NEW MEXICO OIL CONSERVATION DIVISION

STATE LAND OFFICE BUILDING

STATE OF NEW MEXICO

Docket No. 3-93

Case No. 10629

IN THE MATTER OF:

Application of Santa Fe Energy Operating Partners, L.P., for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico

BEFORE:

EXAMINER MICHAEL E. STOGNER

January 21, 1993

ORIGINAL

REPORTED BY:

DEBORAH O'BINE
Certified Shorthand Reporter
for the State of New Mexico

A P P E A R A N C E S

FOR THE NEW MEXICO OIL CONSERVATION DIVISION:

ROBERT G. STOVALL, ESQ.
General Counsel
State Land Office Building
Santa Fe, New Mexico 87504-2088

EXAMINER STOGNER: Let's call the case 10629.

MR. STOVALL: Application of Santa Fe Energy Operating Partners, L.P., for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico.

EXAMINER STOGNER: This case was heard along with Case No. 10628 at the December 18, 1992, hearing. At that time this case was readvertised to include an unorthodox location and some compulsory pooling on additional acreage.

At this time, we'll call for any additional appearances and/or testimony in this case?

There being none, this case will be taken under advisement.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10629, heard by me on 31 January 1993.

, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

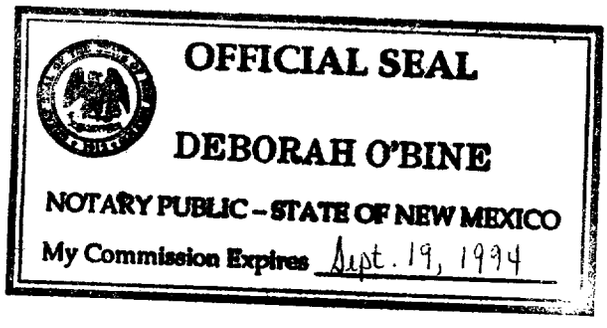
I, Deborah O'Bine, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that I caused my notes to be transcribed under my personal supervision, and that the foregoing transcript is a true and accurate record of the proceedings of said hearing.

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, January 25, 1993.

Deborah O'Bine

DEBORAH O'BINE
CCR No. 63



NEW MEXICO OIL CONSERVATION DIVISION

STATE LAND OFFICE BUILDING

STATE OF NEW MEXICO

CASE NO. 10628 and 10629

Consolidated Cases

IN THE MATTER OF:

The Application of Yates Petroleum Corporation, for Compulsory Pooling and an Unorthodox Gas Well Location, Eddy County, New Mexico.

The Application of Santa Fe Energy Operating Partners, L.P., for Compulsory Pooling and an Unorthodox Gas Well Location, Eddy County, New Mexico.

BEFORE:

MICHAEL E. STOGNER

Hearing Examiner

State Land Office Building

December 18, 1992

REPORTED BY:

CARLA DIANE RODRIGUEZ
Certified Court Reporter
for the State of New Mexico

A P P E A R A N C E S

FOR SANTA FE ENERGY OPERATING PARTNERS, L.P.:

HINKLE, COX, EATON, COFFIELD & HENSLEY
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
BY: **JAMES BRUCE, ESQ.**

FOR YATES PETROLEUM CORPORATION:

CAMPBELL, CARR, BERGE & SHERIDAN, P.C.
Post Office Box 2208
Santa Fe, New Mexico 87504-2208
BY: **WILLIAM F. CARR, ESQ.**

I N D E X

E X H I B I T S

EXAMINER STOGNER: This hearing will come to order. Call next case, No. 10629, which is the application to Santa Fe Energy Operating Partners, L.P., for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico.

At this time I'll call for appearances.

MR. BRUCE: Mr. Examiner, Jim Bruce from the Hinkle Law Firm in Santa Fe, representing the Applicant. I have three witnesses to be sworn.

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm, Campbell, Carr, Berge & Sheridan. I represent Yates Petroleum Corporation and I have three witnesses.

There's a companion case on this docket, Case 10628, which is the application to Yates Petroleum Corporation seeking an order approving the same acreage and approving another unorthodox well location, "another" being other than the one proposed by Santa Fe. Accordingly, we would request that the cases be consolidated for purposes of hearing.

EXAMINER STOGNER: Mr. Bruce, do you concur?

MR. BRUCE: Yes.

EXAMINER STOGNER: At this time I'll call the concurrent case, No. 10628, which is the application of Yates Petroleum Corporation for compulsory pooling and an unorthodox gas well location, in Eddy County, New Mexico.

Do you wish to enter your appearance in that one, Mr. Bruce?

MR. BRUCE: Yes, sir.

EXAMINER STOGNER: And, Mr. Carr, do you have any witnesses?

MR. CARR: Yes, sir. I have three witnesses.

EXAMINER STOGNER: Are there any other appearances in either Case 10627 or 10628?

Will the witnesses please stand to be sworn in.

[And the witnesses were duly sworn.]

EXAMINER STOGNER: Mr. Bruce, I understand that you will be presenting your testimony or your witnesses first?

MR. BRUCE: That's correct. One preliminary matter, Mr. Examiner. Santa Fe's

original well location was 660 feet from the west line and I believe 500 feet from the south line. Santa Fe would like to amend its application to move the location 204 feet from the south line. The other distance remains the same.

I've spoken with Mr. Carr about it and he has no objection to going forward, and we have a waiver from the offsetting interest owner with respect to this matter.

EXAMINER STOGNER: Okay. The location would be changed to 660 from the west line, 204 from the south?

MR. BRUCE: That's correct.

EXAMINER STOGNER: Since that's more unorthodox, we'll have to readvertise it.

GARY GREEN

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name and your city to residence?

A. My name is Gary Green. I live in Midland, Texas.

Q. Who are you employed by and in what

capacity?

A. Santa Fe Energy as a division landman.

Q. Have you previously testified before the Division as an expert petroleum landman?

A. Yes, I have.

Q. Are you familiar with the land matters involved in this application?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I tender Mr. Green as an expert landman.

EXAMINER STOGNER: Are there any objections?

MR. CARR: No objection.

EXAMINER STOGNER: Mr. Green is so qualified.

Q. Mr. Green, briefly, what does Santa Fe seek in this case?

A. Santa Fe seeks to pool all to Section 27, Township 21 South, Range 24 East, Eddy County, New Mexico, to form a unit for all pools spaced on 640 acres in the west half to Section 27 for all pools the formation spaced on 320 acres.

Santa Fe also seeks approval for an unorthodox well location for a well to be located

204 feet from the south line and 660 feet from the west line to Section 27.

Q. Moving to your exhibits, what is Exhibit 1?

A. Exhibit 1 is a 1 - 4,000 land plat. The acreage colored in yellow highlights Santa Fe's acreage and also indicates a six-section outline to the working interest that Santa Fe, Neste, and North Central currently operates under. It also shows the location to Santa Fe's Right Hand Canyon Federal 34 #1. It also shows the proposed location to Santa Fe's Rocky Top Federal Com 27 #1.

The other acreage in there that's indicated in white, that's not colored yellow, would belong to Yates.

Q. So Santa Fe and the Yates group are the two primary landowners in this area?

A. Yes.

Q. Specifically, what parties does Santa Fe seek to pool?

A. Santa Fe seeks to pool Yates Petroleum Corporation, Yates Drilling Company, Abo Petroleum Corporation and Myco Industries, who own all to the south half, except for the

southwest quarter of the southwest quarter.

Santa Fe owns all to the north half and the southwest to the southwest quarter, with the exception of the northwest/northeast quarter.

Q. As to the unorthodox location portion of this case, who are the offset operators or lessees?

A. The offset operators to the south and east is Santa Fe, which owns the acreage there. The offset operators to the west and southwest in Sections 28 and 33 is Marathon, the operator to the Indian Hills Unit.

Q. What is Marathon's position in this case?

A. Marathon has waived any objection to Santa Fe's location. We have a waiver letter which will be marked as Exhibit 2.

Q. Okay. Would you please discuss your efforts to get the Yates group to join in the proposed well?

A. We have been negotiating, talking to Yates for almost a year, since January to 1992. Originally we proposed a six-section federal unit, six-section working interest unit. We have gone time and time again to get their support in

the form to joining in some sort of unit farming out.

Q. Is that the unit that's outlined by the hatch marks on Exhibit 1?

A. Yes, it is.

Q. Was the outline of this unit based on geology?

A. Yes, it was.

Q. Will Santa Fe's geologist discuss this briefly later?

A. Yes.

Q. Okay, please continue. What happened during the course of your discussions with Yates?

A. Basically we could never get a commitment out of Yates. The answer was usually yeah, we want to do something, but we're going to have 50 percent and we're going to operate. Our response usually was, "You don't own 50 percent in the six sections here, and we're going to operate."

Q. You mentioned a couple to other parties, North Central and Neste, I believe. What is the relationship there?

A. Santa Fe sold out its interest to Neste and North Central, and they joined Santa Fe in a

six-section working interest unit and joined in an operating agreement covering this area which will be Exhibit 4.

Q. First, what is Exhibit 3?

A. Exhibit 3 is a letter from Neste, a letter from North Central, who are the other working interest owners in the six-section area, basically supporting the formation of the 640-acre Section 27 as a unit, and also supporting Santa Fe as operator.

Q. Had you informed Yates that Santa Fe was interested in selling out its interest?

A. Yes, we did.

Q. Is Exhibit 4 the operating agreement that Santa Fe has with North Central and Neste?

A. Yes, it is.

Q. Now, when was the interest sold to North Central and Neste?

A. The interest was sold in March, April, May, sometime in that area. I believe it was in May.

Q. From that period on, what correspondence or what phone calls did you have with Yates?

A. I've had a number to telephone

conversations with Mr. Bullock with Yates. In April, I sent Yates a letter officially proposing the working interest unit, six-section working interest unit, asking them to join in that unit or to farm out.

We could never get any support to join in the working interest unit. In June we asked for support in the form to a farm out, option farm out, in the south half to Section 27.

Q. Was this the result to a phone discussion with Mr. Bullock?

A. Yes, it was. We were trying to figure out some way to get Yates to participate in some form or fashion. They suggested we request a farm out, which we got no response to.

Then I had a number to telephone conversations, and after we drilled the well we again proposed to Yates to form a one-section working interest unit covering Section 27 and drill a Morrow well.

Q. You mentioned "after drilling the well." Which well are you speaking about?

A. After Santa Fe drilled the initial test well and prospect, which is the Right Hand Canyon Federal 34 #1.

Q. Did Santa Fe get any support from Yates for that well?

A. No, we did not.

Q. From the beginning of your discussions with Yates, had Santa Fe offered to show its geology to Yates?

A. Yes, Santa Fe offered to show its geology to Yates from the very beginning, if Yates would agree to participate in some form or fashion, either join in the working interest unit or farm out its interest.

Q. Did this include its geology from the Right Hand Canyon well?

A. Yes, it did.

Q. You mentioned after the Right Hand Canyon well was drilled, you wanted to form a one-section working interest unit. What was the reason for that unit?

A. The reason for the one-section working interest unit, the spacing for the Canyon Formation out there, the Upper Penn is 640 acres.

Q. What did the Right Hand Canyon well show with respect to the Cisco Canyon?

A. We were unable to adequately test the Cisco Canyon because to severe loss circulation.

Q. On the Right Hand Canyon well, what is its current status?

A. The Right Hand Canyon well is currently being completed in the Upper Morrow.

Q. And with respect to the one section unit, did you write to Yates proposing that well?

A. Yes, I wrote to Yates a letter dated September 11th.

Q. And, since that letter, have there been subsequent discussions with Mr. Bullock?

A. Yes, there have.

Q. Now, to your knowledge, does Yates have any new completions in the immediate area?

A. Yes. My understanding is that they have recompleted a well in Section 17, Township 22 South, Range 24 East.

Q. Has Yates turned over the data on that one?

A. No, they have not.

Q. Will your geologist be discussing that?

A. Yes, he will.

Q. In summary, Mr. Green, what has Yates' position been?

A. I think Yates' position has always been that they are not willing to participate or

support unless they were given a 50-percent position and operatorship to the Hill Unit. They've basically written us down on the initial test and prospect and given us no support.

Q. Is your correspondence with Yates marked Exhibit 5?

A. Yes.

Q. In your opinion, have you made a good faith effort to obtain Yates' voluntary commitment to Santa Fe's proposed well?

A. Yes, I believe we have. We've worked on this for almost a year now.

Q. Is Santa Fe in any other Yates-operated wells?

A. Yes. Over the last two or three years we've participated in approximately 29 wells with Yates. Yates has operated all to those wells. Even though Santa Fe has had an equal or greater interest in some, we've always conceded operations to Yates. We just feel like it's time for Santa Fe--it's Santa Fe's turn to operate.

Q. In this particular area, in this six-section area, who is the majority working interest owner?

A. Santa Fe would own the majority to the

working interest.

Q. Will Santa Fe's engineer discuss well costs and operating charges?

A. Yes, he will.

Q. Was notice given to Yates and Marathon for this hearing?

A. Yes, it was. It's marked Exhibit 6.

Q. That's your affidavit to notice with the return receipts?

A. Yes.

Q. In your opinion, is the granting of Santa Fe's application in the interests to conservation and the prevention to waste?

A. Yes, it is.

Q. Mr. Green, were Exhibits 1 through 6 prepared by you or under your direction?

A. Yes.

MR. BRUCE: Mr. Examiner, I would move the admission to Santa Fe's Exhibits 1 through 6.

MR. CARR: No objection.

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

EXAMINER STOGNER: Mr. Carr, your witness.

EXAMINATION

BY MR. CARR:

Q. Mr. Green, when did Santa Fe decide to move the well to the current location?

A. It was only decided in the last couple to weeks because to topographical reasons and geological reasons, which our geologist will discuss.

Q. Were you involved in those decisions?

A. No, I was not.

Q. Initially, Santa Fe was proposing a six-section working interest owner unit? Is that what you indicated?

A. Yes.

Q. Today, however, we're really only discussing Section 27, is that correct?

A. Yes.

Q. And in Section 27, the working interest ownership is split 50/50?

A. Yes, it is.

Q. You have everything in the north half except 40?

A. Yes.

Q. We have everything in the south half except 40?

A. Yes.

Q. You have been negotiating and working, trying to put together a voluntary agreement for the development of this section for now a year plus?

A. This particular section, no. Since we've drilled our well, this well was drilled in July, and we have been negotiating about five months on Section 27.

Q. The bottom line is, there's no voluntary agreement for the development of this section?

A. No, there is not.

Q. Your requested pooling, if I understood it, is the west half unit if it's 320 spacing, the entire unit if it's 640-acre spacing?

A. Yes, sir.

Q. And I guess if this should be an oil well, do you know what the spacing would be out here?

A. I think that would have to be determined.

Q. You indicated that you proposed to Yates that they participate and you would share your geology with them. That would be shared

after they had reached an agreement or agreed to participate?

A. After they had agreed to do one of two things, either participate in the unit as a working interest owner or farm out.

Q. The information that Yates has on the Right Hand Canyon well in 34 was obtained pursuant to a subpoena to the Division?

A. Yes, it was.

Q. It wasn't voluntarily provided?

A. No, it was not.

Q. There was also an effort by Santa Fe to subpoena data from Yates, is that correct?

A. Yes, it was.

Q. And a portion to that subpoena was quashed?

A. Yes, that's correct.

MR. CARR: That's all I have.

EXAMINATION

BY EXAMINER STOGNER:

Q. Exhibit No. 4, this is your proposed unit agreement or has this unit agreement been approved?

A. This is an existing working interest unit, joint venture operating agreement covering

those six sections between Santa Fe, Neste and North Central.

Q. Was this unit approved by the BLM?

A. No, it was not. It's strictly a joint operating agreement working interest unit.

Q. We're dealing just with Section 27 today?

A. Yes, sir.

EXAMINER STOGNER: Mr. Carr or Mr. Bruce, we need to flip over here to the list to Exhibit A to that agreement. I don't see this very often but when I do, I get a little disturbed.

Paragraph 17, my last name appears as a lessor. It's a very uncommon name, but I do not know of anybody by the name of Leona L. Stogner, irrevocable trust. This is not the acreage involved in this, but I think this needs to go on the record. Do you know if this name appears anywhere else, Mr. Bruce?

MR. BRUCE: Not to my knowledge, but I would ask Mr. Green.

THE WITNESS: No, it does not appear anywhere else.

EXAMINER STOGNER: Mr. Carr, do you

have any comments or do you see any problem?

MR. CARR: I have no comment and no problem.

EXAMINER STOGNER: I do not know this Leona L. Stogner, but since it's not in this area today, I think it just needs to be brought out.

You mentioned, and I'll hold off and ask one of your other witnesses on the location of the wells, since you did mention there was topographic and geological information as to that. I'll hold off until that time. I have no questions to Mr. Green at this point.

Mr. Bruce?

MR. BRUCE: Just one final question, Mr. Green.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Mr. Green, is it common to show the geology or offer to show the geology after someone agrees to farm out or join?

A. Yes.

MR. BRUCE: That's all I have, Mr. Examiner.

EXAMINER STOGNER: You may be excused. Mr. Bruce?

MR. BRUCE: Call Gene Davis to the stand.

GENE DAVIS

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name and city to residence for the record?

A. My name is Gene Davis, and I live in Midland, Texas.

Q. What is your occupation and who are you employed by?

A. I am the geological and geophysical manager for the Permian District for Santa Fe Energy Resources.

Q. Have you previously testified before the Division as a geologist?

A. No, I have not.

Q. Would you please outline for the Examiner your educational background and your work experience?

A. I received a bachelor's degree in geology from the University of Dayton in 1975. I have a master's in geological sciences from the

University of Texas in El Paso. I received that in 1979.

I worked for Phillips Uranium in Albuquerque, New Mexico and Minneapolis, Minnesota for a year and a half. I then became employed by Superior Oil Company in Midland, Texas, for a period of 14 months.

I then went to work for Heritage Resources, an independent oil and gas producer and in Midland, Texas, and Dallas, Texas, and worked for them for seven and a half years. I then became employed by Santa Fe Energy three years ago.

Q. What are your duties at Santa Fe?

A. My duties at Santa Fe are regional exploration and development geology throughout West Texas and Southeast New Mexico, and I supervise a number to geologists doing the same.

Q. Are you familiar with the geology involved in this application?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I tender Mr. Davis as an expert geologist.

MR. CARR: No objection.

EXAMINER STOGNER: Mr. Davis is so

qualified.

Q. Mr. Davis, first off, what are the primary target zone or zones in the proposed well?

A. The proposed well has two primary objectives, the Cisco Canyon dolomite and the Morrow sands.

Q. And referring to your locator map, Exhibit No. 7, would you describe its contents for the Examiner?

A. Mr. Examiner, and other parties, provided to you there are a set of maps that I've marked as exhibits. Those maps are also on the wall and I'll probably use the wall copies to talk from, if that's all right. You can also refer to the maps that are in front of you, the smaller exhibits. They are exact duplicates.

EXAMINER STOGNER: I'll remind you, Mr. Davis, please do talk loud for our transcriber, and also refrain from pointing to something and saying "here" and "here." You need to describe it.

THE WITNESS: Yes, sir, thank you.

A. Exhibit 7 is a structure map on top to the Cisco Canyon dolomite, in the Dagger Draw,

Indian Basin area. This area is basically 15 miles or so due west to Carlsbad, New Mexico.

The Cisco Canyon formation in this area is basically composed to three different facies, there's a shale facies, there's also a limestone facies and finally there's a dolomite facies. The dolomite facies is a very, very productive reservoir facies in the area. The limestone is shale or lime.

What is depicted on this particular structure map, of course the structure on top to that reservoir unit is the Cisco Canyon dolomite. You'll note on that map that there is a dark black line beyond which there is some printing which says "no dolomite." You can see that that exists both on the east and the west to a trend that goes basically north and south through the area.

There are two major fields or actually three major fields that are located within this dolomite reservoir. Shown in red there is the Indian Basin gas field, which is a very, very large gas field. To the north to that there is the North and South Dagger Draw oil fields.

The Indian Basin gas field is indicated

in red. It is gas productive with plus or minus 60 degree gravity condensate production. The North and South Dagger Draw fields are both gas and oil productive. There is an oil leg which is shown in green, and that is productive to 42 degree gravity oil.

The blue leg that we show above that or rather to the west to the green leg is a gas productive interval with plus or minus 42 degree gravity oil produced with it as well.

If I can, I want to call your attention to the east flank, the southeast and the east flank to the Indian Basin gas field, just east to the area labeled "Indian Hills." That would be in Township 21 South, Range 24 East, and Township 22 South, Range 24 East.

You can see that there is an area that is hachured in green. That area there is an area that we think could potentially be oil productive, with the presence to an oil leg lying structurally down dip to the Indian Basin gas field.

You'll note that there is a six-section outline which is an outline to a working interest unit that Santa Fe, Neste and North Central have

that Mr. Green has discussed. There is a section, which is Section 27, that is colored in yellow. We also indicate the location to the well that we're interested in proposing which is in Section 27, and it is shown by a triangle.

Q. One thing, Mr. Davis, there are several wells surrounded by hexagons. What do those wells indicate?

A. Referring again to this east and southeast flank to the Indian Basin gas field, you will notice that there are six wells with hexagons. Those six wells are wells where there have been DSTs to the Cisco Canyon dolomite where oil, gas and water has been recovered by DST.

Those DSTs are very similar to DSTs that have been taken in the Dagger Draw field, both North and South and are very, very similar to that kind of production.

Q. Basically, Mr. Davis, probably what both Santa Fe and Yates are hoping to replicate or to find is another Dagger Draw field, isn't it?

A. That's very much the case. In fact, I visited with Brent May about that very thing, and he agrees that that's what we're looking at very

possibly here.

Q. Do you have anything further on Exhibit 7 that you would like to discuss?

A. I don't believe so. Thank you.

Q. Now, as you said, there are two formations, one of which is the Morrow. Would you refer to Exhibits 8 and 9, just briefly identify them for the Examiner, and discuss the Morrow geology in this area to interest?

A. Exhibit No. 8 is an isopach map. It is a net porous sand isopach with porosity cross-plotted greater than seven percent. It is the Morrow sand that we're working with there, is a Basal Upper Morrow sand.

The exhibit labeled No. 9 is a stratigraphic cross-section labeled B - B'. You'll note that on Exhibit No. 8, the line to that cross-section is shown as a dashed line with the label B - B' on it as well.

The Morrow here is broken up into three different units; there is an Upper Morrow unit. This particular cross-section is a stratigraphic one that is hung on the top to a Middle Morrow limestone marker. Beneath that marker there are two more units in the Morrow, the Middle Morrow

clastic unit and the Lower Morrow clastic unit, and those overlie the Barnett shale.

The particular sand that we're interested in or that we have a great deal to interest in is a sand that occurs at the basal portion to the Upper Morrow formation encased basically by limes and a little bit of shale, and that is labeled the Basal Morrow sand and it is colored in yellow on the cross-section.

Let me describe a little bit to you about the Exhibit No. 8, if you will. There's a lot to symbology on there. This map also has a structure, the structure on top to the Basal Upper Morrow sand superimposed on it, and those contours are in blue and they are labeled in 50-foot contour intervals.

As far as symbology is concerned, there's the six-section outline that's the working interest unit by Santa Fe and its partners. Indicated as a square is the location to the Santa Fe Right Hand Canyon Federal 34 #1 well. Indicated as a triangle, colored red, is the proposed location of the Rocky Top Federal 27 #1 well in Section 27.

There are a number to Morrow

penetrations on this map. Those that are basically a square standing on one end, they have a symbol around them, are Morrow penetrations where there is no test to that Basal Upper Morrow sand.

We have circles which are Cisco Canyon tests which were not deep enough to penetrate through the Morrow formation. There are hexagons which are Morrow penetrations, where there were gas shows and DSTs to the Basal Upper Morrow sand, and there are two wells that have that kind of an indication, the first being the Right Hand Canyon well in Section 34 drilled by Santa Fe, and then the well in Section 22 which is the Ralph Lowe No. 1 Staple well which was drilled in 1963.

Lastly there are Morrow penetrations that are actual Basal Upper Morrow sand completions, and those are shown as a star. One of those on this particular map is in Section 16. If I may go back to Exhibit 7 for a second, please, and refer to the one on the wall again.

There are a number to gas wells that are shown to exist in Township 21 South, Range 24 East, in Sections 4 and 5, 6, 7, 8, 17 and 18.

These are producing in the Cemetery Morrow gas field. They are relevant to this in the fact that my understanding, the way I believe that the Basal Upper Morrow sand has been deposited here, is that this Basal Upper Morrow sand unit is a long shore bar associated with a barrier bar complex, a barrier bar or barrier island complex.

That barrier bar or barrier island complex is actually located just to the north and west of this particular barrier bar that we have encountered in Section 34, and in Section 27 and 22. That barrier bar and island complex basically is trending in a northeast to southwest direction, and that is the same direction that I believe that the barrier bar or long shore bar that we're looking at, in that the Basal Upper Morrow sand is in Section 34 and 27 trends as well.

Q. So you've mapped that island or bar as continuous across sections 34, 27 and 22?

A. That's correct. The data, as we have presented here, you'll notice that there are three wells that have penetrated the Basal Upper Morrow sand in the area that we're involved in.

Section 34, the Right Hand Canyon well,

encountered 14 feet to net porous sand. The well in Section 27 north half, Anadarko's #1 Pardue Farms well encountered 14 feet as well; and then the well in Section 22, the Ralph Lowe Staple, encountered zero feet of net porous sand but did have six feet to gross sand present in it.

If I can refer to the cross-section, B - B', and just describe it a little more to you, this again is a north/south cross-section and we'll talk about the four wells that will be located on your right-hand side to the cross-section, starting with the Santa Fe Right Hand Canyon 34 #1 well.

You can see that the Basal Upper Morrow sand is located at about 9650 feet. We penetrated about 16 feet to good, clean sand which had, as I said, 14 feet to greater than seven percent porosity. It had water saturation to 41 percent calculated using standard equations.

This zone was DST'd by Santa Fe and it flowed at a rate of 1.5 million a day on DST, with no water at all. It had very good flowing pressures and also good shut-in pressures. Currently, Santa Fe has perforated that zone and

is in the process to completing it.

The proposed location in the Rocky Top 27 Federal #1 well is located about approximately 2200 feet due north of the Santa Fe well, as indicated on the cross-section as well. I believe, from my mapping, that we will encounter something on the order to about 14 to 15, maybe a little greater than 15 feet to net porous sand greater than seven percent.

The Anadarko Production Pardue Farms #1 well in Section 27, in the north half, was drilled in 1978. You can see from looking at the cross-section that they encountered the same Basal Upper Morrow sand at a point of about 9535 feet or so, and encountered again around 14 feet to gross sand and had about 14 feet to net porous sand greater than seven percent as well.

That zone was not DST'd. It had a very, very poor mud log show and was not DST'd by Anadarko. They continued to drill the well down into the Morrow and took a large drill stem test over the Middle and Lower Morrow clastics, received very little show and went ahead and plugged the well.

Standard water saturation calculations

on that well show it to have a water saturation to 45 percent, and I believe that well was just a bypass producer. I believe that it had the same potential as the Right Hand Canyon 34 #1 well that we drilled in Section 34.

The last well, the Ralph Lowe Staple #1 well in Section 22, you can see that they encountered six feet to gross sand. This is an old sonic log whereas the previous two logs were neutron density logs. The old sonic log shows it to have about six percent porosity, not quite seven percent, so it shows zero feet to net porous sand on our isopach map, Exhibit No. 8.

You can see that they did conduct a DST across this Basal Upper Morrow sand. The DST also included some sands in the Middle Morrow. The zone flowed gas at 1.6 million a day with reasonable flowing and shut-in pressures.

They took another test that did not include the Upper Morrow sand that actually included the entire Lower and Middle Morrow interval. That zone flowed at about 600,000 a day and it seems to me it does show that those two DSTs indicate there's some potential in the Ralph Lowe Staple #1 well for some gas production

and indicates to me that that clean sand goes to the north as well.

Q. Now, Santa Fe's proposed well is about midway between the Anadarko well, in the north half of Section 20, and the Right Hand Canyon well, is that correct?

A. That's correct.

Q. In your opinion, is that an optimum location for the well?

A. I believe that we have a very good location there to test the Morrow. From my mapping, it will be structurally high to both the Santa Fe well in Section 34 and also the Anadarko Pardue Farms well in the north half to Section 27. I think we'll encounter plenty to reservoir rock as well.

Q. Now, Santa Fe's proposed location is quite unorthodox. Do you have any comments on this?

A. The proposed well is, about as I said, 2200 feet north to the Santa Fe Right Hand Canyon 34 Federal #1 well. We believe that to be sufficient to prevent interference between the two wells.

Q. And obviously Santa Fe has no objection

with respect to its Right Hand Canyon well?

A. No, we've waived objections, as has Marathon as well.

Q. Are there also topographic reasons for the proposed well location?

A. Yes, there are, and our engineer will discuss those.

Q. Now, if Santa Fe's application is granted, is there a second Morrow location in the east half to Section 27?

A. I believe that we could drill a successful Morrow test in the northeast quarter to Section 27.

Q. And, of course, after this Section 27 well is drilled, there will be more data will there not?

A. That's correct. It will give us a great deal to information as to the extent to that sand.

Q. You've also discussed the Cisco Canyon as the other primary objective. Would you go into more detail on this? and I refer you to your Exhibits 10, 11 and 12. Please identify those exhibits first, and then start off with Exhibit 10.

A. Okay. Exhibit 10 is a structure map on top to the Cisco Canyon dolomite. Exhibit No. 11 is an isopach map to the Cisco Canyon dolomite interval, and Exhibit No. 12 is a structural cross-section labeled A to A' which is roughly a north/south cross-section across the area in question. It takes into account the Cisco Canyon interval.

Q. Moving to Exhibit 10, the structure map, what does that show?

A. Again, if I may digress for one second to Exhibit 7, just to get us located again, both to these are structure maps on top of the Cisco Canyon dolomite, both Exhibits 7 and Exhibit 10.

We're looking at the east flank to the Indian Basin gas field, and we're concentrating on Section 27, where there are, as again on the east flank, that gas field, there are six wells that have tested oil, gas and water from the Cisco Canyon dolomite.

On both maps, and we'll look at Exhibit No. 10 now, you'll note there is a green line at minus 34. Let me digress for one second and go back and talk about the symbology on both to these maps, Exhibits 10 and 11, to get that

cleared up.

Again, we're showing stippled acreage that belongs to Neste, North Central, and Santa Fe. Within a dashed outline, which is that working interest unit, the Santa Fe Right Hand Canyon Federal 34 #1 well is the square; the colored red triangle is the proposed location to the Rocky Top Federal 27 #1 well. There are a number to penetrations to the Cisco Canyon on this east flank to the Indian Basin gas field. Those with a circle around them are Cisco Canyon penetrations where no oil and gas tests were recorded or reported.

The hexagons are, again, the Cisco Canyon penetrations where oil, gas and water were recovered by DST. There are five to those on this particular map, two in Section 27, one in Section 35 to Township 21 South, 24 East. One in Section 2 and one in Section 3 to Township 22 South, Range 24 East.

Finally, there are four Cisco Canyon producers that are shown as six point stars, and those are located in Sections 21, 28 and 33 to Township 21 South, 24 East, and one in Section 4 which is now plugged out, in Township 22 South,

Range 24 East.

Those four gas wells are gas wells that are producing from the Cisco Canyon within the Indian Basin gas field. "NDE," if you see it located on the map, that would indicate it's not deep enough. That particular comment on the isopach map, which is labeled Exhibit 11, are wells that encountered the Cisco Canyon but did not go deep enough in order to get all the way through it to give us the ability to get an isopach-ish interval.

Q. What are the red and green lines?

A. The green line at minus 4034 is the lowest point tested by DST on the east flank of the Indian Basin gas field that recovered oil, gas and water on that DST.

Q. Does that mean that the area to the east would not recover that?

A. No, it does not mean that. All that is stating, basically, is that at that point, that is the lowest point we know there has been oil, gas and water recovered.

Q. There's no data to the east?

A. There is no data to the east to give you any other information, other than there is a

DST and a well in Section 1 to Township 22 South, Range 24 East, and it did recover water and there were no shows to hydrocarbons, and that was over a fairly broad interval.

Q. What else does the structure map show with respect to Santa Fe's location versus Yates' proposed location?

A. The red line shown on there is minus 3754, which is the lowest known perforations to the Cisco Canyon within the East Indian Hills portion to the Indian Basin gas field. That shows where the known gas production is.

With respect to the locations that we're looking at, you'll notice that the well in Section 27, the proposed well in Section 27, is located in the extreme south and west quarter. The well that we drilled in Section 34, indicated by a square, the Right Hand Canyon 34 Federal No. 1 well, that well topped the Cisco Canyon at 3818 and it proved up that we had a structural high that basically runs off the high at East Indian Hills in the Indian Basin gas field, and that high runs basically along in a southwest trend through Section 34 and down into Sections 2 and 3 to the south.

The indicated well in Section 27 would appear, from my geologic work in the area and my contouring, that we should encounter the Cisco Canyon in our well and Section 27 the proposed well, at about 3850, thereabouts. That would be basically 35 feet or so, low to the well in Section 34. The well we drilled, the Right Hand Canyon Federal well.

The proposed well that Yates is planning to reenter in Section 27, the Pan American No. 1 Pardue gas unit U.S.A well, that particular well topped the Cisco Canyon dolomite at minus 3941, which would mean that we would gain about 75 feet to structure to that point to that well by drilling a well at the proposed location.

Q. Do you consider that important?

A. Very much so. If we can look at the cross-section labeled A - A', you'll notice this cross-section kind of zigzags across the acreage and across the area.

Look at the relationship, if you could, between the middle three wells, the Santa Fe Energy Right Hand Canyon Federal 34 #1 well, the proposed location, the Pan American Petroleum

Pardue Gas Unit U.S.A #1 well, and the Anadarko Petroleum Pardue Farms #1.

You'll notice that the Anadarko Petroleum Pardue Farms #1 well drilled down through the shales that lie above the Cisco Canyon, topped the Cisco Canyon, and was immediately in the dolomite reservoir.

They DST'd it a couple to times, had good shows of oil, gas and water. They attempted a completion and, at the end to their completion attempts they were swabbing at a rate of 1,600 barrels to sulfur water with a minor amount to oil from perforations within the upper, say, 80 feet to the formation, the Cisco Canyon dolomite. That well was drilled in 1978.

The Pan American Petroleum well, Pardue Gas Unit well, which is the well that Yates proposes to reenter, that well topped the Cisco Canyon at a structural position somewhat superior to the Anadarko Pardue Farms well, but they drilled into limestone rather than dolomite. And limestone, of course, is a nonreservoir facies.

They drilled 100 feet into the Cisco Canyon before encountering massive dolomite. They ran a DST over that massive dolomite

interval, recovered good shows to oil, gas and water, but it was not something that they were willing to go ahead and attempt a completion on, and they plugged the well and it was plugged and abandoned. That well was drilled in 1966.

The Santa Fe well in Section 34, you can see we drilled into the top to the Cisco Canyon, encountered about 10 or 12 feet to limestone and then went into massive dolomite. We were able to drill about plus or minus 20 feet to that massive dolomite and lost all returns and ended up having to dry drill down to 8290 feet before we could set casing through that interval.

The original location that I had picked for this well, for the proposed location in Section 27 to our well, was fairly close to the Pan American Pardue Gas Unit #1 well.

Q. Yates' location?

A. That's correct.

Q. But subsequent to my discussing that location with Brent May on the phone, having proposed that location, I was able to obtain a sample log on this well. One of the things about the logging tools or the logs that are available

on these wells, both the Santa Fe Energy well and the Anadarko Pardue Farms well, both have neutron density logs on them and it's easy to tell when you're in dolomite because to the cross-over to the curves.

However, the Pan American Petroleum Pardue Gas Unit well drilled in 1966, had only a sonic log, so it was very difficult to tell whether they were in massive dolomite at the top or limestone.

By obtaining a sample log, I was able to tell that they were, in fact, in limestone in nonreservoir facies, and when you look at where they topped the mapped horizon, the Cisco Canyon dolomite, the reservoir facies, you could see that both the Pardue Gas Unit well drove by Pan American, and the Anadarko Pardue Farms well, both are basically flat at a minus 3940 or -41 feet below sea level.

It seems to me at that point I decided that I would change the location because that actually changed my mapping somewhat, and I felt that a location--and I still feel that a location in Section 27 drilled in the southwest quarter--is going to be the most, the highest

structural position that we could gain in Section 27.

Q. You mean the southwest to the southwest?

A. The southwest to the southwest, I'm sorry.

Q. Now, you were talking about the cross-section, Exhibit 12. Let's move back to Exhibit 11, the isopach map. They both show plenty to reservoir at either Yates' or Santa Fe's location?

A. Yes. That's correct. There are two wells in Section 27, one well in Section 27 and the well in Section 34, both penetrated the entire section to the Cisco Canyon formation.

The Anadarko well in the north half of 27 had 510 feet; the Santa Fe well in Section 34 had 629 feet. I believe there will be sufficient reservoir, something on the order of about 600 feet at the location we'll be drilling in Section 27. I don't see any problem with that.

Q. But at Santa Fe's location you won't have that limestone, will you?

A. That's correct, and I think that's very important. One of the things that we don't have

a real good handle on is exactly how the Cisco Canyon formation will form out here, and we would like to be in the most advantageous structural position as possible in order to test the formatiolabeled A - A', you'll notice this crossified
briefly and I think, to your knowledge, at one point during discussions to the working interest unit, Yates requested that Sections 24 and 25 be included, is that correct, immediately to the east to the--

A. That's correct. They did, initially.

Q. Why did you recommend that they not be included?

A. I feel that Section 24 and 25 have--for one thing, they're structurally very low and I'm very skeptical as to whether or not those will actually be productive to oil, gas and water such as we would expect here from the Cisco Canyon.

Secondly, the way I have it mapped, most of Section 24, there's very little dolomite in Section 24 and about three-quarters to Section 25 has dolomite but with thicknesses less than 250 feet.

Q. So, geologically, you couldn't justify

it?

A. I couldn't, no. I don't feel it was prudent to put them in.

Q. Now, I believe you had some discussions with Mr. May regarding Yates' Hickory reentry?

A. Yes. I visited with him about that a couple to times. I asked him if there was any information he could give me on their reentry there.

Yates has proposed the reentry to three different wells on the south and southeast flank of the Indian Basin gas field, one of them being the well in Section 17 which is a old Pan American well, the No. 1 Hollow well, so now renamed the Hickory ALV by Yates.

I felt if there was any information available on that well, whether it be new logging information or production information, it would give us some additional information as to how we might go about drilling and completing and production testing our well in Section 27, the proposed well in Section 27.

Q. So, you would have found that data useful in doing the Section 27 mapping?

A. Yes, I would.

Q. What additional discussions did you have with Mr. May regarding making a determination as to how good the Cisco Canyon may be in this area?

A. Well, both Mr. May and I agreed that we think that there is the opportunity that we could have a Dagger Draw look alike, if you will, located on this eastern flank to the Indian Basin gas field. Those DSTs indicated in those wells seem to indicate that there is that potential.

We talked about how you would go about testing a well in Section 27, and I told him that what our intentions were to do was to make a completion attempt in that well and production test the well for something on the order to 90 to 120 days, to determine what kind of production we would get from the well in ratios to water to hydrocarbon and the like. He agreed with me and said that's exactly what Yates had in mind as well.

Q. I guess what you're saying is that Santa Fe isn't really certain to what's going on with the Cisco Canyon reservoir here, is that correct?

A. Well, we know that, similar to the

Dagger Draw, you're going to produce water, gas and oil. We also know that, at least from our work that we've gotten from Dagger Draw, that it's a very complex reservoir. So we know that you're going to have to go in there, perforate the well, production test it to see what kind of a mix you get. Obviously if you can produce enough hydrocarbons, the water won't make that much difference.

Q. And that's why it's so important to get a good Cisco Canyon test in Section 27?

A. I believe it's very important to get a good test there so we'll be able to do something with that formation in this area.

Q. Again, is the structure critical, the structure gained from Yates' location and Santa Fe's location, critical?

A. Knowing as little as we know about the Cisco Canyon in this area of the world, I think it's as important as can be.

Q. Now, once again, this location is pretty darn unorthodox with respect to the Cisco Canyon. Do you have any comments on that issue?

A. Well, if this area turns out to be similar to Dagger Draw, I think that if you look

at Dagger Draw, if you look at Exhibit No. 7 again and just look at the Dagger Draw field, you'll notice that it appears to be--at this point it is actually being developed on 40-acre spacing even though the field rules are based on proration.

I think the that same thing will happen here if we're successful in proving this up as a Dagger Draw look alike. In that case, this location will not be very unorthodox at all with respect to those type of rules.

Q. Now, if the Yates group is pooled and goes nonconsent under the order, what penalty would you recommend against any nonconsenting party?

A. I think there's obviously some substantial geological risks associated with this prospect, and I think that the maximum penalty allowed would be in order.

Q. In your opinion, is the granting to Santa Fe's application in the interest of conservation, the prevention to waste and the protection to correlative rights?

A. Yes, I think so.

Q. Were Exhibits 7 through 12 prepared by

you or under your direction?

A. Yes, they were.

MR. BRUCE: Mr. Examiner, at this time I move the admission to Santa Fe Exhibits 7 through 12.

MR. CARR: No objection.

EXAMINER STOGNER: 7 through 12 will be admitted into evidence at this time.

Mr. Carr, your witness.

EXAMINATION

BY MR. CARR:

Q. Mr. Davis, if we could go to your Exhibit No. 7, if I understand it, the area with sort of a green hashed line is the area that, based on your interpretation, might be the Dagger Draw look alike or hopefully would be, is that correct?

A. That's correct.

Q. At the present time, are there any wells producing oil from the Cisco Canyon in that area that is shaded in green?

A. There are none to my knowledge.

Q. If we go to your well that you've shown in Section 34 due south of the proposed acreage, what is the current status to that well?

A. That well is currently being completed from the Morrow.

Q. Is there any plan to attempt a completion in the Cisco?

A. No, there is not.

Q. I'm sorry, in the Canyon?

A. Cisco Canyon is fine. No, there is not.

Q. That's where you lost circulation, is it not?

A. That's correct.

Q. You had to run a liner in the well at that point?

A. That's correct.

Q. If we go now to your Exhibit No. 8, this is the isopach map on top to the Morrow, and we look at the wells you have to use for control, if we go on the trace for the cross-section, the well immediately north to the proposed location, the second well, B' and the one below that, it's in the north half of 27--

A. Yes, sir.

Q. --has that well ever produced from the Morrow formation?

A. No, it has not.

Q. Was it wet, do you know?
A. Wet from the Morrow itself?
Q. Yes.
A. From the Lower Morrow and Middle Morrow it did test some gas to surface, and had gas cut mud and no water production at all, or at least no water indicated on the DST. They did not DST the basal Upper Morrow sand, which is the sand that we are attempting to complete in the Right Hand Canyon 34 #1 well.
Q. If we go down to that well, you had multiple Morrow zones in that well, did you not?
A. Yes, we did.
Q. And in attempting to complete that well you did communicate those zones, did you not?
A. It certainly appears that way, yes.
Q. You have perhaps damaged them because of the water as a result of a communication?
A. That, I wouldn't be able to talk about or at least address.
Q. If we look at your geologic presentation, isn't it fair to say that the Morrow was really the secondary objective and that what we're really hoping for is some Dagger Draw-like oil wells out there?

A. The well in Section 27?

Q. Yes.

A. I consider them both to be primary objectives, because I believe that this Morrow sand is capable to being quite a decent producer in this area.

If you look at the wells to the north and west where this sand also produces, it produces in volumes ranging from 1.3 Bcf to 9 Bcf. So it can be a very good producer.

Q. What about the Morrow well in Section 22, the end well on that cross-section? That's also a Morrow well, is it not? Has that ever produced? I'm talking about the Morrow well shown on Section 22.

A. That's the Ralph Lowe Staple #1 well.

Q. Did that ever produce in the Morrow?

A. No. That well was drilled in 1963, they attempted four different DSTs in the Morrow. They did have gas rates as high as 1.6 million on DST but they elected not to complete the well.

Q. What are you looking for on this isopach if you're going to have your best shot at reservoir quality rock? The thickest section?

Is that what you're shooting for?

A. Yes, sir. The thickest possible interval to sand.

Q. And that's why you testified that there was a possible Morrow location in the northeast quarter to Section 27?

A. Yes, I believe that there is a good, viable location in the northeast quarter.

Q. If this acreage was developed with two lay down units in the Morrow, you'd be able to drill a well up there at that good location and have 7/8 to the working interest, would you not, with a lay down unit?

A. Yes, you could.

Q. How would you characterize the control you have for the placement of this Morrow sand? Is it adequate for your purposes as a geologist?

A. Yes, I think it's adequate.

Q. Do you think that it's possible that that Morrow channel might swing farther to the west or to the east, or do you feel like you've got that pretty well nailed down?

A. I feel pretty comfortable and confident that I have a pretty good idea what the trend is, based on the other wells in the area.

Q. If we're looking for the thickest portion to the sand for the purpose to making a successful Morrow well, wouldn't the proposed Yates' location in the Pardue well be virtually comparable with the location that you are proposing in this Morrow sand in your proposed well?

A. That's correct, it would be, yes.

Q. I think you testified that looking at this Morrow location, your proposed location, that you would anticipate that it is far enough away from the well you're trying to complete in the Morrow in 34, to not be interfering with that well?

A. That is correct.

Q. You don't believe that that is an ineffective drainage or well location pattern for producing the Morrow in this area?

A. In my discussion with the engineers in our company, no, I don't think so.

Q. So you're not seeing interference? You're not anticipating it?

A. We're not anticipating any, no.

Q. If Yates was successful in this case and had a south half Morrow unit, based on the

fact that you don't see any interference, then, I assume Santa Fe would have no objection to our placing a well there?

A. Placing a well where?

Q. Where you're proposing it, 204 feet from the line, if you're not seeing interference.

A. No, we would not.

Q. So, if we were successful, you would not object to a location by Yates at that point?

A. No, we would not.

Q. Let's go now to your Exhibit No. 10. This is the Cisco Canyon structure map. If we look at the wells on the western perimeter of this exhibit, you've got four that are producing from the Cisco Canyon. I think you testified that these are gas wells, isn't that correct?

A. That's correct.

Q. Are these wells all currently producing?

A. I believe that the well in Section 4 is plugged and abandoned.

Q. Was that because to water problems?

A. I don't know what kind of problems they had.

Q. It's your understanding that the other

three wells are, in fact, producing?

A. At the moment it is, that's correct.

Q. And the green line indicates just the lowest point tested in the reservoir where there is a show to oil, gas and water?

A. That's correct.

Q. Both to the proposed locations are substantially above that line, is that not right?

A. That's correct, they are.

Q. You looked at the information on the Pardue well, the Yates proposed reentry. You did testify that there were good shows to oil in that well, is that right?

A. There was a reasonably good show to oil, gas and water from the Cisco Canyon below a depth to minus 3941.

Q. If we go to the well that you have drilled, that Santa Fe has drilled in Section 34, that's the well in which you lost your circulation in this interval, is that not right?

A. That's correct. We lost circulation in the Cisco Canyon dolomite.

Q. Does that mean that you don't have a test on that well to tell us if we have an oil show there?

A. When we drilled in the top to that well, we did see a little bit of gas from that horizon, and then we lost all circulations and there was no opportunity to look at the samples or anything.

Q. Now, in terms of the data points and the control you have for actually placing your contours in this area, you really have fairly--well, you have no control between the Pardue well in 27 and the Santa Fe well in 34, isn't that correct?

A. There are no wells located directly between the two, no.

Q. And as to the existence to the limestone stringer that was encountered in the Pardue well, you're really having to just make an educated guess as to how far out that might extend from the Pardue?

A. That's correct. It's thinning, obviously, between the Pardue well and the well we drilled in Section 34; it has thinned substantially.

Q. You wouldn't know what it would be under that proposed location?

A. I wouldn't know what it would be

underneath that proposed location, but I do know how thick it is at the Pan Am one.

Q. I believe you testified that both locations have--I don't want to use the wrong words here, but--reservoir present at the proposed locations in the Cisco?

A. Yes, I believe there will be reservoir present.

Q. You do know there is an oil show in the Yates location and there was a slight gas show at the location to the south? We do know that?

A. That's correct.

Q. If we look at your cross-section, Exhibit 12, we look at first the Pan American Pardue Gas #1, the well that Yates is proposing to reenter--

A. Yes, sir.

Q. --you said there were good shows to oil and gas in this well at the interval above, I believe, the blue area, which is indicated as where circulation was lost?

A. Are we talking about the Pan Am Pardue Gas Unit well?

Q. Yes.

A. Okay. To my knowledge, they did not

lose any circulation in that wellbore. The well drilled down into limestone, there was a small stringer to dolomite it appears, about 50 feet in. They went back into limestone and after another 50 feet or so they drilled into the more massive interval to dolomite.

DSTs were taken across an interval at 7908 to 7951, which would have been in the limestone. That was a straddle-packed DST, where they had recovered some gas cut mud, and some slight oil and gas cut mud, and some heavy oil and gas cut mud with fairly tight flowing pressures and decent shut-in pressures. They also took a DST in deeper portions that would extend down into the massive dolomite, and it did actually get gas flowing to surface and recover free oil gas cut mud and a sufficient amount of salt water.

Q. On this cross-section, you have placed a line that you have entitled loss circulation zone?

A. Yes, sir.

Q. Now, I'm trying to understand where that line is supposed to go. It crosses the proposed location?

A. That's correct.
Q. It crosses the Pan American Pardue well?
A. Yes.
Q. Does it cross the Santa Fe Energy Right Hand Canyon Federal well?
A. That's correct.
Q. And it crosses this, what is it, above that or below that that you have the loss circulation zone?
A. If you look at the Anadarko Petroleum Pardue Farms #1 well, in the upper portion, as they encounter the dolomite there, you'll notice it says they lost 30 barrels to mud at 7664?
Q. Yes.
A. And it also indicates that they lost some mud at an interval--and I would have to look at it to be exact, but it's probably around 7690 or so. They did report on both their drilling reports and their mud logs that they lost some mud at that point.
The point where that goes, if you were to take a look at that log you would notice a tremendous amount to deflection to those log curves to the center portion to the log, to the

left, and that indicates the presence to some porosity at that point.

If you carry that correlative point across to the Santa Fe Canyon Fed 34 #1 well, you'll also see a number to deflections to the neutron curve at that point as well. That's the dashed curve that would be on the right-hand side to the log. That indicates also there's the presence of some porosity there as well. All I did was correlate between the two and say that was another potential loss circulation zone.

In our well, the Right Hand Canyon 34 Federal #1 well, once we started losing returns, we lost returns all the way along, so we don't have any idea to say whether we lost more or less at that point.

Q. Mr. Davis, if I look at your Santa Fe Energy Right Hand Canyon Federal 34, you've got a couple to bars on the log section that shows that that's where you lost all return circulation in the Canyon?

A. That's correct.

Q. In this well, my problem is, I've got a loss circulation substantially above what is characterized as the loss circulation zone. In

the Santa Fe Energy well, doesn't the loss circulation zone start occurring substantially above the line that you've indicated?

A. It occurs above the line that's indicated, that's correct, in 7621.

Q. And the zone in which you started losing and the zone in which you lost all circulation has been penetrated? In fact, the Yates well is through that zone?

A. The Yates well did not encounter the actual dolomite until it was significantly below that point. In fact, the loss circulation zone that you're having some difficulty with, you can see where it extends across the Anadarko Pardue Farms well, and the Right Hand Canyon 34 #1 is lying just beneath the TD to the Pan Am well, the proposed reentry by Yates.

Q. If we go to the isopach map on the existing Cisco Canyon dolomite, here again we have a comparable thickness. Both of the wells are located on the 600 foot contour?

A. That would be correct.

Q. You were involved in the selection to the well locations, were you not?

A. That's correct.

Q. Has topography really been the factor in making these location determinations, or has geology been the controlling--

A. They've both had an equal share.

Q. As to the present location, is that topography or geology?

A. Both topography and geology.

Q. You've gained geological structure? You're higher in the Canyon?

A. I believe it will encounter the Cisco Canyon dolomite at a higher structural position.

Q. What sort of topographical problems were there at the location that we thought we were talking about yesterday?

A. At 500 feet from the south line?

Q. Yes.

A. My engineer will discuss it at greater length, but basically I said I was trying to stake it out in the middle to the air.

Q. Do you do that often?

A. I don't try to, sir. It appeared on the topo sheet that you could stake a location at that point.

Q. In terms to the prior locations, you've moved the well several times?

A. That's correct.
Q. There was one location that was within 200 feet to the Yates Pardue well?
A. That's correct.
Q. And you moved from that location? That was not topographical, that move, was it?
A. That was geological.
Q. That was because to a remapping that you did?
A. That's correct.
Q. What new information did you have to cause you to remap at that time?
A. I was able to obtain a sample log on the Pan American Pardue well that I did not previously have.
Q. And that was the only new information?
A. That was the only new information, that's correct.
Q. In terms to what will effectively be drained by this well, that may be an engineering question, is that right?
A. That's correct.
MR. CARR: That's all I have.
EXAMINER STOGNER: That you, Mr. Carr. Mr. Bruce, any redirect?

MR. BRUCE: Just one, Mr. Examiner.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Mr. Davis, when Mr. Carr was asking you some questions about the Morrow, you said basically the Morrow looked equally good at Santa Fe's location and Yates' location, is that correct?

A. I believe that's how I answered, yes.

Q. But that would ignore the Cisco Canyon, is that correct?

A. That's correct. That's ignoring the Cisco Canyon.

MR. BRUCE: That's all, Mr. Examiner.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Davis, you said that you were not privy or did not have a log on that Pardue Gas Com, that old Pan American well. What log are you talking about?

A. You're talking about the well in Section 22, is that correct? 27 rather?

Q. Yes.

A. What I did not have was a sample log, which is a description to the mud samples. That

is a commercially available log. I have since found out, through the sample library in Midland, and I was able to obtain a copy to that log from them, and that's where I found the information that gave me some more geological enlightenment, if you will.

Q. You're not referring to an electrolog?

A. No.

Q. In your direct testimony, you mentioned something about the Morrow could be produced with another well in the northeast quarter to Section 27, was that correct? Did I hear that right?

A. I believe that a successful Morrow well could be drilled in the northeast quarter of Section 27, that's correct.

Q. Would that be subsequent to the Morrow completion in the southwest quarter?

A. That's correct.

Q. Why would you have two wells in the Morrow in Section 27?

A. I believe that you can drill--well, a Morrow well can be drilled on a 320-acre spacing, and I think we could drill a well in the west half and also in the east half.

Q. So this was 320-acre spacing that you

know of, then?

A. In the Morrow, that's correct. I believe so.

EXAMINER STOGNER: No other questions.

DARRELL ROBERTS

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name and city to residence for the record?

A. My name is Darrell Roberts. I live in Midland, Texas.

Q. Who are you employed by?

A. By Santa Fe Energy Resources.

Q. What is your job there?

A. I'm a drilling engineer.

Q. Have you previously testified before the Division as an engineer?

A. Yes, I have.

Q. Are you familiar with the matters involved in the drilling to the proposed Santa Fe well?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I tender the

witness as an expert petroleum engineer.

EXAMINER STOGNER: Are there any objections?

MR. CARR: No objection.

Q. Mr. Roberts, let's first address the location of the well. Would you refer to Exhibit 13 and describe the topography in this area?

A. Okay. This is a topographic map to Section 27, surrounded by the six other sections or what not, the nine other sections around there.

Basically we have--our location is on top to a ridge, and north and south of that is a deep canyon. We have extreme relief in this area, and the topographic map is depicted with a minor 20-foot contours, and then the major contour lines are a hundred feet. You'll notice in some places they don't even bother to put the minor 20-foot contour lines on the map because it's so steep. That's both north and south of our proposed location.

Q. There's a yellow line on part to this map. What does that indicate?

A. I outlined that, and that would be the possible places you could place a drilling rig or

drill a well.

Q. In the southwest quarter to the section?

A. Right.

Q. The location that Mr. Davis picked, I think he stated, was originally 500 feet, or I should say his second location was 500 feet from the south line. Is that correct?

A. I think it was actually 550 is where he depicted it, looking at his geology and then off to this topo map.

Q. As you'll show, as he said, that was in the middle to the air?

A. Yes, it was. We have other exhibits as pictures. When I went out to stake the well, it turned out that at 550 from the south line and 660 from the west line we were, as Gene said, we were out in the middle to the air, so I moved the location.

Q. Let's describe that in a little more detail. Would you refer to the pictures marked Exhibits 14A, B and C, and discuss what we're looking at here, then describe the direction we're looking at it, et cetera?

A. Okay. The first picture is with me

standing on our proposed location looking to the northeast at the abandoned location, the Pardue Gas Unit well. You can see it up through the northeast. There's a flat place that Pan American built 26 years ago, and then there's a dry hole marker there. This shows the distance from Yates' proposed reentry versus our location, and also the topography. You can see that to the north there we drop off to this ridge and there's a corresponding ridge a couple to miles away.

Q. Why don't you move on to Exhibit 14B?

A. This is a picture looking northeast from the abandoned location. I'm standing on the edge of the pad, looking northeast.

Q. From Yates' proposed location?

A. Proposed location. This is the canyon that's north to their proposed location and the white line in the front is the Brantley Dam, but you can see the extreme relief in the area.

Q. So, actually locations to the north to Yates' proposed location are extremly limited?

A. Right.

Q. What is Exhibit 14C?

A. Here again I'm standing on the pad to the abandoned well looking south at our proposed

location. You can barely see the four-wheel drive vehicle in the middle to the picture on the top to the ridge. That is where our proposed location would be.

The draw that's to the right is where a standard location would have been located and also where Gene's first proposed location is 660 from the west and 550 from the south. It would have been in the middle to that draw and would have been cost-prohibitive to try to place a location in that area, so I moved it to the south at the present location.

Q. So, in your opinion, based on Mr. Davis' geology, it's not only good geologically, it's good topographically?

A. Right.

Q. Now, ignoring geology for a moment, why not reenter the well in the southwest quarter to Section 27 as Yates has proposed?

A. From an operations standpoint the primary reason that I see is the fact that the well is 26 years old. It was plugged back then and the casing integrity would be in doubt. And also the fact that we propose to take the well to the Morrow.

It has 8-5/8" casing in it and there's no contingency to run a 7" intermediate casing string in case loss circulation is experienced in the Cisco Canyon, on your way to the Morrow.

Q. So, you propose using 9-5/8" casing, is that correct?

A. Yes, I do.

Q. Now, you talk about structural integrity. Have any other wells in this area experienced any problems?

A. Yes, sir, there has. There's a well in the southeast quarter to Section 34, the Anadarko AE #1 which was drilled in 68 and was plugged back then, too. It was drilled to the Cisco Canyon.

In the meantime, since that time the BLM has experienced or has noticed oil to the surface leaking to the surface, and made Anadarko go back in and replug the well. So that tells me that they had reservoir fluids up to the casing and was probably not--had lost integrity.

Q. You don't want to jeopardize the Cisco Canyon test by using inadequate equipment, is that correct?

A. That's true.

Q. So, besides geological and topographical reasons, there's operational reasons for the new location?

A. Right.

Q. Would you please refer to Exhibit 15 and describe what it is for the Examiner?

A. Okay. This is a cost estimate that I prepared for the Rocky Top 27 Federal Com #1. This is taking into account contingency in case we do lose circulation on our way to the Morrow, to drill the Morrow to 10,220 feet.

These costs are based on our experience with our well in Section 34, the Right Hand Canyon 34 Fed No. 1.

Q. You anticipate this $998,000 completed well cost as the maximum?

A. That's correct.

Q. If you don't need to use the 7" liner, et cetera, you don't encounter the problems you did in the Right Hand Canyon well, what would be the approximate completed well cost?

A. It would be $200,000 less than that, which would be $750,000.

Q. Now, would you refer to Exhibit 16 and identify that for the Examiner?

A. Exhibit 16 is a cost estimate from Yates Petroleum to reenter the Pan American Pardue ALZ Fed #1 located in Section 27.

Q. And their completed well cost is about $435,000, is that correct?

A. That's correct.

Q. Do you see anything on this AFE that you think is inadequate or something that should be on there?

A. Well, to me, everything is not accounted for, in my mind, if they were going to take the well to the Morrow as they state here, to 10,300 feet. The well was drilled at 8,000 feet and plugged, and in order to get to the Morrow you've got to be able to drill to that point. And nowhere on here that I can see are bits or mud logs; not enough supervision or contingency listed on this cost estimate. I think everybody would agree that those are needed or would be necessary to get to the Morrow.

Therefore, I would state that not everything is accounted for on this cost estimate.

Q. As a rough estimate, how much do those contingencies, or whatever you discussed, add to

the proposed well cost?

A. I would say around $60,000, which would bring their cost up to around $500,000, completed well cost.

Q. Now, you mentioned the added $200,000 plus well cost. Once again, that's added to Santa Fe's AFE? Once again, that's based on your experience with the Right Hand Canyon, is that correct?

A. That's correct.

Q. Other than what you've discussed on Yates' AFEs, do you have any other objections to Yates' proposed well costs?

A. Yes. Santa Fe is a partner in 29 wells in the Dagger Draw that has been stated before. Our experience with their accuracy in indicating their cost estimates is less than desirable, I'll say that.

Q. Would you refer to Exhibits 17, 18 and 19 and discuss those further?

A. Exhibit 17 is a spread sheet that compares 25 wells that Santa Fe is a partner in with Yates being the operator.

Q. And these are in the Dagger Draw area?

A. That's true. That's in the Dagger Draw

area. They're listed by spud date, and the things listed on the spread sheet are the spud date--well, first off is the well name, spud date, our working interest--our net working interest.

Q. Santa Fe's?

A. Right.

Q. The gross proposed AFE cost is the third column, and then the fourth column is what we've calculated as being Yates' actual gross cost. These costs were gathered from our net joint interest billing and grossed up to a gross amount.

And then the other column is a variance between their actual amount versus the projected amount to their proposed AFE, and then the last column is the amount that was overspent, actual versus projected.

Q. And the average to that is a 30 percent overexpenditure, is that correct?

A. Yeah, the average of that is 30 percent. Some to the wells are 80 percent over and one is two percent under.

Q. So, based on your experience in the Dagger Draw area, it's possible that Yates' costs

for the reentry could well be closer to $650,000 rather than the $450,000 they predict?

A. Right. If you added 30 percent to the $500,000, I would think that would be an accurate cost estimate based on their past track record.

Q. And meanwhile, hopefully, if Santa Fe drills its well, and no loss circulation, et cetera, Santa Fe's cost for a new well would be more like $750,000 to $800,000, is that correct?

A. That's true.

Q. That's $100- or $150,000 difference. It's still a substantial amount?

A. Yes.

Q. How would you justify that?

A. Well, our well is a new well. We have contingency for the loss circulation. The casing will be new. We don't have any risk to having junk in the hole that I think they could encounter in the reentry.

I would like to point out, one well that we have a prior case to them entering a well, the Sara AHA Com #1, it's the sixth well down on the spread sheet. This was done and spudded in 1990.

As you can see, their proposed cost was

$210,000. The actual cost, by our numbers, is $377,000, for an 80 percent overexpenditure, which if you apply that 80 percent overexpenditure, that would bring their completed cost up to, by my calculations, up to $784,000, based on that prior history.

Q. But by Santa Fe drilling a new well, based on Mr. Davis' testimony, you would get a better geological location, is that correct?

A. That's correct.

Q. It would ensure a good test to the Cisco Canyon, is that correct?

A. Yes. This location honors his geology, and then gives us a new well. It gives us contingencies for loss circulation to take the well down to the Morrow.

Q. Before we move on, Exhibits 18 and 19, are they bar charts to the data from table 17?

A. Yes, that's correct. The main thing we were doing, these are just charts prepared from this spread sheet. The main thing we were trying to convey with this is that over the two-and-a-half-year period, their ability to predict their actual cost versus their AFEs has not gotten any better.

This one, I guess, Exhibit No. 18, shows the actual versus projected, and then the amount they were overexpended at the top. And Exhibit 19, there again it shows the percent overexpended, and then also listed by spud date for all 25 wells.

Q. And this data is presented to show that, in your opinion, the final well costs won't be much different between Yates and Santa Fe?

A. Right. We have a new wellbore and preferred geology, I think.

Q. In your opinion, is Santa Fe's proposed well cost reasonable and in line with costs for other wells drilled to this depth in this part to Eddy County?

A. Yes, I do.

Q. And what are Santa Fe's proposed overhead rates?

A. $4,500 a month for drilling the well and $450 a month for operating a well.

Q. Are these Ernst & Young rates?

A. Not exactly Ernst & Young rates but they're comparable. They're a little lower for Morrow wells--

Q. Lower?

A. They're a little lower for Morrow wells, and slightly higher than is recommended by Ernst & Young for Upper Penn.

Q. Is there any other reason Santa Fe would prefer to operate this well rather than have Yates operate the well?

A. Well, we have experience in the area. We have drilled the one well. We have the majority of the interest in the six sections. There again, we're only talking about the one section, but in the six-section unit that we've proposed, I think we would have an average of 71 percent working interest and Yates would have 29 percent.

Q. One additional item, your proposed penalty in case Yates' group did not join in the well, based on mechanical risk, et cetera, what penalty would you recommend against nonconsenting interest owners?

A. I would say recommend what I understand would be cost plus 200 percent.

Q. And were Exhibits 13 through 19, except Exhibit 16, the Yates AFE, prepared by you or under your direction?

A. Yes, they were.

Q. And Exhibit 16, I believe, is an AFE that Yates provided to Santa Fe?

A. Yes, it is.

Q. One final thing, Mr. Roberts. You mentioned the well costs in Dagger Draw. Do you have any final comment on that?

A. Well, the cost estimate that we prepared is an extreme case. If we don't lose circulation, then it will be $250,000 less than that. It's based on actual wells.

Q. Has Santa Fe audited Yates' costs?

A. Yes, we have.

Q. And just very briefly, was an audit conducted?

A. Yes, it was.

Q. What did it involve?

A. This audit covered 14 wells to 29 wells that we're a partner in.

Q. 14 to the 29?

A. Yes.

Q. In the Dagger Draw?

A. In the Dagger Draw area. It's only been recently completed. I think a copy to it has been provided to Yates. They have not had a chance to respond to it. The bottom line is, our

auditors have about a million-and-a-half dollars' worth of exceptions that we would like to have addressed.

Santa Fe is quite adamant about operating this well because of these things that were listed on the audit and also because to the inability to accurately predict the cost to doing the wells.

Q. In your opinion, is the granting to Santa Fe's application in the interests of conservation and the prevention of waste?

A. Yes, it is.

MR. BRUCE: At this time, Mr. Examiner, I would move the admission of Santa Fe Exhibits 13 through 19.

MR. CARR: I have no objection.

EXAMINER STOGNER: Exhibits 13 through 19 will be admitted into evidence at this time.

Your witness, Mr. Carr.

EXAMINATION

BY MR. CARR:

Q. Mr. Roberts, Exhibit 13, the area inside the yellow contour, that's where topography would permit the drilling of a well? Is that what your testimony was?

A. Yes, except as it turned out, even inside that yellow line, as you can see from the picture, Exhibit 14C, that even though the location that Gene had picked, 550 from the south is within that yellow line, it's not acceptable.

Q. Why not?

A. Because of the relief. It would be cost-prohibitive to try to put a location there, and unsafe, too.

Q. So topography was a factor in determining that the well had to be moved, and geology told you where you were going to move it?

A. Right. We were trying to honor the geology and stay on the predicted highs and yet find a relatively flat place to place the well. That's how we came up with the 204 feet.

Q. Do you have any opinion as to what acreage a well at this location might, in fact, drain in any to these formations?

A. No, I really don't.

Q. Would you expect a well at this location to drain all 640 acres if you get a gas well in the Canyon?

A. No.

Q. If we look at the AFE figures, you told

us that you were participants with Yates in 29 wells in the Dagger Draw, and you've listed 25. Why did you only list 25?

A. Some to those 29 wells are not Dagger Draw wells. I know the one, the Red Hat was in the audit, and it's not a Dagger Draw well.

Q. So you're participants with Yates in 25 Dagger Draw wells?

A. Yes.

Q. And you have voluntarily participated in the drilling to these wells?

A. Yes, we have.

Q. And you have continued to commit your working interest to a Yates-operated well as recently as August 11, 1992?

A. Yes, sir.

Q. When was the audit conducted?

A. It was just completed last weekend.

Q. When was it actually conducted or requested, do you know?

A. Let me see when the date was. It was covering properties for the period of January 1, 1990 through December 31, 1991. We just received a copy of this this past week.

Q. Do you know when it was requested?

A. No, I don't.
Q. An AFE is really just an estimate to what you think the costs are going to be, is that correct?
A. That's correct.
Q. You're not required by Yates to prepay, are you, based on an AFE?
A. No.
Q. So you're billed actual costs?
A. That's true.
Q. When you've requested supporting data, has it ever been denied to you?
A. I don't think so.
Q. Have you, even with the audit in hand, ever lodged objections to Yates about any particular costs?
A. I'm not familiar with that. I'm mainly just a drilling engineer.
Q. Do you know to any objection that's been made to Yates on any costs? Do you know?
A. Not a formal objection.
Q. Now, you have agreed to participate with Yates in 25 wells as shown in your Exhibit 17. What kind of a success rate have you experienced with those wells, do you know?

A. The wells are very successful. It's a very good field.

Q. When Yates goes over, they have billed you for additional costs?

A. Yes, they have.

Q. And you have paid those costs?

A. Yes, we have.

Q. Do you know when they close their AFE? That is, do you know how long they leave it open to build completion costs in, in terms of actual billing?

A. No, I don't.

Q. When we look at AFEs and compare them, we're really making our best guess as to what it would cost, isn't that fair?

A. That's correct.

Q. Suppose, and just for the purpose to this question you can assume that Yates should prevail here and a pooling order was entered, are you familiar with pooling orders?

A. Yes.

Q. If you were required to pay your share based on their AFE, you would pay 50 percent, wouldn't you? That's your ownership, isn't it, or whatever it would be in the dedicated acreage?

A. Yes.
Q. And if their AFE is lower, then to avoid the risk penalty you would pay less, isn't that correct?
A. Yes.
Q. And if we're unsuccessful and we're asked to pay based on your AFE to avoid the risk penalty, we would pay more, because you've got your contingencies in?
A. Right.
Q. And you don't know whether or not you're going to need a liner, do you?
A. No, we don't.
Q. If you're going to incur the costs to 9-5/8", whatever it is, casing, just in case you do, isn't that right?
A. Yes, the 7" casing.
Q. And we really don't know what exactly will be encountered when we get into the Yates well, isn't that right?
A. That's true.
Q. So we really don't know what the costs are going to be?
A. No.
Q. They're going to be billed either way,

not probably paid in advance, unless somebody's force pooled, isn't that right?

A. That's correct.

Q. And, in that scenario, not knowing what these numbers are going to be, it still remains a fact that to reenter the well will cost less, isn't that right?

A. Not the way I see it.

Q. Do you think it will cost less to drill a new well, based on your figures, than to reenter the Yates well?

A. It could.

Q. And that would mean only if you encounter no problem?

A. Yes.

Q. And only if Yates does?

A. Well, not even if--they didn't even encounter problems in their reentry and their costs were higher.

Q. Higher than a new well?

A. Well, let's see. No.

Q. I'm asking you as an expert witness, a drilling engineer, isn't it your experience that it is less expensive, usually, to reenter a well like this than to drill a new one?

A. I don't know. I guess so.
Q. Now, you think that Santa Fe should be the operator to the well because they have experience in the area, didn't you state that?
A. Uh-huh.
Q. And the experience is the well they drilled in 34?
A. That's true.
Q. And that's the well that you've communicated the Morrow zone to, isn't that right?
A. Uh-huh.
Q. One wet zone and one dry zone isn't that right?
A. Uh-huh.
Q. And you're having problems with that, isn't that right, because to the downhole communication to a wet Morrow zone and a dry Morrow zone?
A. Yes.
Q. And that's your experience?
A. Uh-huh.
Q. Now, you indicated that you ought to be able to prevail or ought to be operator because you have a majority interest in the six sections

that you originally proposed to Yates, isn't that right?

A. Uh-huh.

Q. Have you completed the interest ownerships in the six sections that Yates then proposed to you, including two additional sections off to the east?

A. No, I haven't.

Q. Those figures would change, would they not?

A. I guess.

Q. You've looked at Section 27, haven't you?

A. Yes, I have.

Q. The ownership in 27 is 50/50, isn't that right?

A. I'm not aware of that.

Q. You don't know what the working interest ownership is in Section 27?

A. No, I don't.

Q. You only looked at the six sections that you were proposing?

A. Yes.

Q. Not what we're considering here today in this area?

A. Gary was doing that.

MR. CARR: That's all I have.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Roberts, where with the BLM is this application for your proposed well?

A. We haven't proposed it yet.

Q. Has it been staked? Has the notice of staking been made with the BLM office yet?

A. It's only been staked. The notice of staking has not been submitted.

Q. So, no surface inspection by the BLM or any archaeological needs have been presented to them at this point?

A. No, they haven't.

Q. Have you made applications to drill out in this area with the BLM before?

A. Yes, in Section 34.

Q. So, you're familiar with the procedure?

A. Yes, I am.

Q. Do you think they would let you drill that 500 foot from the south line?

A. No.

Q. How come?

A. It's been too big of a cut.

Q. Do you think they'll let you drill this one?
A. Yes, sir.
Q. Based just on topographic at this point?
A. Based on the amount of cut to make a location.
Q. We don't know of any artifacts out here nor are you an archaeologist or is anybody in this room?
A. No.
Q. But there are other items that the BLM will be looking at for the location of a well out here, such as archaeology, wildlife needs and such as that, is that correct?
A. That's correct. They had a concern about us drilling the well in Section 34 due to wildlife and walnut trees, but they eventually let us drill the well.
Q. And when were you made aware of this location, the 206-foot location?
A. The 204 feet?
Q. Yes. I'm sorry.
A. I was out there with the surveyors.
Q. And when was that?

A. It was staked on November the 13th, and I was out there and determined that 550 from the south would not be an acceptable location, and that's how we came up with the 204 to find a place that we could put a location.

Q. Who in Santa Fe's organization makes the actual application with or files the APD with the BLM or has a notice or provides the notice of staking to them?

A. I do.

Q. You do. And so between November 13th and today, December 18th, that has not been done?

A. That has not been done.

Q. Is that normal?

A. No.

Q. How come you haven't made an APD or at least filed the paperwork to get it going with the BLM?

A. We've had a lot of rigs going, and then also knowing the fact that we were going to a hearing on this location, it would take some time. We had other things to do, to put it briefly. We're real empty on staff at this time.

Q. So, this is not that important of an issue today for Santa Fe?

A. Yes, it is.

Q. Well, I'm sorry, you said you had other things to do.

A. We've got three people here; it's real important. But as far as applying for the permit, I thought we had some time before that well would actually be drilled.

EXAMINER STOGNER: Are there any other questions for Mr. Roberts?

MR. BRUCE: I have a few, Mr. Examiner.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. With respect to the issue to not applying to the BLM, Mr. Roberts, obviously if Yates' location is approved, you won't need BLM approval for Santa Fe's location, is that correct?

A. Right.

Q. And I guess what you're saying with respect to the 500 or 550 foot location, it would have been on a steep hillside or a canyon?

A. Yes, a very steep hillside.

Q. Looking at your Exhibit 13, Santa Fe's location is apparently fairly close to an existing road, is that correct?

A. Yes, it's a two-track road going along the top of the ridge there.

Q. And that would minimize surface disturbance, would it not?

A. Right.

Q. With respect to a couple of questions by Mr. Carr, the Right Hand Canyon well isn't Santa Fe's only Morrow well in Eddy County, is it?

A. No, it's not.

Q. Santa Fe has drilled and operates a number of wells in Eddy County, does it not?

A. Yes.

Q. And other formations also?

A. That's true.

Q. One final question. Santa Fe has elected to continue to participate in these Dagger Draw wells with Yates as you testified, correct?

A. Yes.

Q. Dagger Draw is a prolific pool, isn't it?

A. It sure is.

Q. In your opinion, would it be foolish not to participate in the wells?

A. Yes, it would.

MR. BRUCE: I have nothing further, Mr. Examiner.

FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. This two-track road that you mentioned, is that a fairly accessible road, or is it a four-wheel drive?

A. Well, I was able to get there in a Chevrolet Impala. It's real rough. Going down Section 26, you can't go down that road without a four-wheel drive vehicle, but there is a road back to the west that goes along the ridge. Ranchers use this road.

Q. Anybody else use it?

A. Not that I know of. Our surveyors use it to find their corners.

EXAMINER STOGNER: Does anybody else have any questions of Mr. Roberts?

MR. CARR: No questions.

EXAMINER STOGNER: You may be excused. Let's take a 20-minute recess.

[A recess was taken.]

EXAMINER STOGNER: The hearing will come to order. Mr. Carr?

MR. CARR: Thank you, Mr. Stogner.

ROBERT BULLOCK

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. CARR:

Q. State your name for the record, please.

A. My name is Robert Bullock.

Q. Where do you reside?

A. In Artesia, New Mexico.

Q. Mr. Bullock, by whom are you employed and in what capacity?

A. By Yates Petroleum, as a landman.

Q. Have you previously testified before this Division?

A. Yes, sir.

Q. At the time of that testimony were your credentials as a petroleum landman accepted and made a matter of record?

A. Yes, they were.

Q. Are you familiar with the applications that are the subject of today's hearings?

A. Yes.

Q. Are you familiar with the status of the

lands and the subject area?

A. Yes, sir.

MR. CARR: Are the witness' qualifications acceptable?

EXAMINER STOGNER: Any objections?

MR. BRUCE: No objection.

EXAMINER STOGNER: Since there are no objections, Mr. Bullock is so qualified.

Q. Mr. Bullock, will you briefly state what Yates seeks with this application?

A. Yates is seeking a compulsory pooling of the working interest in Section 27, Township 21 South, Range 24 East, for a proposed reentry of the Pan Am Pardue ALZ Fed Com No. 1 well to be reentered and deepened at an unorthodox location, being 1140 feet from the south line and 1350 feet from the west line.

Q. Have you prepared certain exhibits for presentation here today?

A. Yes, sir.

Q. Could you refer to what has been marked as Yates Petroleum Corporation Exhibit 1 and identify this and review it for Mr. Stogner?

A. Our Exhibit A is our land plat, of the nine sections surrounding our proposed reentry

and deepening of the Pan Am Pardue ALZ well. That well located there in Section 27 shows the footage, being 1140 from the south, 1350 from the west line. It shows the leases involved and the owners of those leases, expiration dates of those leases.

Q. Yates is seeking an order approving all of Section 27 on formations developed on 640-acre spacing. What would the ownership breakdown be under Section 27?

A. It would be 50 percent Yates Petroleum Corporation and 50 percent Santa Fe Energy and their partners.

Q. If Yates' application is granted, Yates is also seeking a south half 320-acre unit for all tracts developed on 320 acres. What would be the ownership breakdown in the south half unit?

A. It'll be 87-1/2 percent Yates Petroleum, 12-1/2 percent Santa Fe Energy and their partners.

Q. Santa Fe is proposing a west half stand up. If that application was granted, Yates would have 3/8?

A. Yates would have 3/8 and Santa Fe would have 5/8.

Q. The primary objectives in the well are, as with the Santa Fe application, the Upper Penn and the Morrow, is that not correct?

A. That is correct.

Q. Could you briefly summarize your efforts with Santa Fe to reach voluntary agreement for the development of this acreage with Yates as operator?

And I think in this regard, Mr. Bullock, you do not have to repeat all of the testimony that was presented by the Santa Fe land person to the extent it is the same.

A. Okay, we sent them a proposal via a letter of October 27th proposing the reentry and deepening of the captioned well. Along with that letter we sent them an AFE and an operating agreement inviting their participation in this well.

We also suggested that if they didn't want to participate, we would propose an acreage trade whereby we would swap 40-acre tracts in the north half and the south half, where we would have all the south half and they would have all the north half. We received no response from that proposal.

Q. That letter is your Exhibit B?
A. That is correct.
Q. Then your Exhibit C, is what?
A. Exhibit C is the AFE that was sent with that October 27 letter.
Q. This is the same AFE that was reviewed in the Santa Fe presentation, is that right?
A. Yes, sir.
Q. And then Exhibit D?
A. Exhibit D is the notification that Yates was seeking application from the OCD for compulsory pooling and the unorthodox oil gas well location as of the date of that hearing.
Q. Mr. Bullock, the bottom line is, you've been talking with Santa Fe, as Mr. Green testified, for several months, is that right?
A. That is correct.
Q. At this time there's no agreement between the parties for voluntary development of this section?
A. That is correct.
Q. What percentage of the acreage would be voluntarily committed to a well if Yates' proposal is granted?
A. It would be 50 percent.

Q. That would be in Section 27?
A. That's correct.
Q. And in the south half you would have 87-1/2 percent?
A. That is correct.
Q. On the AFE, these are the totals that were reviewed by Mr. Roberts?
A. That is correct.
Q. It shows dry hole costs of $160,000 and $435,500 for a completed well?
A. Yes, that is right.
Q. Will Yates call a witness to further review the Yates AFE charges?
A. Yes, they will.
Q. Is Exhibit E an affidavit confirming that notice of today's hearing has been provided in accordance with OCD rules?
A. Yes, sir.
Q. Have you made an estimate of overhead and administrative costs to be incurred while the well is being drilled, and also while producing?
A. Those rates were submitted in our operating agreement as $5,400 per month for drilling and $540 for operating.
Q. Those are above the AFE costs proposed

by Santa Fe?

A. Yes, they are.

Q. How did you derive these figures?

A. Those are the figures that Yates uses straight across the board on all the wells for this depth. We're not going to change them, and they're not going to be changed just for this hearing. That's what we use, $5,400 and $540.

Q. These are above the Ernst and Young--

A. I believe that they're slightly above it.

Q. And you would request that the Yates figures be incorporated in an order?

A. Yes.

Q. If the Examiner desires to go to the Ernst and Young figures, you would also accept that?

A. We would probably accept that.

Q. Does Yates Petroleum Corporation seek to be designated operator of this well?

A. Yes, sir.

Q. Will Yates also call geological and engineering witnesses to review questions concerning operations and the risks involved?

A. Yes, sir.

Q. Were Exhibits A through E prepared by you or compiled at your direction?

A. Yes, sir.

MR. CARR: At this time, Mr. Stogner, we would move the admission of Yates' Exhibits A through E.

MR. BRUCE: No objection.

EXAMINER STOGNER: Exhibits A through E will be admitted into evidence.

MR. CARR: That concludes my direct examination of Mr. Bullock.

EXAMINER STOGNER: Mr. Bruce, your witness.

EXAMINATION

BY MR. BRUCE:

Q. Mr. Bullock, has Yates had any discussions with Marathon regarding the unorthodox location?

A. We submitted information to them indicating our proposed location. We received no objection.

Q. You don't have a written waiver from them?

A. Well, let's see. I believe that's part of our--is that included in the affidavit of

mailing?

MR. CARR: That's just notice.

A. That was just the notice. No, we do not have a--they were notified. We've received nothing back from them.

MR. BRUCE: Mr. Examiner, I would like to note for the record that Mr. Kellahin has entered an appearance in these two cases on behalf of Marathon, a written entry of appearance.

EXAMINER STOGNER: I'm not sure I've seen it. Oh, yes I do have it, dated--

MR. BRUCE: December 11th, I believe?

EXAMINER STOGNER: We received it on December 11th, and that's in Case 10628. I'm assuming I have a plan in 10629. Yes, I do. I'll take notice of that, and it's made part of the record, Mr. Bruce.

MR. BRUCE: Okay.

Q. And although it's not in evidence, Mr. Bullock, you submitted to Santa Fe an operating agreement together with your proposal letter, did you not?

A. That's correct.

Q. And that operating agreement only

covered the south half, is that correct?

A. Yes, that is correct.

Q. Why didn't it cover all of Section 27?

A. Well, our proposed well was a Morrow proposal, and that was what we were drilling, to the Morrow, and that's all it covered was the Morrow.

Q. Were you aware at the time you submitted this that the Cisco Canyon spacing was 640 acres?

A. I believe I was, yes. Uh-huh.

Q. Has Yates made any proposal as to how there would be a cost sharing between Yates and Santa Fe, between the Morrow, which is on 320 and the Canyon which is on 640-acre spacing, considering the difference in ownership between those two formations?

A. That operating agreement did not provide for that, no, it did not.

Q. You don't have any proposal?

A. Our proposal would be, if it's spaced on 640 the costs would be shared 50/50. Based upon the south half, the cost would be shared 87-1/2 Yates and 12-1/2 percent Santa Fe.

Q. Now, your letter to Santa Fe also made

a proposal to trade acreage?

A. That's correct.

Q. Did you ever make that proposal before Santa Fe completed or drilled the Right Hand Canyon well?

A. I am going to look at my notes here. That proposal was probably made at a later date.

Q. After Yates was aware that Santa Fe had drilled the Right Hand Canyon well?

A. That's probably correct, yes.

Q. And Yates' proposed unit does maximize Yates' acreage in the Morrow, does it not?

A. As far as a south half location, yes, it would.

Q. And it obviously benefits from the Morrow test well, the Right Hand Canyon well, is that correct?

A. It may, yes. That's a possibility.

Q. Does Yates have BLM approval of its surface location?

A. No, it does not. We submitted the APD on 10/29/92, and as of this date we do not have approval from the BLM for this application.

Q. Now, in your discussions with Mr. Green, did you also relate to him that Yates

wanted to include acreage in Sections 24 and 25 to this proposed six-section working interest unit?

A. It was always, because of our acreage holdings in that area, Mr. Yates wanted for this well to be roughly 50/50. And, yes, we did suggest that some of our lease be included in the six-section working interest unit to bring it up to that level.

Q. And you're referring to Mr. John Yates?

A. That's correct. And I would like to clarify a point that Mr. Green made here, if you want to get into that.

It was not our intention to operate the entire unit, as he testified. Mr. Yates and I communicated this to Mr. Green several times. We would operate where our interest was greater on a spacing unit, and likewise Santa Fe would operate where their interest was greater. That is what I communicated to him several times.

Q. Now, Mr. Yates' proposal to join Sections 24 and 25, was that made without the benefit of any geology?

A. Yes.

MR. BRUCE: I don't have anything

further.

EXAMINER STOGNER: Mr. Carr?

MR. CARR: I don't have anything further, Mr. Stogner.

EXAMINATION

BY EXAMINER STOGNER:

Q. I want to double-check and make sure I got the overhead charges again, of $5,400 for drilling?

A. $5,400 and $540.

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

Mr. Carr?

MR. CARR: At this time we would call Mr. May.

BRENT MAY

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. CARR:

Q. Will you state your name for the record, please.

A. Brent May.

Q. Where do you reside?

A. Artesia, New Mexico.

Q. By whom are you employed and in what capacity?

A. Yates Petroleum, as a petroleum geologist.

Q. Have you previously testified before this Division?

A. Yes, I have.

Q. At the time of that testimony were your credentials as a petroleum geologist accepted and made a matter of record?

A. Yes, they were.

Q. Are you familiar with each of the applications filed in these consolidated cases?

A. Yes, I am.

Q. And have you made a geological study of the area that is involved in this case?

A. Yes, I have.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER STOGNER: Any objections?

MR. BRUCE: No, sir.

EXAMINER STOGNER: Mr. May is so qualified.

Q. Mr. May, you were present here today when Mr. Davis testified. Do you agree with his

testimony that the proposed wells are projected into what appears to be, actually--hopefully would be an oil zone, somewhat like Dagger Draw?

A. As far as relating the Dagger Draw to this area, I agree with that, yes.

Q. How do the rock characteristics compare?

A. They're very similar. It's the same dolomite. The dolomite that is present in Dagger Draw carries down into the Indian Basin.

Q. Could you relate or explain where the Yates well's location is in regard to the boundaries of the Indian Basin Upper Penn pool?

A. It's to the east.

Q. Is it close to the edge of the--

A. It's close to the edge of the gas pool, yes.

Q. What is the current status of this well?

A. It's currently the Old Pan American Pardue Gas Unit #1, which was a plugged and abandoned well. Yates plans to reenter it. Its present depth is in the Upper Penn or Canyon formation at 8038 feet.

Q. And about to what depth do you intend

to take the well?

A. As I said before, Yates plans to reenter the well and deepen it to approximately 10,350 feet to test the hydrocarbon potential of the Upper Penn, or Canyon, and the Morrow formation.

Q. As for the Santa Fe proposal, the primary objectives are the Upper Penn and the Morrow, is that right?

A. Yes.

Q. Could you just generally describe the geological characteristics of the Morrow and the Upper Penn?

A. You want me to go through my exhibits with this?

Q. Well, I think if you could just give us a general overview as to what we're talking about?

A. Okay. The Canyon dolomite, both the dolomite and the Morrow are primary objectives. The dolomite of the Canyon is the reservoir, as Mr. Davis stated earlier, and the limestone and shales are not of reservoir quality.

The dolomite in this lease is actually the east edge of the Indian Basin, Upper Penn

pool, the same dolomite. Basically the lens are porous and permeable dolomite pinching out into a tight limestone.

The Morrow sands, in my opinion, are fluvial-deltaic deposits.

Q. Let's go to what has been marked as Yates Exhibit No. 1, your cross-section. I would ask you to first identify that and then review the information on that exhibit for the Examiner. All right. Let's go to Exhibit No. 1 and if you would review it, please?

A. This is cross-section A - A'. It's a north/south stratigraphic cross-section with the top section showing the Canyon dolomite and limestone, and the bottom section showing the Morrow.

In the upper section the Canyon dolomite is shaded in blue and the limestone is uncolored. North is on the left side, ranging to south on the right. On the extreme left side we have the Ralph Lowe Staple No. 1 in Section 22. Proceeding into the north half of Section 27, we have the Anadarko Pardue Farms #1. Then to the south half of Section 27, the Pan American Pardue Gas Unit #1, which is the proposed Yates

reentry.

And then down into Section 34, the Santa Fe Energy Right Hand Canyon Federal 34 #1, and then down into Township 22 South, 24 East in Section 3, the Curtis Inman Walt Canyon Unit #1.

The datum on the Canyon is the top of the Canyon carbonate. I would like to point out, the DST intervals and perforated intervals are marked in the Anadarko Pardue Farms #1. There's two DSTs in the proposed Yates reentry, there are two DSTs in the Canyon, and in the Walt Canyon Unit #1 there are three DSTs in the Canyon.

You might note that the dolomite from north to south, going from Section 22 into 27 is thickening, especially when it gets into Section 27.

Q. Going back to the DSTs, and especially in the Anadarko Pardue Farms #1 and Pan American Pardue Gas Unit #1, the first DST in the Anadarko well at the top of the dolomite produced 110,000 cubic feet of gas, 1800 feet of heavy oil and gas cut mud.

The second DST, a little bit further down, recovered 130,000 cubic feet of gas and 2600 feet of heavy oil and gas cut mud.

Moving over to the proposed Yates reentry, the first DST taken was actually the bottom one and it produced 275,000 cubic feet of gas which decreased to too small of a measure at the end of the test, and it recovered 280 feet of oil and gas cut mud and 1830 feet of sulfur water. And this is actually in the dolomite section.

The second test, which was a straddle test, which appears to be in the Canyon lime, produced 114,000 cubic feet of gas. That again decreased to too small to measure at the end of the test, plus 60 feet of gas cut mud, 90 feet of slightly oil and gas cut mud, and 90 feet of heavy oil and gas cut mud.

I might note that my dolomite lime, the top of the dolomite in this proposed Yates reentry is a little bit higher than what the sample logs show, and that's my interpretation going off this sonic log. The Gamma Ray was a little bit cleaner going higher up, so, in my opinion, the dolomite could be a little bit higher than what the sample log described it. The sample log actually showed the dolomite starting at a depth of 8000 feet.

Over in the Santa Fe Energy Right Hand Canyon well, basically all they had was a cased hole Gamma Ray neutron log through this interval since they lost circulation. You can't determine the difference between limestone and dolomite from this log, and I did not have access to sample logs or mud logs, so I made the assumption that the dolomite was continuous through this whole section. That's why I have the question marks at the base of the dolomite lime through this area.

Q. Are there wells in the area where the sands were actually wet?

A. I'll get to the Morrow on that in just a minute. I guess that's about all I wanted to say. Oh, I just wanted to point out, too, on the Walt Canyon they had substantial shows of oil in the top of the dolomite in that well, too.

Moving down to the Morrow cross-section at the bottom of this page, the datum was the top of what I call the Morrow clastic section, which is a little bit different from Mr. Davis'. I divided the Morrow clastics loosely up into an A and a B section.

EXAMINER STOGNER: Hold on a second

while I close the door.

MR. CARR: And could we turn up the heat, please?

[Discussion off the record.]

Q. All right. Do you want to continue, Mr. May?

A. Yes. I just want to point out, we have the Lower Morrow marked and a section below that, which is loosely a Yates' in-house term called the Austin cycle, which is just the lower section of the Penn. When we penetrate that we're assured that we're through most of the productive sands in the Morrow.

I would like to point out that the sand that Mr. Davis, I believe, called his basal Upper Morrow sand, is shown in my Morrow clastics A Section. In the Anadarko Pardue Farms #1, it appears to have very good porosity, but it does on log calculations calculate to be a little wet in my opinion.

Going over to Santa Fe's well, the same sand appears and looks even better and again, in my opinion, I think that that sand is a little on the wet side. They did DST it and recovered a good amount of gas, but it appears that it may

produce a little bit of water, too.

Q. All right. Let's go to your structure map of the Canyon, which is Exhibit No. 2. Can you identify the contour interval and then identify that and review that exhibit for Mr. Stogner.

A. This is a Canyon structure map. The top of the Canyon carbonate again is the datum. It shows a general structural dip to the east with a large nose down to the south of Section 27.

The proposed Yates reentry is circled in blue, and the Santa Fe location, not their present location now, but the location of 500 feet from the south line is circled in orange.

I might point out that the Yates reentry along with the Pardue Farms #1, which is in the north half of 27, the dry hole symbol, as I stated on the cross-section, both had shows of oil on drill stem tests in the Canyon.

In my opinion, relying on those two tests and plus with the one test down in Section 3 in the Walt Canyon Inman well, which is just above the minus 4000 structure line, both the Santa Fe location and the Yates location should

be structurally high enough to produce oil out of this zone.

Q. Let's move to the Canyon isolith map, your Exhibit No. 3.

A. I might point out again the two locations are circled in blue and orange, and the red triangles showed the wells that had shows of oil on DST.

This isolith map represents the Canyon dolomite and shows its thicknesses and limits. I also might point out that the value signs that have pluses beside them indicate that the dolomite was not fully penetrated and so the true thickness is unknown.

Looking at this map, most of the locations in 27 should have a sufficient thickness of dolomite for potential oil production.

Q. All right, Mr. May, let's go down to the Morrow. If you could refer to your Morrow structure map, Exhibit No. 4, identify and review this for Mr. Stogner.

A. This is the Morrow structure map with the top of the Lower Morrow as a datum. It shows a general structural dip to the east and again a

nose down to the south of Section 27. Basically what I'm showing here, is both the Yates reentry and the Santa Fe Energy location should be updip of the Pardue Farms #1, which I pointed out I thought had a wet sand in it, and Santa Fe's Right Hand Canyon well, which I think could produce some water in that.

So I think structurally these two locations are similar and should be updip from those two wells.

Q. Let's go now to Exhibit No. 5, the isolith on the Morrow. Review that, please.

A. This map represents the sands of the total Morrow clastic section and shows the limits of that sand deposition. This isolith is a clean sand map with a gamma ray cutoff of 58 PI units or less, and it shows a sand thick trending through the area of the proposed locations.

The map shows that a well located within the 50-foot contour interval could have a better chance for encountering reservoir quality sands. The Staple #1 up in Section 22, in my opinion, and which I forgot to point out on the cross-section, but I think Mr. Davis alluded to it, that well had a DST and it looks like it came

from a thick Morrow sand in the Morrow clastic section, and that produced up to 1.6 million off that DST. In my opinion, that should have been a Morrow completion.

The Anadarko Pardue Farms #1 in the north half of Section 27 had the one quality sand which Mr. Davis termed the basal Upper Morrow sand; but as I referred to earlier, it looks wet to me. It had a few other sands, but they were very low porosity values.

Moving down to Santa Fe's Right Hand Canyon well in the northwest quarter of Section 34, that well had basically two sands. The one which they had a good DST off of and I think could produce some water. And another one below it, which was a little on the tight side, but both have sufficient thicknesses.

Using those wells, that's kind of what I based the 50 contour cutoff on, and plus my knowledge of the area. Some of the other areas that I've worked in this immediate region, I've used the same cutoff.

You might note that the Yates reentry should have approximately 55 feet of sand present, possibly giving it a better chance of

encountering quality sands, as opposed to the proposed Santa Fe Energy location, which will have--I said 45 feet at this location but their new location may have a little bit more. I want to state, there is a little bit of a difference between these two locations, but in my opinion they're very similar.

Q. Let's go to what has been marked as Yates' Exhibit No. 6. Identify this exhibit and then explain to Mr. Stogner what you're trying to show with this?

A. This just shows the different Santa Fe locations that I've learned all through the course of our negotiations, and of course it doesn't have the last one on it. The source of this information was through verbal communication with Mr. Davis in phone conversations during the week of October 26th through the 30th, 1992.

I might point out first that the locations are the orange circles and they are chronologically numbered. And the Yates reentry is the red dry hole marker in the south half of 27.

Their first location, the way I understand it, was located 660 feet from the

south line and 1980 from the west line of Section 27. That is an orthodox location for a lay-down 320-acre Morrow spacing unit.

In the course of our conversation Mr. Davis said that the BLM requested that they move that location, because of topography, to 1300 feet from the south line and 1350 from the west. And if I'm incorrect on some of these footages, I'm sure Mr. Davis can correct me. That's basically 200 feet away from the proposed Yates reentry.

In a later phone conversation a couple of days past the first one, Mr. Davis stated that the location had then been moved to 500 feet from the south line and 660 feet from the west line, because he had remapped the area.

The conclusion I draw from this, they had gone from one, two, three and now four locations in the south half of the southwest quarter of Section 27. It appears to me that they're geologically comfortable with any location in that area, and that's basically the crux of my presentation here.

I think the Yates' location and the Santa Fe location are very similar, geologically.

Q. Mr. May, is Exhibit No. 7 a written summary of your geological presentation?

A. Yes, it is.

Q. What geological conclusions can you reach or have you just stated those?

A. I think I just stated them.

Q. In essence, both are geologically comparable?

A. That's my opinion.

Q. Were Exhibits 1 through 7 prepared by you or compiled under your direction.

A. Yes, they were.

MR. CARR: At this time, Mr. Stogner, I would move Yates' Exhibits 1 through 7.

EXAMINER STOGNER: Any objection?

MR. BRUCE: No, sir.

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

MR. CARR: That concludes my direct of Mr. May.

EXAMINER STOGNER: Thank you, Mr. Carr.

^ I had put that in to make sure it was Mr. Br Mr. Bruce?

EXAMINATION

BY MR. BRUCE:

Q. I just want to reconfirm a few things, Mr. May. I don't think we need to stretch out the cross-section you have, but do you agree with Mr. Davis that at Yates proposed reentry, there is limestone on top of the dolomite?

A. Yes, there is. But the first DST was definitely in the dolomite and they definitely did recover oil and water comparable to the Dagger Draw DSTs.

Q. You did say that you would anticipate a completion at either the Santa Fe or the Yates location in the Upper Penn to be more of a Dagger Draw type well than an Indian Basin gas well?

A. That's what I anticipate. I feel like that when we drill into the Canyon, we're not going to a gas well here. It's either going to be oil, water or both. Probably oil and water, or water.

Q. Is your structure map on the top of the Canyon, is that on the top of the dolomite?

A. That's on top of the carbonate, so it's a little bit different from Mr. Davis'.

Q. Do I interpret it correctly to show that Santa Fe's location would gain some

structure over Yates' proposed reentry?

A. Yes, it would, as far as the dolomite goes.

Q. The Anadarko well in the northwest quarter of Section 27, do you know its footage location?

A. I believe it is--well, that should be on the cross-section. I have it 2310 from the north line and 1980 from the west line of Section 27.

Q. In the Pan Am Pardue well, did you use samples, or did you use a sample log to determine the top of the dolomite?

A. I used the combination of the sonic log and a sample log, a commercial sample log, which I think is probably similar to what Mr. Davis said.

Q. Did the sample log show any limestone below the point where you put it on your cross-section?

A. Yes, it did. The sample log showed lime going down to 8,000 feet and, as I described earlier, my opinion is that the dolomite could have possibly come higher because of the cleaner section on the gamma ray.

The thing you have to take into account, and this is just my opinion, sometimes samples are not good samples or are incorrect. It's just my opinion.

Q. Can you definitely separate the limestone from the dolomite by gamma ray?

A. No, not definitely, not by any means. That sonic log is very vague.

Q. Now regarding the Morrow water saturation, did you do the calculations on that?

A. Yes, I did.

Q. Do you agree with the values Mr. Davis gave?

A. Those are probably in the ballpark, yes. I may have gotten some a little bit higher, but they were not out of the ballpark by any means, no.

Q. Do you think that a four percent difference, I think Mr. Davis had 45 percent and 41 percent, do you think that four percent difference suggests one is wet and one is dry?

A. That's very hard to say. I don't think that's a definite line that you can pick in between there. Usually we consider in the Morrow, I was getting around 50, or low 50s or

high 40s, and that's a little on the wet side, as far as my opinion is.

Q. When you discussed the same wells in Section 22 and 27 that Mr. Davis did, did you think the well in Section 22, the Ralph Lowe, was that a bypass producer in the Morrow, in your opinion?

A. Yes, that should have been a Morrow completion, in my opinion.

Q. What about the wells in Section 27?

A. The Pardue? The Anadarko well?

Q. Yes.

A. I think that sand is wet, and so I don't think I could consider it a Morrow completion.

Q. Would that indicate that it might be best to move as far away from that well as possible?

A. You want to move away from it as long as you get structurally high enough to where you think you're out of the water, and I think both the Santa Fe and the Yates' locations will do that.

MR. BRUCE: Nothing further, Mr. Examiner.

EXAMINER STOGNER: Mr. Carr, any redirect?

MR. CARR: No redirect.

EXAMINATION

BY EXAMINER STOGNER:

Q. I'm looking at Exhibit No. 6, Mr. May, you show the three well locations and I'm showing the fourth one. Who did you talk to or where did you learn about these Santa Fe locations from?

A. This is all verbal communication with Mr. Davis, the Santa Fe geologist.

Q. Over what kind of time frame are we talking about?

A. We talked one day of the week of October 26th through the 30th, and he told me about the first and second location and told me the second location was going to be their location at that time.

A few days later, I can't remember whether it was two or three, he called me back and said that he had remapped and moved it to the third location.

Q. We're talking late October, early November?

A. Yes.

Q. Now, I want to make sure I have my time frames straight here. You said your first communication with Mr. Davis was October 26th. Was that the first time you talked to him about any prospect out here?

A. I had talked to him earlier about trying to get the logs from the Right Hand Canyon well. But as far as prospects, I don't believe we discussed any prospects.

Q. But October 26th was the first date that you talked to him on it?

A. The week of the 26th was the first time I recall that we talked about a prospect.

Q. And that was a week after the APD was submitted to the BLM by Yates?

A. I think it was the week of, wasn't it?

MR. BULLOCK: 10/29 is when it was submitted.

EXAMINER STOGNER: I thought you said the 22nd, Mr. Bullock.

MR. BULLOCK: Let me check.

EXAMINER STOGNER: Since I'm going to need a copy of that, that shows the receipt date at the BLM. I would certainly appreciate that, and that might be in our files here.

MR. CARR: But we will provide a copy of the APD, in any event.

EXAMINER STOGNER: So, Mr. Bullock, am I correct, is it the 22nd or the 29th?

MR. BULLOCK: We submitted it the 29th. I don't have the date received. I'm not sure of the date they received it. It's dated 10/29. I won't say that's the date they received that.

MR. CARR: We'll confirm that, Mr. Stogner.

EXAMINER STOGNER: I have no other questions of Mr. May at this time.

MR. CARR: We have no further questions of Mr. May.

EXAMINER STOGNER: Mr. Carr?

MR. CARR: At this time we would call Dr. Boneau.

DR. DAVID FRANCIS BONEAU

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. CARR:

Q. Could you state your name for the record?

A. David Francis Boneau.
Q. Where do you reside?
A. Artesia, New Mexico.
Q. By whom are you employed and in what capacity?
A. I'm employed by Yates Petroleum Corporation as a reservoir engineering supervisor.
Q. Dr. Boneau, have you previously testified before the Division?
A. Yes, sir.
Q. At the time of that testimony, were your credentials as a petroleum engineer accepted and made a matter of record?
A. Yes, sir.
Q. Are you familiar with each of the applications filed in these consolidated cases?
A. Yes, sir.
Q. And are you familiar with the area that is involved in these cases?
A. Yes, that's correct.
MR. CARR: Are Dr. Boneau's qualifications acceptable?
EXAMINER STOGNER: Are there any objections?

MR. BRUCE: No, sir.

EXAMINER STOGNER: Dr. Boneau is so qualified.

Q. Have you prepared certain exhibits for presentation here today?

A. Yes, that's correct.

Q. Would you refer to what has been marked as Yates Exhibit No. 8, identify that first and then review this exhibit for Mr. Stogner?

A. Yates Exhibit No. 8 is supposed to point out two things. One is a quick review of the theory on which this exploration is based in the Canyon dolomite formation, and the other idea is to support that it's a risky proposition with a 200 percent penalty being appropriate.

What Exhibit 8 is, is a map of the Indian Basin Upper Penn field. The total productive limits are the black area plus the yellow area. The yellow area is the part of a field that has watered out over the last 25 years, as approximately 1.5 Tcf of gas has been produced from this field. Water has encroached from the east and watered out all the areas that are shown in yellow.

The theory we're talking about here is

that there is an oil leg downdip of this gas, and that oil leg would be just to the east of the red line in Sections 22, 27, 34 and adjacent areas that have been discussed here.

The pink dot shows--well the pink dot probably covers both proposed locations, but it shows where we're talking about drilling here. So there is a theory that there is oil off to the east in some extensive area, hopefully, so that the exact location of this test is somewhat immaterial to whether there's an oil leg there or not.

I'm the sceptic at Yates on this whole project, and I guess I have a friendly wager with John Yates as to whether there's anything there. But the concern in the risk factor is that there may have been oil off to the east, but in these 25 years of production, water has moved in the oil. What there was of it could have easily moved updip and be trapped in a previously gas-saturated reservoir and just not be commercial.

There's sensational risk of that, and it's my opinion that that's what we're going to find. I would love to be proved wrong, but there

is that great risk.

Q. You would concur, would you not with Santa Fe, that this is a high-risk venture?

A. That's exactly what we're saying.

Q. That a 200 hundred percent penalty should be assessed against any interest owner who doesn't voluntarily participate in the venture?

A. We agree with Santa Fe on that, yes, sir.

Q. There are no oil wells producing from this theorized oil trap at this time?

A. That's correct, yes.

Q. Let's move to Yates Exhibit No. 9. Could you identify that, please?

A. Yes, sir. Yates Exhibit No. 9 shows kind of a score card of Yates' activities in the area of reentries within the last six or eight months.

Exhibit 9 lists six wells that Yates has reentered since last spring. It also shows the locations and the target reservoirs, et cetera. These are not all in the immediate area that we're talking about, but they're all in Southeast New Mexico, in Eddy and Lea Counties.

The purpose is to show something about

AFE costs, and something about our experience and success at completing these reentries. So we're talking about six wells here.

To the right-hand side I show our AFE costs in the third last column from the right, and for the six wells that totals $2.218 million.

The second column from the right shows the actual costs we have incurred in completing these six reentries, and that's $2.166 million.

The final column shows what it would cost to drill a new well in each of these situations, and that's about $4.2 million.

So the message is that, on average, we have come in equal to our AFEs on these reentries. And, on average, we've saved about 50 percent over the cost of drilling a new well.

You look at individual comparisons here, and some of the actual costs have been 25 percent higher than AFEs, some of them have been 40 percent under the AFEs, but we have completed these reentries and we have completed them on average at the AFE level that we're projecting.

We should note that these are not easy reentries. These six here, five of them had

cutoff casing stubs in the hole that we had to get back over and patch in casing and re-cement the well. The only one that didn't have that situation was the Hickory, item #4 there.

We'll see in a minute that the reentry we're talking about is relatively straightforward compared to at least five of the six reentries that we have successfully completed in recent times.

Q. Let's go now, Dr. Boneau, to Exhibit No. 10, and you can explain and review that.

A. Exhibit No. 10 is a wellbore sketch for the Pardue Fed. Gas Com #1, showing the present situation of the well we attempt to reenter. There's surface casing at 280 feet cemented to the surface, and there's 8-5/8" casing at 2780 feet. There's a hole in the ground at 8038 feet with some cement plugs in it.

This is a relatively straightforward reentry. You drill out the plugs, drill deeper, run production casing, cement it, and try to complete the well. We're clearly going to get to the 8000 foot level.

Santa Fe has brought up the possibility that we'll lose circulation and somehow not be

able to get any deeper. If that were to happen, and I think it's unlikely, but if that were to happen, we will be able to test the dolomite which is, in my mind, the main objective of this is testing this oil theory in the dolomite. I think we'll get to the Morrow. But if we don't get to the Morrow, we'll surely complete this reentry and we'll get a test of the dolomite and it will be cheap.

Q. Dr. Boneau, if you did that, if you were unable to get to the Morrow, the option of drilling a Morrow well would still remain, is that not correct?

A. Yes, that's correct, and it might even be a relatively orthodox location.

Q. In view of the risk that's associated with this venture, do you believe it is prudent to drill a new well when a reentry is available?

A. I think it is prudent to test this oil theory as cheaply as possible. If it proves that there's oil there, then real dolomite wells, real Canyon wells can be drilled on closer spacing and produce lots of oil.

Q. Are you expecting a 640-acre gas well unit in the Canyon to result from this operation?

A. No. The Canyon well is not going to produce gas. It's going to produce nothing, or water or oil.

Q. Now, Dr. Boneau, you heard Mr. Roberts' testimony today concerning the AFE costs that have been charged or at least presented by Yates?

A. I heard that.

Q. Can you explain why some of these costs may have been so high?

A. I made a tabulation of the AFE and actual costs for the Dagger Draw wells that Yates operates where Santa Fe participates. My conclusion from that is similar to what Mr. Roberts said. My numbers are that the total AFE costs were like $12 million and we actually spent $16 million on those AFEs.

I went back and looked individually at quite a number of those wells. In my mind, there are three million reasons for the cost overruns, mostly not related to Yates drilling the well right.

The main reason the AFEs run over is that we leave the AFEs open beyond the period of time that the writer of the AFE had in mind. And what happens is that we complete the well--Dagger

Draw well we're talking about--we produce it for a month or two, we find out we need a bigger pump, a smaller pump, we go in and restimulate it, most often successfully, and those charges that occur a couple of months down the line are lumped into the original drilling AFE.

These pump changes and these retrievement costs are about $100,000, and they weren't considered by the writer of the AFE.

Q. Dr. Boneau, if someone is required to prepay based on an AFE, the lower figure would be the figure utilized, is that right?

A. Yes, that's correct.

Q. And you're billing actual costs on these, is that right?

A. That's correct.

Q. What would be another reason that the AFE costs may be high?

A. Another thing that we've done that we think is wise but fouls up the AFEs, is that we're cementing those Dagger Draw wells to the surface on the production casing and we're doing that to protect against corrosive waters in the Abo and the Yeso.

The AFE contains $8,000 for a cement

job, and in order to use DV tools and three-stage cement jobs to cover that, we're spending $30,000. Again, the AFE was not written with that in mind; but subsequent to writing the AFEs, we decided that was a good idea and that was done.

The other item that drives up the AFE, and this is relatively related to what Santa Fe is talking about, is that in some of the wells at Dagger Draw we lose circulation above the dolomite, from about 4000 feet to 5400 feet, and it requires extra water, mud, and day-work charges to overcome these loss circulation problems.

We're always successful in overcoming them, but to be honest with you there are not contingency charges in the AFEs for that happening in most cases. And recently, I think we've got some of these changes in the AFEs, so the AFEs are a little higher and we're doing a better job of hitting them. Those are the kind of things that have happened to explain the facts that Santa Fe brought up.

Q. Are you aware of any complaints from Santa Fe about these costs?

A. No, I'm not aware of those.

Q. Is Yates willing to discuss those with them if those problems are brought to them?

A. Most certainly. We're trying to save money. We're spending a lot of money out there of our own. We're trying to save money, surely.

Q. Now, if we look at the proposed Santa Fe location, you indicated we weren't looking for a 640-acre gas well. If, by some quirk, we got that, would a well at the proposed location drain that acreage, Section 27, at the Santa Fe proposed location?

A. No. A well that's barely in Section 27 is not going to drain all of Section 27.

Q. How does this location stack up as an effective location to drain the Morrow in Section 27?

A. Well, it's not going to drain 320 acres of Section 27 of the Morrow, it's going to drain Santa Fe's other acreage.

Q. Do you have an opinion as to the most efficient way to go about testing this oil theory?

A. My opinion is to test it as cheaply as possible because it's a theory, which means that

it's in need of test and may be wrong.

Q. We had testimony from Mr. Roberts and he stated reasons he felt that Santa Fe may be a better choice as an operator here. Could you summarize what, in your opinion, would be the arguments for Yates operating this property?

A. I'll attempt to do that, yes. We think that the reentry approach that Yates is suggesting is the prudent way to go. Our location is less than orthodox. Yates has experience with reentries. The reentry cost is going to be lower. Yates has experience with Morrow gas wells in Southeast New Mexico. We operate about 125 of them. Yates has experience with Canyon dolomite wells, we operate about 120 such wells at Dagger Draw. The reentry costs are going to be lower than drilling a new well, no matter how you cut it.

This is a risky project. The Canyon theory is unproven and needs to be tested. The reentry is a straightforward reentry. We're going to get to the Canyon. We can overcome loss circulation if, by some sense, that happens. We have experience with loss circulation.

The Yates way will test it prudently

and cheaply. The Morrow, in my opinion is--well, the place to test the Morrow in Section 27 is almost outside Section 27. It's somewhere in the interior of Section 27.

I think, for the reasons I've tried to state, that the Yates approached to testing the Canyon is a prudent, cheap thing to do, and that's what we should do in this case.

Q. In your opinion, will approval of Yates' application and the drilling of a well as Yates proposes, be in the best interests of conservation, the prevention of waste and the protection of correlative rights?

A. Yes, sir.

Q. Were Exhibits 8, 9 and 10 prepared by you or compiled at your direction?

A. Yes, sir.

MR. CARR: At this time, Mr. Stogner, we move the admission of Yates Petroleum Corporation's Exhibits 8, 9 and 10.

EXAMINER STOGNER: Any objection?

MR. BRUCE: No, sir.

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

MR. CARR: That concludes my

examination of Dr. Boneau.

EXAMINER STOGNER: Thank you, Mr. Carr.

Mr. Bruce?

EXAMINATION

BY MR. BRUCE:

Q. Dr. Boneau, regarding this drainage issue, Santa Fe has already said it doesn't object to a well at its location and really it's the one affected, isn't it, to say that because of the unorthodox Santa Fe location, it's not the best location to drain all of Section 27?

A. The unorthodox locations are not the best place to drain all of Section 27. The fact that some of the drainage will probably come from 34 should probably be considered immaterial since that is Santa Fe's acreage.

Q. Looking at your Exhibit 9, the six wells you listed, are any of those Dagger Draw wells?

A. No, those are not Dagger Draw wells. Those are Delaware wells and those are Saunders Permo-Penn wells.

Q. They're not in the Dagger Draw field?

A. They're not in the Dagger Draw field.

Q. There have been a couple of reentries

in the Dagger Draw, have there not?

A. We know there's been the Sara #1 put up by Santa Fe.

Q. The Larue XX?

A. You would call that a reentry, yes. There were a couple of old Conoco wells that we reactivated; whether you call those reentries or just reopenings.

Q. And those were over budget? Over the AFE? Actual versus AFE?

A. The Sara #1 well was over AFE, and when that was brought up this morning I looked at the details on that, and the reentry was over AFE.

Q. You gave some reasons why the actual costs were above AFE. Is whoever prepares the AFE going to start taking these extra costs into account, like cementing to surface, et cetera?

A. Yes. I talked to him in recent weeks, and some of those changes had been made in late summer, early fall. I'm under the impression that we have changed the AFEs so that they're more--

Q. Very recently?

A. I think the cementing to surface was changing some that were effective in the August

kind of time frame.

Q. Now, regarding your proposed reentry, back 20, 30 years ago, was it, maybe not a practice, but was it common when people were plugging wells, to throw junk into the well?

A. Well, I wasn't there throwing junk 25 years ago, but we have experience with reentries and there are a fraction of the reentries where you hit something that really shouldn't be in the hole; maybe one out of five, or something on that order.

Q. And we don't know what's in the Pan Am Pardue hole?

A. No. Those kind of actions are usually not recorded on the official record.

Q. What would Yates do if it lost circulation in the Cisco Canyon during the reentry, but prior to drilling to the Morrow?

A. I'll attempt to answer that adequately. If we lose circulation in a minor way, we would attempt to fix it and continue. If we lost it in a major way we would stop where we were, which will be at least partially through the dolomite, set casing, and test the Canyon dolomite.

Q. Would you be able to continue on down to the Morrow?

A. It would not be a Morrow test at all. We would not get to the Morrow. We would admit that we would not get to the Morrow.

Q. Mr. Carr questioned you that you could still drill a new Morrow well, of course, even if that happened?

A. Yes.

Q. Do you have an estimate, off-the-cuff estimate of the cost of a new Morrow well in this section?

A. It's going to be in the $700,000, $750,000 range.

Q. So there is a potential if you lost circulation in a major way, as you said in the Cisco Canyon, you would spend an estimated $435,000 in the reentry, and then, if you wanted to drill a Morrow, $750,000, so to get the same results Santa Fe is seeking, you would be spending a million-two, or thereabouts?

A. Well, we probably would not spend all that $435,000 if we couldn't get past it, but we would spend $750,000 plus $300,000 or some such thing, yes.

MR. BRUCE: That's all I have, Mr. Examiner.

EXAMINER STOGNER: Thank you, Mr. Bruce. Mr. Carr, any redirect?

MR. CARR: No redirect.

EXAMINER STOGNER: I have no questions of Dr. Boneau at this time.

Any other witnesses?

MR. CARR: That concludes our presentation.

MR. BRUCE: Mr. Examiner, I don't have any other witnesses. However, on Mr. May's Exhibit 6, there are some proposed Santa Fe locations. We don't agree with those. I don't know if it's really worth the Examiner's time to go into those, but our version of events as to what Santa Fe proposed is a little different.

EXAMINER CATANACH: Oh, I would like to hear it.

MR. BRUCE: Mr. Davis could, in just a minute, because he speaks very fast.

EXAMINER STOGNER: Thank you, Dr. Boneau, you may be excused. Mr. Davis?

GENE DAVIS

Having been previously duly sworn upon his oath,

was recalled to the stand, and was examined and testified further as follows:

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Mr. Davis, just very briefly, could you specify what Santa Fe's initial location was and then how it got down to the current location, and also there was a 1980, 660 location mentioned by Mr. May. How did that get in?

A. When I visited with Mr. May for the first time on the phone in, I guess it would be, late October, we talked about drilling a well in Section 27 and I told him what our location would be. I don't have the exact footage, but it would be within a couple hundred feet and on the same pad as the proposed reentry by Yates of the Pan Am Pardue Fed well.

Q. So that was number one?

A. That was number one. We may have, during the course of the conversation, discussed a location or possible location that would be orthodox at 1980 from the south and 660 from the west for a stand-up or for that location, but that was never a proposed location, and I was never told by the BLM that I could not drill that

location.

By looking at a topo sheet, it's fairly obvious that you could not drill there because the topography wouldn't allow it.

I did call Mr. May back later in that week, or sometime thereafter to make sure the exact date, and told him I was going to change the location to a location that would be 500 feet or so from the south line and 660 from the west, and I told him that was because of some of the geological information I had gotten from the remapping.

Q. From the sample log?

A. Correct. I think I visited with him or left a message for him because I wasn't able to get ahold of him because he was out of the office on wellsite duty, that we were changing the location to 204 feet from the south line because of topographic reasons.

MR. BRUCE: Thank you.

EXAMINER STOGNER: Mr. Carr?

FURTHER EXAMINATION

BY MR. CARR:

Q. Mr. Davis, I understand your testimony to be that you don't agree with the locations as

presented on Yates Exhibit 6, correct?

A. That's correct.

Q. I further understand your testimony to be that you have proposed three locations in the southwest quarter of this section instead of four?

A. That's correct.

MR. CARR: Okay, thank you.

EXAMINER STOGNER: Anything else, Mr. Bruce?

MR. BRUCE: Nothing else, Mr. Examiner.

EXAMINER STOGNER: Closing statements?

MR. CARR: Yes, sir, Mr. Stogner. Mr. Stogner, we're both before you, obviously, seeking an order pooling the same lands, and there are a lot of things that are not in dispute.

There's no dispute this is a high-risk venture. There's really no dispute as to what the ownership questions are or that there's been an effort to obtain voluntary joinder and that effort has failed, so we come before you asking for a pooling order. And the questions are relatively simple. The questions you have to

decide are which of these proposals make sense and who should operate the well.

We've done a lot of posturing and we've talked about a lot of things that probably aren't really going to be determinative of much of anything. We're not talking about a 640-acre unit, and we have a 50/50 ownership split if we were. We really know we're not. We're talking about a Morrow well or a Cisco Canyon oil well, and that would be a much smaller spacing than anything we've actually discussed, although that's actually been the issue before you here today.

We both proposed a unit if we're in the Morrow that will maximize our ownership position. All of those things are background, but I think when you are through listening to all of this, there are some thing that are very clear.

One, the comparable locations being proposed in both the Morrow and in the Canyon, and then the question becomes, does Santa Fe's proposal really make sense? As Dr. Boneau says, they want to test Section 27. Actually, what they would like to do is test Section 27 by

getting virtually off the section itself. They've tucked it way down, 204 feet off the south line way in the corner, and everybody knows that isn't going to be an effective drainage pattern.

If they're going to drain they'll drain, yes, from them, a lot from their own acreage in Section 34, but while they're doing that they're also going to be draining the southwest of Section 27. And if you look at that, three-quarters of that is ours.

What we're proposing is a best location. The photographs presented by Mr. Roberts suggested that there were not a lot of locations due to topographic reasons, but we're about as standard as you can get to drill a well, to achieve our objectives, and to test this formation.

We also, I think, because we have a high risk, have a matter before you that you should consider whether or not it is prudent to start throwing a lot of unnecessary cost in an effort to test what I think is truly nothing more than a theory. And yet, to try and avoid that, we have Santa Fe standing here and suggesting

there's going to be loss circulation and all sorts of problems, we need to drill a hole because, well, maybe we would have to put a liner in the well.

And the bottom line is, when you look at our reentry, we've already penetrated the zone that they have loss circulation in. Those problems, we submit to you, are really red herrings.

We talked about operations. I think there are several things that just cannot be disputed. If you're developing 27, Yates does have a better location. We're at least more central to the acreage they're trying to test.

Look at experience. I'm not suggesting Mr. Roberts said that their well in 34 was the only well that Santa Fe operated in Southeast New Mexico, but I suggest anyplace you look, Yates stands heads and shoulders above Santa Fe in terms of experience. We're ahead of them in Morrow completions, in Canyon completions, in reentries.

They may not like the costs, although they're telling us that today, not before, about Dagger Draw wells. They sure sign up, because

the results we've gotten have been extremely good. We can reduce the costs on what is a very high-risk venture, and we will be more efficient. And when you're looking at conservation and proper use and development of the resource, we think that's a factor you should consider.

We also think when you look at this, you can see that if there is a problem with our reentry, we can go back and test the Cisco Canyon. We've been there. At least that zone was tested before we acquired the well. There are oil shows, and we will be able to get a test in that zone.

We haven't lost anything. It's not like we're proposing two wells. Mr. Bruce would like you to think that. We have, at least, a fall-back position and that is, in the worst case scenario, we will be able to test the Canyon zone.

You are supposed to decide this case based on considerations of waste and the protection of correlative rights. When we look at waste, we submit to you that Santa Fe is undertaking a wasteful effort to sort of pretend they're testing Section 27. Mr. Davis says he

needs a Canyon test. Under our program, we can give you that. There is so little control out here, you can't tell us that their location, and they can't tell you, that the location that they're proposing is any better for this purpose than what Yates is standing before you proposing today.

With risk, as to the risk of getting that test, there's really very little with Yates. And so the waste issue, we think, falls on our side.

As to the correlative rights question, all you're supposed to do is give us an opportunity to produce, without waste, our fair share of the resources, and so both of us are here today taking advantage of that opportunity, and I submit to you that that is not a significant issue in this case.

The bottom line, when all factors are considered, experience, better location, more efficient operations, the case really comes down on the side of Yates Petroleum Corporation. And after you've decided that and after we've drilled the well or reentered the well and taken it to the Morrow, the option is still present for Santa

Fe to go forward and drill what Mr. Davis characterized as a good prospect, and drill a well in the north half of this section, which would be virtually entirely their acreage, and go ahead and test the Morrow and the Canyon on their own land.

EXAMINER STOGNER: Thank you, Mr. Carr, Mr. Bruce?

MR. BRUCE: Mr. Examiner, it's pretty clear that the parties have negotiated for months. Santa Fe was intent on drilling a well in this area; the problem was, they could never get Yates to commit to anything.

As a result, Santa Fe went ahead on its own and drilled the Right Hand Canyon well, benefitting both parties. Yates rode Santa Fe down on the Right Hand Canyon well, and now they want to take what we view as unfair advantage by forming a south-half unit and, in essence, excluding Santa Fe from a second well in this prospect. We don't think that's right.

As far as the geology goes, I think regardless of whose sets of exhibits you use, Santa Fe's location is better for the Morrow based on the results of the Right Hand Canyon

well. Perhaps more importantly, Santa Fe's location is better to test the Cisco Canyon because there's more reservoir and it's at a higher location structurally. Neither party knows for sure what the Cisco Canyon reservoir is like in this area, so it's better to be safe and use Santa Fe's superior location.

In response to Mr. Carr, the Morrow is not a theory in this area. Santa Fe is going to complete a well in the Morrow. It's there, and it's a waste of money and a waste of time not to drill down to the Morrow. Santa Fe's location, furthermore, if it's drilled and is successful in the Morrow, as they anticipate, will set up a second Morrow well in the east half of Section 27.

Obviously, despite Dr. Boneau's questions, the Cisco Canyon is very important for both parties. That may be a theory, but with Santa Fe's location you get both the Cisco Canyon and the Morrow; whereas, with Yates' location, it's more likely you're just going to test the Cisco Canyon and perhaps not even the whole section of the Cisco Canyon.

Because of that, it's imperative to

drill a new well in Section 27, rather than doing the reentry, as proposed by Yates.

Furthermore, as we've demonstrated, the actual difference in cost between the Santa Fe proposal and the Yates proposal will be very small, especially considering that you will get the Morrow for sure in the Santa Fe well.

These factors are accentuated, as I said, by the better geology at the Santa Fe location.

You can go round and round on the operatorship issue. Santa Fe has dozens and dozens and dozens of wells in Southeast New Mexico. Perhaps not as many as Yates, but a lot. We've gone through this before. I don't know if you were at the hearing, Mr. Examiner, but in the Hanley Petroleum matter, there's testimony in the file about how many wells Santa Fe has drilled and operated in Eddy and Lea Counties.

Santa Fe, as we've stated, is the majority working interest owner in the area. It operates the offset. We believe it's an equally qualified operator to Yates in this area.

Once again, the comment about the

Dagger Draw, they keep on saying well, despite what Yates did, Santa Fe joined in the Dagger Draw. I think any working interest owner in that area would be foolish not to join in those Dagger Draw wells than to go nonconsent, considering the prolific field that Dagger Draw is. Obviously they're going to recover their well costs.

Because of these factors, we think that Santa Fe's proposed location and having Santa Fe as operator is the superior application, and we urge you to grant Santa Fe's application and deny Yates' application.

EXAMINER STOGNER: Thank you, Mr. Bruce.

I'm pondering over the unorthodox location. It was requested in the Santa Fe case, 500 foot from the south line. This is more than half, and lots more unorthodox, and our policy is to readvertise. Do you concur, Mr. Bruce?

MR. BRUCE: Yes.

EXAMINER STOGNER: Mr. Carr?

MR. CARR: Yes, sir.

EXAMINER STOGNER: You're aware, Mr. Carr, since both these applications cover the same area, such readvertisement will also affect

your case inasmuch as one order will be issued?

MR. CARR: Mr. Stogner, I understand that, but I think that you're really stepping outside the rules if you don't.

EXAMINER STOGNER: With that, the earliest I can get it on would be the 21st of January hearing for a readvertisement. That's an additional week than we would normally have because of the holidays.

With that, since we do have a little bit of time, I would like a rough draft from both of the parties.

MR. CARR: And, as you know, Mr. Stogner, the rough draft and the memo writing that Mr. Bruce and I have been engaged in, has been about to kill us lately. If it is all right with you, may we file that in mid-January?

EXAMINER STOGNER: You've got until the 21st.

MR. CARR: That's fine.

MR. BRUCE: That's fine.

EXAMINER STOGNER: There again, the earliest you can get it. I'm not aware of the memorandums that you're talking about, but I'm sure that's a different story.

If there's nothing further in either one of these cases at this time, then the record will remain open on both cases. It will not be necessary to readvertise your particular order, but it will be left open pending the rough draft orders.

MR. BRUCE: Thank you.

MR. CARR: Thank you.

(And the proceedings concluded.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10628 and 10629 heard by me on 19 December 1992.

Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Carla Diane Rodriguez, 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 caused my notes to be transcribed under my personal supervision; 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 January 18, 1993.

Carla Diane Rodriguez

CARLA DIANE RODRIGUEZ, RPR
CCR No. 4