictating where drill sites should occur in order to obtain commercial production.

Q. How long have you been engaged in that activity for Nearburg in this particular reservoir?

A. Approximately seven years.

Q. During that period of time, how many specific wells have you analyzed in terms of participation or in drilling and staking and producing?

A. Operated and non-operated?

Q. That's right.

A. Probably -- I'd have to guess between 40 and 50, would be a guess.

Q. As part of your preparation for this case, have you drawn on your experience and the information already at hand to address the issue about where to drill the first well within this spacing unit?

A. Yes.

Q. And based upon that work, you now have a conclusion?

A. Yes, I do.

MR. KELLAHIN: We tender Mr. Elger as an expert petroleum geologist.

EXAMINER STOGNER: Any objections?

MR. ERNEST CARROLL: None.

EXAMINER STOGNER: Mr. Elger is so qualified.

Q. (By Mr. Kellahin) Let's turn to Exhibit Number 6, Mr. Elger, and before we talk about the structure map itself, let's use it as a way to summarize your conclusions.

A. Well, we believe that the -- Let me explain a little bit about the coloring system utilized on the map.

Q. Yes, sir, let's do that first.

A. Upper Pennsylvanian Canyon producers on this display have been shaded orange.

Wells that are shaded yellow are producing from deeper horizons than the Cisco/Canyon, mostly from the Atoka and Morrow sands. Those are indicated as gas wells.

Wells that have produced formerly from deeper zones as gas wells and have been plugged back and produced oil from the Cisco/Canyon have been shaded half orange and half yellow.

Wells that have formerly been Canyon producers and are currently or have formerly been saltwater disposal wells in the Canyon have been shaded half orange and half blue.

Wells that have been injection wells or disposal wells in the Cisco Canyon only have been shaded totally blue.

The proposed drill site in the unit for the spacing, for this hearing in the southeast quarter of 16, has been shaded yellow. And the proposed Nearburg Arroyo 16 Number 1 has been shaded red.

Q. Summarize for us the conclusions for why you have recommended the Nearburg location rather than agree with Mr. May on the Boyd X State Com 9 well location.

A. Those conclusions are basically threefold. Number one, and probably the most critical issue in dictating the location of our proposed drill site is, to get as far away within the spacing unit from the Amole Number 2, located in the northeast quarter of the southwest quarter of 16, as we possibly can.

Q. We'll come back to why in a minute.

A. Okay.

Q. What are the other reasons?

A. The second reason is because, from a geological perspective, we feel like the entire Cisco/Canyon section will be reservoir rock at the Nearburg-proposed location. And that's critical.

As Brent May testified to, the more -- As a general rule in this area, the more dolomite you have, the

more net feet of pay, the greater the reserves.

Q. And what's your last major reason?

A. That structurally it's the highest location within this proration unit. Therefore, you have the maximum amount of dolomite above whatever the oil-water contact is eventually determined to be out in this area.

Q. You and Mr. May have a difference of opinion about how to pick the top of the productive reservoir here, and in doing so have a difference in how high the Nearburg location is over the Yates location?

A. That's correct.

Q. We'll come back to that. Let's go back, then, to why you want to move away from the Amole Com Well Number 2, which is in the adjoining spacing unit to the west, and as shown at location A on the line of cross-section that's marked on Exhibit 6.

A. In order to adequately do that, I would like to address Exhibit Number 7 at this time, which is a --

Q. All right, let's turn to Exhibit 7.

A. -- structural cross-section.

Q. Give me a chance to unfold it.

A. Okay. And it incorporates that Yates location that Yates -- southwest quarter of 16.

Q. When you look at the far left side of Exhibit 7, we have the Amole Com Number 2 well that Mr. May described

and which you are about to discuss?

A. Yes.

Q. Why do you want to get away from it?

A. Well, two reasons -- well, actually three reasons.

The top that I pick for the top of the dolomite, which is the map, Exhibit Number 6, is at the base of the lime section, corresponding depthwise to roughly 766- -- I'm sorry, -73, -74, something like that.

Q. Say the number again?

A. 7674 --

Q. All right, sir.

A. -- is the top of the dolomite in that wellbore.

There is a point between Brent and myself as to whether that's actually the top of the dolomite. That, in my opinion, based on the density neutron curves and the PE curves, that point represents the top of reservoir rock which contributes reserves to this well.

The four- or five-foot section that's the point of contention between myself and Mr. May, I really think it's insignificant to the case, because that dolomite section really, in my opinion, contributes nothing to the reserves of this wellbore, and therefore would be considered nonreservoir rock.

Again, the density neutron curves tend to track

each other. We could argue whether it's due to gas effect, as Mr. May testified to, or not. But I think it's due to the fact that it's a very limy section. There is probably some dolomite incorporated with the limestone. Whether it's a true limestone or a true dolomite, I can't really say. The mud log he presented during his testimony suggested there was lime and dolomite present within that unit.

Q. So what's your first major reason --

A. Either way, the cross-plot porosity of that low-porosity streak is roughly two to three percent.

Q. So what's the first major reason to move, in your opinion, away from the Amole Com 2 well?

A. The first major reason is the absence of significant amounts of dolomite in the upper part of the Canyon.

Q. And we see that depicted in what way on your Exhibit Number 7?

A. By the presence of the limestone fingers or members that you see and have been noted.

Q. All right. What else? What else do you want to get away --

A. The fact that all of the dolomite that's been perforated in this wellbore is not going to make it, it's not a commercial well. And Brent characterized the well as

being a -- I believe he said mediocre well. And in fact, our opinion of the well is that it's subcommercial. And the Boyd X State Number 9 well is as close as you can get to this noncommercial well within this subject proration unit.

Q. Any other reasons to move away from the Amole Number 2 well?

A. Well, the development of these lime stringers in the upper part of the Canyon, the fact that it -- even from the dolomite that is present, it's a subcommercial well, and then structurally the fact that there's a more -- there is a proration unit -- or there is another 40 acres that could be drilled within this proration unit, where you could avoid these problems and gain structure.

The combination of those three factors went into the picking of the Nearburg proposed location in the southeast-southeast of 16.

Q. When Mr. May mapped the distribution of the net dolomite on his Exhibit Number 11 -- you have a copy up there if you need it --

A. Yes, sir.

Q. -- he's given us his opinion of the values between the Yates location and the Nearburg location. Is that issue of importance to you there?

A. Well, I think it only substantiates the fact,

with his own subsurface work, that their proposed location is subject to thickness values, total thickness dolomite values of less than 300 feet. And that versus the 360 feet projected dolomite thickness at the Nearburg location, that is some 50, 70 feet of difference, and that --

Q. Is that enough difference to matter to you as a geologist?

A. Well, based on where the limestone stringers are developing within the Canyon section, that 70 foot of section is going to be -- occur in the upper part of the Canyon within the hydrocarbon column, so therefore you'll have that many feet less pay, potentially less pay, at their proposed drill site.

Q. Any other geologic criteria that you applied in making a selection about a location and your preference to the Nearburg location over the Yates location?

A. Those are the main factors.

Q. It was of concern to Mr. May to move farther away from the old Yates disposal well, that Osage saltwater disposal well. Is that matter of significance to you in terms of where you locate a well within this particular spacing unit?

A. I don't -- Again, it's an unknown as to what area has been influenced by the disposal of water in the two wells that occur just to the south of this area, and that's

probably the subject of another time.

But I think it's most critical to move to an area where you have reservoir rock available to your location, and not only reservoir rock but commercial quantities of hydrocarbons within that reservoir rock.

Q. Let's finish the cross-section, Exhibit 7, and show us how you have tied it in to the rest of the logs as we move from left to right. We've talked about the Amole well. Now let's pick up the other two.

A. Well, the other two which are located in the northwest quarter of Section 22, are the Anadarko well and Nearburg Ross 22 well. Both of those wells are situated structurally favorable for a major portion of the dolomite, upper part of the dolomite and the Canyon hydrocarbons.

Both of those wells show the absence of any lime streaks or stringers within the upper part of the Canyon. You've got -- So you have reservoir rock available at those wells. And those are the wells that Nearburg has moved towards. We're not -- and to get away from this subeconomic well located in the southwest quarter of 16.

Q. Let's go back to 6, then, and have you summarize the importance of the structure and give us your interpretation of Exhibit 6.

A. Well, again, just to summarize the geological criteria that went into the drill site, structurally we

think we'll have an advantage, I have a mapped advantage over the Yates location of approximately some 20 to 30 feet on the top of the reservoir, main part of the reservoir.

We've moving to an area where the entire upper part of the Canyon, which is where the hydrocarbons are trapped within the Canyon -- we're moving to an area where there's fewer nonreservoir limestone stringers that will be present. The entire upper part of the Canyon would be reservoir rock.

And three, structurally, it's -- it just is the most favorable location in that proration unit.

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

We move the introduction of his Exhibits 6 and 7.

EXAMINER STOGNER: Exhibit 6 and 7 -- I'm sorry, is there any objection?

MR. ERNEST CARROLL: No objection.

EXAMINER STOGNER: Exhibit 6 and 7 will be admitted into evidence.

Thank you, Mr. Kellahin.

Mr. Carroll, your witness.

MR. ERNEST CARROLL: Thank you.

CROSS-EXAMINATION

BY MR. ERNEST CARROLL:

Q. Mr. Elger, I guess one of the keys to your

opinion is the fact that this small stringer that you see in the Amole well at the very top -- You say that that contributes nothing to the pay in the Amole well; is that correct?

A. Very little. In my opinion, it contributes very little.

Q. And that's what I want for us to explore. You have no single objective piece of evidence or fact which supports that opinion, other than your opinion, isn't that true?

A. Well, again, some of the exhibits that Brent prepared, the mud log, for instance, it did -- You know, I would concede that there was a three- or four-foot drilling break that appeared on that mud log.

But the mud logger did not log 100-percent dolomite; he logged a portion of that break as being dolomite and a portion as limestone. And I don't think the good reservoir rock out in this part of the world is dolomitic lime or limy dolomite. I think the good reservoir rock associated with the Canyon out here is 100 percent dolomite --

Q. Now, Mr. --

A. -- systems that are developed.

Q. Now, Mr. Elger, prior to you making your opinion and testifying here this evening, you hadn't seen the mud

log for this well, had you?

A. I don't believe so. I don't recall seeing it.

Q. So at least when you made your opinion, you did not have the benefit of that -- objective facts that were reported by the mud logger. And as Mr. May stated, he was present at the time and actually saw the samples that would come out of the hole. You haven't seen the samples either, have you?

A. No.

Q. Now, you've made the statement to the Examiner that the Amole is a subcommercial well; is that correct?

A. Yes.

Q. The reason you say it's a subcommercial well is because the ratio of oil to water makes it subcommercial; isn't that a fair characterization?

A. Yes.

Q. Because the disposal of the water or handling of the water is an extremely costly factor out here in the Dagger Draw area?

A. That's correct.

Q. And in fact, the Ross Ranch Number 2, which is the last well on the right side of your cross-section, is an extremely subcommercial well because it is basically a water producer?

A. That's correct.

Q. So one of the key things that -- when we're considering whether or not to drill in a location would be, we ought to consider the possible effect or the possible likelihood that that well is going to encounter a lot of water; isn't that true?

A. Which well?

Q. Well, any well in this proration unit. That should be a supreme -- or not, say, supreme, but a very extremely important consideration when picking a viable location for the first well to test this proration unit?

A. By how little water it makes? Is that what you're asking?

Q. Well, if you know objective factors which raise the risk of a proposed location of being a water producer, you should give consideration to that and move away from it, shouldn't you?

A. There's some question, and it's unknown at this time, as to why the Ross Ranch 22 Number 2 well is a high-percentage water producer, and I don't think that in any of the hearings that I'm -- I'm not a qualified reservoir engineer, so I can't address exactly why that well is a high water producer. But there are certainly wells in this area that are capable of good production.

Q. Well, Mr. Elger, I don't think you really answered my question. My question was, if there is a

possibility of a factor which is known to contribute to the noneconomic or noncommerciability of a well, shouldn't you do everything to avoid that complication or factor when picking a location?

A. On that basis, that's why we moved -- picked our location away from the Amole Number 2 --

Q. Well --

A. -- yes --

Q. -- but you went closer to two disposal wells, didn't you?

A. Yes, we did.

Q. And the Amole does produce 162 barrels of water; isn't that correct? Excuse me, of oil.

A. Yes, it does

Q. And if the --

A. That's what it potentialed for.

Now, as Brent testified for, I think the numbers were 140 -- somewhere in the 140 range.

Q. Your determination that the Amole is a noncommercial well could change if the water production would go down with that well; isn't that true?

A. Most of the wells in Dagger Draw that -- you could characterize the production as seeing some flush production.

They go on a decline, and I'm not exactly sure

what that decline rate is for the first four to six months of the life of those wells. And then they stabilize, or at least go on a less steep decline.

And I think that the Amole Number 2, which was just a fairly recent well -- it was completed -- it was drilled in June of 1995 -- the 140 barrels of oil per day that the well -- roughly what that well is currently capable of producing, is probably still in the steep part of that decline. By the time that decline curve makes some sort of a turn and stabilizes at some rate -- less steep decline -- the well will never reach payout.

And in fact, the other well that's in that same proration unit, the Amole Number 1 in the southwest-southwest of Section 16, I would characterize also as a noncommercial well.

These are expensive wells to operate, and they're expensive wells to drill, and because of the casing size and because of the submersible pumps they're very expensive wells to drill and complete. And it takes a lot of hydrocarbons to pay one of these wells out.

And I think in the case of both wells in the southwest quarter of 16, we're looking at wells that will never see payout. They may probably reach payout, but I would characterize a well where you could get a one-to-one return back on your money as being subcommercial, because

you've wasted your time and expense.

Q. And again, Mr. Elger, everything that you've just talked to us about here in the last few moments is all tied to the production and the encountering of water, isn't it? In some fashion, it's related back to having to either use the sub pumps to move the additional volume because of water, the disposal costs because you've got to get rid of water -- All of these things, some way or back another, it all comes back to water?

A. That's right, it all converts back to the total oil that needed to be produced to pay the well out.

Q. Now, you will agree with me -- On top of your Exhibit 6, you have -- the two topmost wells, you show new well, new well; is that correct?

A. Yes.

Q. That's the Aparejo, I think, Number 1 and Number 3 respectively. You heard Mr. May testify that both of those wells produce in excess of 500 barrels of oil a day. You have no reason to disagree with Mr. May with respect to that, do you?

A. That's correct.

Q. And you will agree with me that when you look at the Exhibit 11, which you commented on, which was Mr. May's net isopach of Canyon dolomite, that the thickness of dolomite in both of those wells, which are very good

producers, and certainly not subcommercial -- the amount of dolomite is significantly less than what is proposed to be encountered at either the Yates location or the Nearburg location?

A. Yes, that's correct.

Q. So when you make the statement that the thickness of the reservoir -- of the dolomite -- is most critical, those two wells contradict that statement, don't they?

A. In general, and I only have access to one of those logs, and that's the Aparejo Number 3.

And I have not conducted a detailed study of the actual porosity of those wells, how -- The quality of the dolomite has a lot to do with how good these wells are. And it may be that as you move north into the north half of 16, the quality of the dolomite increases, the vugginess of the dolomite can increase, there could be a number of factors which characterize the north half of 16, which is the reason those wells are so low or so thin and still have good rates.

Q. When a drilling bit encounters dolomite that has the large vug or vugginess as you agreed to it -- or excuse me, described -- you're going to see a significant drilling -- increase in the rate that the bit goes through that rock, will you not?

A. Yes, you can.

Q. And that's just exactly what Mr. May was telling us had been encountered in this stringer of dolomite in the Amole; is that correct?

A. Yes, but that -- just because of the drilling break does not mean you have vuggy porosity. You cannot correlate the two.

Q. The notations on the mud log, I think, do talk about vuggy, does it not? Or maybe I just misread it. Do you have that mud log?

Yeah, there it is. If you'll note right directly opposite the orange line there's the references -- or the, I guess, "Descriptions and Remarks", and it does comment that it was vuggy, doesn't it?

A. Down below the break, towards the -- some 15 or 16 feet below the -- where the drilling break occurred, it does describe that. It's hard to tell exactly, depthwise. You would hope that they would transcribe this description opposite of where whatever the lithology they're putting on their graphic lithologic presentation would occur.

Q. Well, Mr. Elger, on mine I see the notations of vuggy porosity directly across -- I'm on the exact same line that the orange line is drawn. Would you look at that?

A. Yes.

Q. And it shows vuggy porosity there, as well as the

line that you were reading some 15 feet down below?

A. Yeah, it says -- yeah, small -- If I'm reading it right, it says "small vuggy porosity", you're correct. Or "some" -- I can't -- "small" -- "SML", whatever that stands for.

MR. ERNEST CARROLL: I pass the witness.

EXAMINER STOGNER: Thank you.

Any redirect, Mr. Kellahin?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: You may be excused.

MR. KELLAHIN: Mr. Examiner, I call Tim McDonald to the stand.

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

A. My name is Tim McDonald. I'm a petroleum engineer for Nearburg Producing Company in Dallas, Texas.

Q. Within the context of that employment, describe what functions you have performed that are relevant to our discussion today.

A. Yes, sir.

Q. Have you looked at the AFE costs by Nearburg and Yates?

A. Yes, I have.

Q. In addition, are you familiar with the actual costs as they come through on joint interest billings and other invoices you may receive?

A. Yes, sir.

Q. Are you familiar with what it costs to connect these wells to either system in a general way?

A. I believe I am, yes, sir.

Q. And you're aware of the actual costs of disposal involved in these wells?

A. Yes, I am.

Q. In addition, are you involved with others in your company, as well as consultants, to obtain additional sophisticated logging information by which to more accurately, and hopefully more profitably, perforate these wells when they're drilled?

A. Yes, I am.

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

EXAMINER STOGNER: Any objections?

MR. ERNEST CARROLL: No objection.

EXAMINER STOGNER: Mr. McDonald is so qualified.

Q. (By Mr. Ernest Carroll) Mr. McDonald, let's deal

first of all with the topic of the AFE costs. What have you done here in terms of Exhibit Number 8?

A. I've tried to do a comparison between the Arroyo AFE that we prepared and the Boyd X Number 9 that we received from Yates.

In the matter of a month we received AFEs for depth wells in the same area, one for approximately $500,000, one for $600,000, one for $700,000. So it's getting difficult to compare them, but just laying these two down --

Q. These are all coming out of Yates?

A. Yes.

Q. For what ranges of total costs?

A. One for $508,000, one for $595,000 and one for $685,000.

Q. And so you have taken the Arroyo 16 Com proposal by Nearburg and tried to categorize it so there is a comparable entry utilizing the Boyd X State Com 9 well AFE from Yates?

A. Right.

Q. As you go through the analysis, then, let's turn to the last page, and initially there is a differential between the two proposed AFEs of what amount?

A. It's $127,285.

Q. If you go through and re-analyze that and break

down the difference, describe for me the categories in which there is a difference and why it has occurred.

A. Well, basically what I've tried to do here is, since there was such a discrepancy, really go back and look -- like the Yates engineer had previously testified, these are estimates, and trying to look back and at some of our recent costs and see if there were areas where we were just out of line on this one, as compared to the Yates AFE and vice-versa.

So as I went down the column, the first one I -- The drilling footage rate that we used for this AFE was $16 a foot, and I believe we're getting $14.50 now. So there was some savings that will be achieved there.

The road and location expense we had in the AFE --

Q. Let's understand how to read the spreadsheet then. You're looking at the bottom portion, and you're looking at the left side of it and it says, "Likely Savings from Nearburg AFE"?

A. That's correct.

Q. You're looking at your gross number of $723,000, from which, then, you have re-examined and determined that some of these values will actually result in a savings?

A. That we estimate would probably -- will actually be less when the well is drilled.

Q. All right. You've got a drilling footage difference that will be less than what you AFE'd?

A. Right.

Q. And go through the rest of the items.

A. The road and location expense, we estimated $17,000. We've been building those for $10,000 recently, so that's a $7000 savings.

The damages we had estimated $5000. We're comparing to $2500.

The drilling fluids we had estimated at $15,000. The last couple wells have been in the $7500 range, so there was some savings there.

Cement surface casing was insignificant. It was a couple thousand dollars, but that was based on a bid that we received.

Our insurance rates, we had -- We had renewed our insurance recently and they've dropped somewhat for wells of this depth, so there was some savings then.

And we generally put in a much larger contingency factor than Yates does, and that was $29,000, which is hopefully something that, barring any problems with the well, we wouldn't have to spend.

Q. You've equalized the contingencies, then, to use the same contingency levels they had?

A. Right, they had no contingencies for the dryhole

portion of the well.

Q. All right. So you take those out and you have a net reduction, then, of $63,700?

A. Right.

Q. Any other categories for which there will be further savings, based upon your analysis?

A. Yes, in the -- On the after casing, going to the completion side, I think our pulling unit cost was a little high. It was based on some earlier wells. We did more extensive testing down in the lower sections of the Cisco/Canyon and now we've better defined where the pay is, and I think that we'll spend less time during the completions on the wells. So there was some savings there.

Also, we had $9500 worth of contingencies.

Q. The final entry, where it will, in your opinion, reduce your AFE cost, is what?

A. Of that category is about $14,000.

Q. Okay, and then the final entry?

A. A submersible pump, I think we had $80,000 and they had $75,000. Whoever drills the well is going to wind up most likely buying the same size submersible pump, so I just equalized that. That's where that $5000 came from.

That gave me a grand total of potential savings, actual savings, once the well is drilled, about of $83,000.

Q. Let's look at the other column, then, on the

right and look at the Yates AFE and have you demonstrate for us those items where you think they have not put cost components in the AFE which in fact would have to be money spent for a well.

A. Okay. First of all, we had planned on running two drill stem tests in this well, and there was no cost in there for that.

We're always charged, as we do them, for engineer or geologist's time out on the well, and I don't see any cost in theirs for that.

The legal and professional, we certainly pay title charges, among other legal fees, and I don't see any -- or certainly not enough cost for that.

The insurance, they didn't charge us for any insurance. I know that we all pay insurance.

They didn't include any drilling day work costs to run the production casing, that I could detect, so I had some in for that.

I didn't see any engineer/geologist cost for the completion, which there's always some incurred.

And then the tank battery, they have testified that this was going to go to another tank battery, but they'll still have to buy additional tanks, more than likely, for that battery. That's been the practice in the past. So I added some money, at least for a saltwater tank

and an oil stock --

Q. If you add those additional items which you conclude are necessary to their AFE, it adds an additional $37,000 to their AFE?

A. Right.

Q. And if you then subtract the $82,700 from your AFE as other additional cost savings, the net -- the total is $120,000 and the net difference then is only $7000?

A. That's right.

Q. Okay. Let's turn to the topic of what is your company's practice with regards to the kinds of logs that you attempt to either run when you operate or, when you have a working interest in some of these wells, to go ahead and pay for.

A. Okay.

Q. Describe for us what we're talking about.

A. One thing where that comes from, on our AFE we have $20,000 in here for open hole logging and they have $11,000. This is part of my explanation for that cost difference also.

Q. Now, that is not in this subdivision on this spreadsheet?

A. No, I didn't take it out of there because we do plan on running these logs on our well.

Q. Why are you spending so much more money on these

additional logs?

A. We feel like with this technology we can learn a lot about the reservoir, and it's the only time that you can do it before you run pipe in there, and we feel like these tools are starting to demonstrate to us that we can see things that we can't see with conventional tools, and we'll utilize those to make multiple decisions as we produce the reservoir and drill other wells.

Q. If you're allowed to drill and operate this well, then what besides a conventional log would you do?

A. Well, we've made a standard practice in the last few months, we're making a -- what's called a high-resolution pass with the standard logs, which is basically just running the logs at a slower speed over the formation and hence getting more data points and averaging over a smaller area and getting better resolution on the -- as with the porosity tools, on the porosity of the reservoir.

Also, the FMI, which is a Schlumberger tool, which is a resistivity-type imaging tool that we've run on the last two wells, which is very helpful in spotting vugs, fractures and -- You know, it's basically a picture. I have an exhibit here later that shows that that's basically a picture of the wellbore. So it's about as good a resolution as you can get.

Q. FMI is a formation micro- --

A. -- imager.

Q. Let's go to Exhibit 9 and have you summarize for us what that analysis does.

A. Basically what it does, it -- What we're doing is a spot analysis with it. And what it does, it calculates -- it computes the spots or vugs that appear on our formation micro-imager as a percent of the areal size of the wellbore surface. And from this computation, the apparent producibility of the formation can be inferred from actual production histories or from analogous formations.

Also, we take the SPOT/ELAN porosity that we compute from the SPOT/ELAN, and we put it in the ELAN program, which you calculate volumetrics and come out with what we feel like are more realistic volumetric estimates for these wells.

The FMI is also very useful in identifying natural fractures and determining fracture azimuth, which we hope will aid us in determining preferential drainage orientation, which may be critical as we develop this field also.

Q. The first thing you can do with this is determine where best to put your perforations?

A. That's a key thing. There's some examples where you can see vugs on the FMIs in some of the even cruder

imaging tools that have been run out here, where you see vugs on the imaging tool but you do not see porosity on the open-hole logs.

Q. In addition, would it be a way to give you more accurate reservoir values by which you can determine if you have sufficient oil in order to go ahead and complete in the first place?

A. Yeah, we feel like it is. I know it's been argued before the Commission for years about how the actual porosity relates to the log porosity, and we think this is just another step in trying to answer that question. And obviously, the porosity is directly related to the reserves calculated for the well.

Q. Let's turn to Exhibit 10 and have you identify and describe that.

A. This is just a sample of an FMI that we ran out there, just to give the Examiner an idea of what the picture looks like. It has some --

Q. We're taking this wellbore, this circle --

A. Right, this is a circle, and it's just laid out -- if it were cut and laid out flat, that's what you're looking at here.

Q. You're taking a circle, splitting it vertically, laying it out, and this is what you would see --

A. That's correct.

Q. -- under a formation micro-imager?

A. Right.

Q. Under this example show us how you and other technical people could find a vug as a signature on this display.

A. Well, as you can see, some of the notations on the right, you see this large dark area is a vug, a large vug, and you can also tell which side of the hole basically it's on.

You can see fractures. If you look at the next up from that one, you see a fracture that's maybe open or maybe healed, but it has solution vugs that have formed along that fracture plane. You can see healed fractures, you can see small pinpoint vugs at the top also.

Q. When you ask Yates to pay for and participate in this type of logging, will they do it?

A. We are running the -- We haven't asked them to run this on their wells. We are running the high-resolution logs on their wells, and we're paying for that. They're not participating with us.

Q. Let's look at Exhibit 11 then, and show us what you've set up here on Exhibit 11.

A. This is just taking the same well that had the picture, the FMI picture on the last exhibit, and it's showing --

Q. The conventional log is on the left --

A. Right.

Q. -- and it would be characteristic of a log taken out of North Dagger Draw?

A. Right.

Q. And read it for us. What's the three and a half percent at the top mean?

A. We digitized these logs, and we just calculated from standard correlations what the porosity in that section -- what average porosity would be that you would calculate. And it comes out to -- it calculates about 3.6 percent.

Q. What happens when you have the ability to utilize a high-resolution sampling?

A. A high-resolution sampling, you take the same log, we digitize it and we calculated a 5.6-percent average porosity, the same interval.

Q. And then finally the SPOT technique?

A. The SPOT technique, we calculated a 10.3-percent average porosity.

Q. What's the point?

A. The point is that the porosity is directly proportional to the calculated reserves for the well, and if you base that on 3.6 percent, in some cases where you don't have enough dolomite, you may elect not to run pipe

on a well that you really have a lot more porosity and would possibly be an economic producer.

Q. If Nearburg is awarded the right to operate, you propose to do that in this well?

A. Yes.

Q. Is that technology and procedure more sophisticated than what Yates is proposing to do?

A. They have not done that on any wells that we've participated with them out there so far.

Q. Let's turn to the next display, Exhibit Number 12. Identify and describe that.

A. This just takes the last exhibit a step farther and uses the different porosity values, the water saturation values that were calculated and all the values that go into the volumetric equation.

And it shows that using the spot porosity of 10.3 percent, all other variables being the same, you calculate oil in place in that section of dolomite, in that well, of approximately 203,000 barrels, whereas using the 1.2-inch-high-res you would calculate 57,000, using the conventional log you would calculate 14,000 barrels in place.

Q. As part of your duties, do you review and approve the joint interest billings that you receive from Yates?

A. Yes, I do.

Q. And are you familiar with how you're handling,

when Nearburg is the operator, the costs of connection if there are any, to connect the Nearburg disposal system to any of these Cisco wells?

A. Yes, I think that we bill the well for the pipeline that connects it to the disposal system.

Q. Are you aware of any material difference between how you and Yates are doing this, or how you propose to do it in this case?

A. No.

Q. Is the daily disposal rate that each of the systems are charging back to the well approximately the same, 25 percent?

A. It is the same.

Q. Twenty-five cents per barrel?

A. Twenty-five cents, yes.

Q. So is there a major issue as to whether or not we decide this case upon which operator has a disposal facility?

A. No, there isn't, no.

Q. Do you have capacity in your system to handle the additional water that would be produced if you're allowed to operate and drill this proposed spacing unit?

A. Yes, we do.

Q. When you as a reservoir engineer are judging for yourself, after discussing with Mr. Elger his geologic

conclusions, what is your opinion about where you want to be in this spacing unit? Do you want to be up next to that Amole Com 2 well, or do you want to be down there in the southeast-southeast?

A. My concern with the Amole Com 2 well is not so much the water but the oil rate.

Like Mr. Elger talked about a little bit, if you basically see a profile out there where you have a relatively quick decline, where you produce 30, 40 percent of your reserves that you're going to produce, then you see a slight flattening -- and most of these wells, or a lot of the good wells, start off at, you know, 500-plus barrels a day.

And if this well follows that same profile and is now producing only 130 barrels a day, our -- we really -- We project that you need to recover about 75,000 barrels to pay out one of these wells, and we don't anticipate that well will ever get there based on current rates.

Q. So apart from simply the water cut, you really need to have your best location to maximize the oil recovery at that location; is that not true?

A. You need to have a good oil rate, along with the low water rate, yes.

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

We move the introduction of his Exhibits 8 through 12.

EXAMINER STOGNER: Any objection?

MR. ERNEST CARROLL: None.

EXAMINER STOGNER: Exhibits 8 through 12 will be admitted into evidence.

Thank you, Mr. Kellahin.

Mr. Carroll?

CROSS-EXAMINATION

BY MR. ERNEST CARROLL:

Q. Mr. McDonald, how long have you been working in this area for Nearburg?

A. We've run these logs on the last two wells that we've drilled out there.

Q. No, I'm talking personally, about your experience.

A. What area?

Q. The Dagger Draw area.

A. Ever since we started drilling in there, which was in the -- I guess the late Eighties sometime.

Q. Okay, so you've been employed by -- and I'm talking about your experience --

A. Right.

Q. -- is what --

A. Right.

Q. You've been employed by Nearburg since the late Eighties?

A. Since the early Eighties, yeah.

Q. Excuse me?

A. I've been employed by Nearburg since 1985.

Q. All right. So then you are aware of what's been going on out here and, in particular, you can agree that the costs that Yates has been having with respect to these wells, as the exhibit prepared by Mr. Fant did, has been dropping steadily; isn't that true? You have no disagreement with what Mr. Fant was saying about Yates' costs?

A. They appear to be dropping. You know, it's a function of, I'm sure, improved drilling techniques as they learn more, and also utilizing common batteries.

Q. And it's also been accomplished by the fact that they've cut out a lot of these different kinds of log examinations and things that you were just talking about; they no longer use this because in their experience they've found them not to be helpful. You're aware of that because they've told you that and had that very discussion with you several times?

A. I've never had that discussion with Yates.

Q. Well, you talked about a log just a moment ago that Mr. Kellahin asked you about and you said, Yes, we're

running this log but Yates won't pay any part of it? You're paying the full cost of it?

A. The high-resolution log, that's correct, not the FMI.

Q. And Yates' position is, and they've expressed it to you, is that they have run these logs and they have found them not to be helpful; isn't that true?

A. That's their opinion.

Q. That's their opinion. And you also know it's the opinion of Schlumberger out here, that all of these tools and logging suites that they have to tell us about the vugs and all this stuff, they are telling their customers right now that they don't believe their logs tell what it's cracked up to be, and they are presently engaged in research to try to make these logs do what everybody would like them to do, which is what you presented to the Commission that they would do?

A. I'm not aware of that.

Q. You're not aware of that at all?

A. No.

Q. But it wouldn't surprise you that Mr. Fant had lunch with the Schlumberger people just this Saturday --

MR. KELLAHIN: Oh, I'm going to object. This is not appropriate cross-examination.

EXAMINER STOGNER: I agree with Mr. Kellahin.

Q. (By Mr. Ernest Carroll) But you wouldn't disagree with the fact, Mr. McDonald, that Schlumberger representatives have told Mr. Fant that very thing?

A. I have no idea what they told --

Q. You have no idea.

Well, when you look at your Exhibit Number 9, your SPOT and ELAN log analysis, I'm really curious -- intrigued by the last -- the sentence under the "SPOT". It says, "From this computation, the apparent producibility of the formation can be inferred..."

A. With enough data points, yes.

Q. Not measured?

A. That's correct.

Q. These logs don't measure anything, do they?

A. They present a picture of the wellbore, and having enough data samples over a large enough area you can start to draw conclusions and inferences from them.

Q. And that's the problem. When you get one, two, three, four inches away from this log, it tells you nothing about what's happening out there in the reservoir, does it?

A. That's true, but it tells us certainly a lot more about what's happening in those three inches than a standard log does.

Q. Well, there could be other tools that are better, because Yates seems to be completing some of their best

wells here in the last few months, and they don't use these tools, do they?

A. Not that I'm aware of.

Q. And these tools all -- These pictures, Exhibit 10, Exhibit 11 and 12, they all deal with this Dagger Draw 31 Number 7 well?

A. That's correct.

Q. And that was a well that Yates had 25 percent in, Conoco had roughly 25 percent in, and Nearburg had about 50 percent in; isn't that correct?

A. That's correct.

Q. And this well you didn't even run pipe on, did you?

A. We haven't yet. We're -- The well's shut in right now, pending further evaluation.

Q. But you've been notified by Yates and Conoco that they don't want to have any part?

A. That's correct.

Q. These particular wells, when you frac them, you go in and you use something on the order of 20,000 barrels of acid to acidize these things, don't they?

A. I believe it's gallons.

Q. Gallons, excuse me. That's normal?

A. That's pretty standard, yes.

Q. That -- The use of acid like that tends to make

it less critical that you actually pinpoint the exact area of the vugs; isn't that true?

A. To a point it does, yes.

Q. You'll agree the Ross Ranch 22 is almost nothing better than a water well?

A. At this time, that's true.

Q. And you run pipe on that well?

A. That's correct.

Q. And you had available all these tools?

A. We didn't run these tools on that well. That's before we started running these.

Q. You'll agree with me, though, Mr. McDonald, none of these tools measure water, do they?

A. These particular ones measure porosity.

Q. Right, they don't have a thing to do with water, do they?

A. That's basically correct.

Q. I believe you testified that -- and I apologize, I wasn't sure exactly what you said, but on the hooking up cost of these disposal systems, Nearburg does charge the working interest owners a cost, and I believe you said it was insignificant? And I apologize if I -- Don't let me mischaracterize it.

A. I think I said we charged them the cost of tying in the wells to the system.

Q. How much is the average cost for doing that?

A. It could vary dramatically, compared to how far they are away from the system.

Q. All right. So your nearest point with respect to this location would be the Ross Ranch Number 2; is that correct?

A. That's correct.

Q. So what does -- your estimate of the cost from your proposed location to the Ross Ranch 22?

A. I don't have an exact -- I haven't prepared an exact estimate.

Q. You don't -- $20,000? $30,000?

A. Oh, I'd suspect more like $10,000, probably.

Q. Ten thousand? There's a significant difference between zero and $10,000, wouldn't you agree?

A. Yes, there is.

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

EXAMINER STOGNER: Mr. Kellahin, any redirect?

MR. KELLAHIN: No, I have no questions.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. McDonald, if your well is successful, do you visualize the whole 160 acres having four wells on it at one time, or subsequent wells?

A. I don't think so. Probably -- I'm sure all wells

will be drilled.

Q. So you share Yates' opinion on that?

A. Yes.

EXAMINER STOGNER: No other questions of this witness. You may be excused.

MR. KELLAHIN: I have a certificate of notice buried here somewhere, Mr. Examiner.

Mr. Examiner, I would mark and we would propose to introduce as Exhibit 13 a certificate of notice for hearing as to all these interest owners, and I'll do that after the conclusion.

MR. ERNEST CARROLL: No objection.

MR. KELLAHIN: Here's a copy of it, Mr. Examiner, and here's the original.

EXAMINER STOGNER: Mr. Carroll, do you have any -- would you like to recall any of your witnesses or anything at this time?

MR. ERNEST CARROLL: Your Honor, I have no further evidence to present to the Examiner.

Furthermore, if Mr. Kellahin is of the same mind, I would waive any further argument. I think these issues are pretty simple. They've been argued before this Commission I don't know how many times in the last few months.

MR. KELLAHIN: I concur, Mr. Examiner. We'll

leave it up to you to decide the differences and determine who you appoint as the operator of the spacing unit.

EXAMINER STOGNER: This is one of the first ones I have sat in, so I'm going to ask each of you to furnish me a rough draft order, and -- What is the time frame on it? Why don't you all agree on a time frame?

MR. KELLAHIN: Ernest, what's your schedule? Ten days? Two weeks?

MR. ERNEST CARROLL: Yeah, two weeks would be fine.

MR. KELLAHIN: Nobody's got a deadline on this one, I don't think, do we?

MR. ERNEST CARROLL: No.

MR. KELLAHIN: Okay, two weeks.

EXAMINER STOGNER: Leave it up to you. Appreciate that.

If there's nothing further in either of these cases, 11,310, 11,311, then this matter will be taken under advisement.

(Thereupon, these proceedings were concluded at 3:55 p.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case Nos. 11310, 11311 heard by me on August 10, 1995.

, 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 25th, 1995.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998