STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

5 February 1986

EXAMINER HEARING

IN THE MATTER OF:

The disposition of cases called at this docket but for which no testimony was presented.

CASE 8775, 8809, 8810, 8819, 8820, 8821, 8806, 8805, 8789, 8823, 8813, 8689.

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
Attorney at Law
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Santa Fe, New Mexico 87501

For the Applicant:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

19 February 1986

EXAMINER HEARING

IN THE MATTER OF:

Application of Santa Fe Energy Company for compulsory pooling, Eddy County, New Mexico. CASE 8820

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Jeff Taylor
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For Santa Fe Energy: Ernest L. Padilla
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For Exxon Corp.: W. Thomas Kellahin
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I N D E X

I N D E X CONT'D

E X H I B I T S

E X H I B I T S CONT'D

MR. STOGNER: This hearing will come to order.

We'll call Case Number 8820, which is the application of Santa Fe Energy Company for compulsory pooling, Eddy County, New Mexico.

We will now call for appearances.

MR. PADILLA: Mr. Examiner, Ernest L. Padilla, Santa Fe, New Mexico, for Santa Fe Energy, the applicant in this case.

I have three witnesses to be sworn.

MR. STOGNER: How many?

MR. PADILLA: Three.

MR. STOGNER: Three. Are there any other appearances?

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, appearing on behalf of Exxon Corporation and I also have three witnesses.

MR. STOGNER: Are there any other appearances?

Will all six witnesses please stand at this time?

(Witnesses sworn.)

MR. STOGNER: Mr. Padilla?

PATRICK J. TOWER,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. PADILLA:

A Mr. Tower, for the record would you please state your name, by whom you're employed, and in what capacity?

A Okay. My name is Patrick Tower. I'm employed by Santa Fe Energy Company in Midland, Texas, as a petroleum landman.

Q Mr. Tower, have you previously testified before the Oil Conservation Division as a petroleum landman and had your credentials accepted as a matter of record.

A Yes, I have.

Q Are you familiar with the purpose and substance of the application of Santa Fe Energy Company?

A Yes, I am.

Q Can you briefly tell us what that is?

A Santa Fe is seeking an order for compulsory pooling, specifically against Exxon Corporation and

Spectrum-7 Energy Corporation, and it's all those mineral interests in the Wolfcamp, Strawn, Atoka, and Morrow formations in the west half of Section 24, Township 22 South, Range 27 East, in Eddy County, New Mexico.

Q Mr. Tower, have you been involved in negotiations and do you know the land ownership of (not clearly understood) in the area of Section 24, Township 22 South, Range 27 East?

A Yes, I do.

MR. PADILLA: Mr. Examiner, we tender Mr. Tower as an expert landman.

MR. STOGNER: Are there any objections?

MR. KELLAHIN: No objection.

MR. STOGNER: Mr. Tower is so qualified.

Q Mr. Tower, let me hand you what we have marked as Applicant's Exhibit Number One and have you tell the Hearing Examiner what that is.

A Okay. This is a land plat as prepared by Santa Fe Energy Company. The acreage, or leasehold, is colored in yellow indicating where Santa Fe has an interest or is in control of the acreage.

The red outline indicates the proposed proration unit with the proposed location marked in the box

square thereon. The -- within the proration unit, as far as the interestn Santa Fe Energy Company controls the acreage in the southwest quarter with the balance of the proration unit owned 25 percent by Exxon and 25 percent by the Spectrum group.

Q Do you have anything further concerning Exhibit One, Mr. Tower?

A No, I don't.

Q Let's move on to what we have marked as Exhibit Number Two and have you tell the Hearing Examiner what that is.

A Exhibit Number Two is a chronology of my oral communications with parties at Exxon and at Spectrum-7 concerning the proposed location forced pooling.

Q Can you briefly summarize what that exhibit contains?

A Yeah. Initially is shows that we contacted Exxon and Spectrum on January 10th of 1986, wherein we proposed the drilling of the Johnson No. 1 and also indicated that we were going to initiate a forced pooling action due to the fact that we had some time constraints under a farmout agreement.

Q Where was that meeting held?

A It was -- with Exxon it was in Exxon's office, and also with Spectrum it was in Spectrum's office.

Q What happened after January 10th, 1986?

A Thereafter we filed the forced pooling application. We followed up, once we had secured the preparation of the operating agreement, AFE, and pertinent material, we followed up in writing with the written proposal and that was hand-delivered on January 20th.

Thereafter the chronology will indicate several conversations where we have discussed with Exxon and Spectrum the matter of where the location would be and the proration units involved.

With Spectrum in particular there is conversations in here where we were attempting to negotiate a farmout agreement, as they indicated they were --

Q With whom?

A This is with Mike Childers at Spectrum.

Q At Spectrum, okay. Would you continue now, please?

A Anyway, the conversations would show that Spectrum was indicating they were willing to farmout. We received no indication from Exxon, and primarily here toward the end it's our understanding that Exxon and Spectrum were negotiating to make a deal where Exxon was entertaining purchasing Spectrum's interest or taking a farmout from them, and as of yesterday, it was our understanding that -- or as of last Friday that no such deal had been made yet.

Q Have you heard from Spectrum anything further concerning your negotiations about this time on your farm-in, or your proposed farm-in?

A From the inception of that?

Q Yes.

A We initially talked to them and they'd indicated they were interested in farming out a portion of their interest, in which case we made them an offer. They indicated that was not acceptable. They then came back and said they may entertain farming out their entire interest but they were seeking not only the form of a farmout agreement but also some cash consideration which Santa Fe Energy Company did not feel was warranted.

Q So you had no success with either Spectrum-7 and Exxon.

A No.

Q Let's go on to what we have marked as Exhibit Number Three and have you identify that for the examiner.

A Okay. Exhibit Number Three is the written correspondence between Santa Fe Energy Company and the Exxon Corporation and also Spectrum-7.

The first letter is January 17th, which was hand-delivered and received by the two respective companies.

On January 20th a copy of the forced pooling application and pertinent documentation for the well was delivered with a letter.

On January 23rd we discovered there was an addition error, just in they left out a 20,000 figure in the adding, just in the addition column. We corrected that and provided that both to Exxon and Spectrum.

On January 28th, January 29th, we received a letter from Exxon concerning the location of our well and asking Santa Fe to consider the feasibility of drilling the unorthodox location with a south half proration unit, in which case we had had some verbal discussions in this regard, and we followed up with a letter on January 30th indicating we were not willing to meet with Exxon on the basis that they'd requested us to furnish our geological information without any reciprocation.

We also addressed some concerns they had concerning the gas market and possibly getting a gas contract in this area.

Q In connection with gas market, have you had any success in negotiating contracts for sale of gas from Santa Fe Energy operated properties in that area?

A Yes, we have. We've drilled approximately, I believe we've got about nine producing wells in this area, both from the Strawn and/or the Morrow and to date all

of them have been dedicated and I think all of them have been connected and we are selling gas with the exception of possibly one that's in the process.

Q Is the west half, at least your acreage in the west half of Section 24 dedicated to a contract now?

A Not at this time.

Q Do you anticipate having any difficulties in obtaining a contract for sale of gas that may be produced from a well located in the west half of Section 4?

A No, we don't, mainly in light of our existing contract and production in the area. We feel that we will be able to negotiate a contract.

Q Have you contacted anyone concerning a potential gas contract for that -- for the sale of that gas?

A I have not personally. We have a separate gas department and I am not -- I'm not aware if they have or they have not.

Q Okay. Now tell us something about your own acreage in Section 24. How was that acreage obtained and under what circumstances?

A Okay. The acreage in the south half of 24 is currently under a farmout agreement from Kerr McGee Corporation; initially from Delta, with Kerr McGee being their successor, and basically calling for the commencement of a well, initially by February 19th.

We secured an extension and now have until April 20th of 1986 to commence operations or forfeit the rights to earn the acreage involved.

Q When were you given that -- when were you given that extension?

A Let's see, it was, I believe, granted on January 31st.

Q Had you asked for that extension previously from Kerr McGee?

A We initially hoped to get an extension and we had requested same of Kerr McGee on December 20th, 1985. We received a response on January 3rd that they would not consider an extension, and at that time we decided that we needed to go further and get a well drilled.

Q And on January 10th you then contacted Exxon and Spectrum as shown on Exhibit Two.

A That is correct. There is one additional letter, which I didn't refer to, in that Exhibit Three, the last letter. We did indicate that -- to Exxon, that we would consider drilling a southwest location; however, based on the testimony which the engineer and geologist (not clearly understood), we prefer to have the stand-up unit, but we would consider drilling the location in the southwest quarter should that help in their --

Q Let me hand you Exhibit Number Four and

have you tell us whether that is the AFE that was delivered to Exxon and Spectrum-7?

A Yes, it is.

Q Is that AFE, to your knowledge, typical to the AFE's that have been used in the area by Santa Fe Energy?

MR. KELLAHIN: Objection, Mr. Examiner. There is no proper foundation laid for that question.

MR. STOGNER: Would you please repeat the question?

MR. PADILLA: The question was whether or not that AFE is typical of the AFE's used by Santa Fe Energy in the area.

MR. KELLAHIN: My objection was that there -- this witness was -- Mr. Padilla has not laid the necessary foundation to elicit from this witness that testimony.

MR. PADILLA: Mr. Examiner, Mr. Tower has already testified that that is the AFE or an AFE was delivered to Exxon and Spectrum-7, and my question, he indicated that, yes, that was the -- and my question now is whether that's the AFE that was delivered to Santa Fe -- or Exxon and Spectrum-7.

MR. KELLAHIN: I think I under

stood the testimony differently.

The question, the first question was, was this the AFE delivered to Exxon and Spectrum-7, and the answer was yes.

The next question, to which I objected, was, was this a typical AFE, and there's been no foundation laid that this witness can tell us that this is a typical AFE that was used in the area.

MR. STOGNER: Mr. Tower, do you -- does your job duties entail you to review AFE's?

A No, it doesn't. I mean as far as the detailed preparation of it.

MR. PADILLA: Mr. Examiner, if necessary, I can hold that exhibit until I have my engineer on.

MR. STOGNER: Why don't you do that, Mr. Padilla?

MR. PADILLA: Okay.

Q Mr. Tower, does Santa Fe Energy desire to be designated the operator of that west half proration unit as proposed by your application?

A Yes, we do.

Q Did you submit a joint operating agreement to Exxon and Spectrum-7?

A Yes, we did.

Q What did the overhead expenses --

A We had --

Q -- or what were the overhead expenses in that operating agreement?

A Okay. The proposed overhead rates were on a fixed rate basis with the drilling well rate of $4900 and the producing well rate of $490.

Q Are you familiar with the other -- with other joint operating agreements that Santa Fe Energy uses in that area?

A Yes, I am.

Q And do you typically review those in conjunction with your duties?

A Yes, I do.

Q And are those in accordance with what you are proposing now?

A Yes, they are.

Q Mr. Tower, in your opinion is -- would approval of the application be in the best interest of conservation of oil and gas?

A Yes, it would.

Q Do you have anything further to add to your testimony?

A No.

MR. PADILLA: Pass the witness,

Mr. Examiner.

MR. STOGNER: Mr. Kellahin, your witness.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q Mr. Tower, would you describe for me again your experience as a landman for Santa Fe Energy with regards to your involvement, specifically with the development of the Strawn and the Morrow formations in the area shown on your Exhibit Number One?

A With my specific duties?

Q Yes, sir. What has been the extent of your experience in this area --

A Okay.

Q -- in formulating spacing units --

A Okay.

Q -- and consolidating acreage for the drilling of the Strawn and the Morrow wells?

A Okay. To date I have worked for Santa Fe since the inception of our development in this area in the first well that they drilled. There's probably nine or ten wells.

In the process we have had several locations which required testimony in unorthodox locations, and

as to the pooling and development under those previous wells, I have handled the land matters in conjunction with that since we were in this area.

Q When did your involvement commence; approximately what date?

A It was approximately March of 1983.

Q Have you been involved on behalf of your company in the forced pooling of any other interest owners for the formation of spacing units for either the Strawn or Morrow wells that your company has drilled in this area?

A I believe we initiated some; however, we reached a settlement prior to showing up at the hearing (not clearly understood).

Q Can you identify for us the wells which you recall were involved in at least some forced pooling effort by your company?

A I believe initially, just trying to the best of my recollection, it would have been possibly the Weems No. 1, which was in the -- the proration unit assigned to it right now is the north half of Section 28, and I believe that initially was a forced pooling, to the best of my recollection.

Q Do you recall what parties were involved in that forced pooling case?

A I believe the primary party was Read and

Stevens and I think we filed for forced pooling. I don't recall the details.

Q Do you recall any others, Mr. Tower, in which you were involved on behalf of your company in a forced pooling case in this area?

A Not -- not off the top of my head, no.

Q So of the nine producing wells your company has drilled and operates in this area, either in the Strawn or in the Morrow, it is your best recollection that you resorted to forced pooling only once in order to get a spacing unit?

A I believe that's correct, and in that situation I don't believe it actually went to a forced pooling.

Q Is it your company's practice to threaten forced pooling at the same time it makes its initial proposal to other working interest owners?

A No, it's not.

Q Why did you do that in this case?

A The primary reason was because of the constraints put on us by this farmout agreement. We were under a time -- time bind.

Q Your first initial proposal to either Exxon or Spectrum-7 was the communications and discussions on January 10th of this year?

A That is correct.

Q Let's look at Exhibit Number One, Mr. Tower. You told us that your company received a farmout of acreage from Kerr McGee?

A Yes, from Delta, who was Kerr McGee's --

Q Predecessor.

A Kerr McGee succeeded to the interest of Delta.

Q The Delta/Kerr McGee farmout to Santa Fe Energy, can you show us on Exhibit Number One what acreage that involved?

A Initially there were three, what they refer to as well tracts, involved.

The first one was in Section 23, basically the southeast quarter, and the southeast of the southwest.

The second well tract is the south half of Section 24 and --

Q That's the subject tract we're talking about.

A That is the subject tract, and there's one additional tract which is in Section 30, crossing the township line there, to the east, the, basically, the north half of the northwest, I believe.

Q What's the effective date of that farmout

agreement, Mr. Tower, do you recall?

A I don't recall. I have it in the files here.

Q You could give us the approximate date.

A I believe it was, I think it's December, October and December, 1984, I believe.

Q And did Santa Fe Energy drill the well pursuant to the farmout?

A Yes, we did.

Q And that's your Ferguson Well in Section 23, isn't it?

A That is correct.

Q All right. When was the first well completed, approximately, to the best of your recollection?

A It was, I believe, in August, towards the end of August, 1985.

Q You told us that you had some time constraints under the Kerr McGee farmout?

A There is a continuous development provision.

Q Tell us specifically what you understand the terms of that continuous drilling obligation to be.

A Okay. It basically calls for commencement of operations on one of the additional well tracts within 180 days following the completion, and I believe

that's defined as release of the completion rig, to continue drilling to earn the acreage.

Q The Ferguson well was completed approximately August of '85?

A I believe that's correct.

Q All right, and that starts the 180-day period.

A I believe so, yes.

Q All right. What caused you to wait until January 10th of '86 before you made your initial contact with the other owners in the section for the voluntary formation of the unit?

A Okay. A couple reasons. We were waiting to hopefully get some additional information on production.

We drilled the Ferguson. We also had the Dunn Well, which is in the Section 25, and we did not get those connected to a pipeline till December, mid-December of '85.

We were hoping to get some production data on that, although we didn't feel it was absolutely necessary.

The other reason, there was some KGS acreage in the area and we were wanting to get that out on the table, whether it be into Santa Fe, or whoever. Primarily it was some of the tracts that Exxon bought at the KGS sale

in late November.

But we were trying to get the acreage in the area put up so that we weren't drilling a test with unleased acreage in the area and once we had those items established, then we were going to make a decision as to continuance for the well.

Q Did your company participate in the efforts before the BLM bidding to acquire the acreage in the north half of Section 24 that Exxon ultimately acquired at that sale?

A No, we didn't.

Q You didn't bid at that sale for that acreage?

A We did not for that acreage, no.

Q Under the terms of the Kerr McGee farmout, Mr. Tower, if the Commission establishes the west half as the orientation for the spacing unit, would you have further continuous drilling obligations to drill a well for the southeast quarter?

A Yes, we will.

Q And if you don't do that, you would lose the southeast quarter?

A That is correct.

Q Under your existing agreements for the south half of Section 24, Mr. Tower, can you drill on a vol

untary basis without forced pooling, a Morrow or a Strawn test, and dedicate that acreage?

A (Not clearly understood) we can, yes.

Q There are no contract restraints or obligations that would preclude you --

A No.

Q -- from the south half orientation?

A No.

Q All right. And that orientation would allow you to drill one well and hold the whole south half under that farmout agreement.

A That is correct.

Q You said you've identified some nine producing wells either in the Strawn or in the Morrow in which you know your company's been involved in this area.

Can you tell me, Mr. Tower, if -- if eight out of those nine wells have spacing units that are laydown spacing units?

A How many wells did you need?

Q You said there were nine and I said, I believe there are eight that may constitute laydown spacing units?

A I believe that's correct.

Q Let's talk about the initial offer, Mr. Tower, on January 10th of '86. Did you make the same propo-

sal to both Spectrum-7 as you -- as well as Exxon?

A We did.

Q And that initial offer was that they participate in the drilling of this Johnson Well, is that the name?

A Yes.

Q Did you offer or suggest any other terms other than a straight participation in the well?

A I don't recall. I believe that's correct but I don't recall.

Q Have your latest attempts with Exxon to obtain a voluntary agreement, have those conveyed the original terms that you gave them back in January 10th of '86?

A Would you restate that?

Q Yes, sir. I'm asking you if now the terms that you've offered Exxon are the same terms that you offered them in January 10th of '86?

A I believe that's correct.

Q In terms of the Spectrum-7 acreage, Mr. Mower, you said that Spectrum-7 representatives have made a counter proposal to Santa Fe Energy that was unacceptable to your company?

A They did not give us -- well, they did give us specific terms. They mentioned the price range of about $2000 an acre and that they would like to have on top

of that some type of back in or reversionary interest in line with the possibility of a sixth up to 25 percent.

Q Do you anticipate any further negotiations with Spectrum-7 with regards to their interest?

A Not on those terms.

Q Have you proposed any further counter proposals?

A We -- the last proposal we made was basically that we would entertain a straight farmout wherein they would retain a 25 percent back-in, which was the main point of contention; however, we would not consider purchasing the acreage on top.

Q You've mentioned in your correspondence, Exhibit Number Three, I believe, that you've communicated to Exxon two different possible well locations in the west half of Section 24.

A That is correct.

Q All right, would you tell me what the first proposed location by your company was for a well in Section 24? What's the location?

A It's a standard location being 1980 feet from the north line and 660 feet from the west line.

Q That would be on Sepctrum-7's 40-acre tract in the southwest of the northwest?

A That is correct.

Q Okay. And in response to communication from Exxon, your company had an alternate location in the southwest quarter?

A We -- to facilitate the drilling of the well and because of our deadline under this farmout, and the questions by Exxon, we feel that we could drill the southwest quarter, in other words, primarily the development would be the west half, if that would facilitate the drilling of the well and avoid the forced pooling action, we indicate we would consider that.

Q What was the specific footage location that you communicated to Exxon in your later correspondence?

A It was a location being 660 feet from the west line and 1980 feet from the south line.

Q That would have placed the well in the northwest of the southwest quarter, then.

A That is correct.

Q Have you proposed to either Spectrum-7 or Exxon any other alternative locations other than those two that we've just discussed?

A No.

MR. KELLAHIN: Thank you, Mr. Examiner.

MR. STOGNER: Thank you, Mr. Kellahin.

Mr. Padilla?

MR. PADILLA: Yes.

REDIRECT EXAMINATION

BY MR. PADILLA:

Q Mr. Tower, when was the BLM/KGS sale?

A I don't recall the specific day but I think it was approximately November 24th, somewhere -- in 1985; somewhere about that date.

Q What acreage did Exxon obtain in that sale in the north half of Section 24?

A Specifically the northwest quarter of the northwest quarter and the north half of the northeast quarter, and the southeast of the northeast quarter.

Q All right. And your initial request for an extension on your farmout agreement was in December of 1985, is that correct?

A That is correct.

Q Now, Mr. Tower, did you actually threaten Exxon and Spectrum-7 with forced pooling on January 10th?

A I told them we felt it necessary to get on a forced pooling docket, yes.

Q Did you give them an ultimatum type of -- was that an ultimatum meeting?

A No.

Q You simply stated what your time constraints were, is that correct?

A That is correct.

MR. PADILLA: I don't have any other questions, Mr. Examiner.

MR. STOGNER: Thank you, Mr. Padilla.

Mr. Kellahin, any more cross examination?

MR. KELLAHIN: No, sir.

CROSS EXAMINATION

BY MR. STOGNER:

Q Now, Mr. Tower, in Exhibit Number One, let me (not clearly understood) a little bit --

A Okay.

Q -- talking about the south half, is that Federal, fee, or State acreage?

A That is fee acreage. In fact, the majority of the section is all fee with the exception of that -- the Exxon acreage I mentioned.

Q Okay, and looking at that, let's talk about the Federal acreage, then. To your understanding what is the Federal acreage in the 24?

A Okay, it's the northwest quarter of the

northwest quarter and in essence it's the entire northeast quarter less and except the southwest of the northeast quarter.

Q Everything else is fee.

A That's correct.

Q So there's no Federal acreage involved in the west half.

A There is. The northwest quarter of the northwest quarter, that one 40-acre tract.

Q On Exhibit One it has "Exxon" written across it.

A Yeah. We -- this was built off of Midland Map, which was -- did not have the current ownership on it when we built it, so we have had our Drafting Department insert that.

Those are -- that is the leasehold that Exxon bought at the KGS sale in November of '85.

Q Okay, let's talk about the southwest quarter of the section.

Is that 100 percent controlled by Santa Fe?

A Yes, it is. We have a partner, Crede Exploration but it is under our control by virtue of a previous agreement.

Q Okay, so the party you are -- the parties

that you are force pooling is Exxon, which has 25 percent of the west half.

A And Spectrum-7.

Q Which has another 25.

A Yes, another 25 percent.

Q Okay.

MR. STOGNER: I have no further questions of this witness at this time.

Are there any other questions of Mr. Tower?

If not, he may be excused.

Mr. Padilla?

MR. PADILLA: Call Curtis Anderson.

MR. STOGNER: Mr. Padilla, before we continue, did you offer any exhibits with the last witness?

MR. PADILLA: No, I did not. I'll offer --

MR. STOGNER: Pardon?

MR. PADILLA: I'll offer Exhibits One through three.

MR. STOGNER: Oh, okay. Are there any objections?

MR. KELLAHIN: No objections.

MR. STOGNER: Exhibits One through Three will be admitted into evidence at this time.

Mr. Padilla.

CURTIS A. ANDERSON,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. PADILLA:

Q Mr. Anderson, would you please state your name, where you reside, and by whom you're employed?

A Yeah. My name is Curtis Anderson. I live in Midland, Texas, and I'm employed by Santa Fe Energy Company as a Senior Geologist.

Q Mr. Anderson, have you previously testified before the Oil Conservation Division and had your credentials accepted as a matter of record as a petroleum geologist?

A Yes, I have.

Q Have you made a study and prepared exhibits in connection with today's hearing?

A Yes, I have.

Q And you're familiar with the formations under consideration as far as the forced pooling application

of Santa Fe Energy is concerned?

A Yes, I am.

MR. PADILLA: We tender Mr. Anderson as an expert geologist.

MR. STOGNER: Are there any objections?

MR. KELLAHIN: No objection.

MR. STOGNER: Mr. Anderson is so qualified.

Q Mr. Anderson, let's have you refer to what we have marked as Exhibit Number Five and tell the hearing examiner what that is.

A Exhibit Number Five is a partial copy of the Schlumberger compensated neutron litho density log that was run in the Santa Fe Energy Company No. 1 Henry Well, located in the northwest quarter of Section 26 of 22 South, 27 East, Eddy County.

Q Mr. Anderson, would you explain your technicolor as you have depicted on that log?

A Okay, what I've done here and what this exhibit represents, is the stratigraphic intervals that we'll be concerned with on my following Isopach and structure map.

The first Strawn interval at the very top of the log is one of the objectives at the proposed loca-

tion. The red color that's -- that's also within that interval is productive porosity greater than 4 percent.

Q Why have you chosen 4 percent porosity cutoff?

A Well, that's what we have been using as far as productive porosity within the Strawn formation.

Q Okay. Go ahead.

A Okay. Base of the Strawn formation is colored in purple. It's a structure datum used for one of the structure maps.

The yellow color down on the lower part of the log, the upper one being what I'm calling the Dunn sand, the lower one being what I'm calling the Henry sand, are sands that I mapped and Isopached with respect to the proposed location.

The brown color labeled Lower Morrow is another structure map that I've prepared.

Q Okay, so the red and the yellow are your basic -- your primary targets.

A That is correct. I've mapped the footage indicated by the red color as the porosity on the Isopach, and the yellow as sand thickness.

Q As between the Strawn and the Morrow, which is -- has higher priority in your view?

A With respect to this location, the Strawn

formation.

Q Okay. Is there anything further you have with regard to this exhibit?

A No, sir.

Q Let's go on now to what we have marked Exhibits Six, Seven, and Eight, and would you explain what those are and how they relate to each other?

A Okay. Starting with Exhibit Number Six, this -- by the way, all of these maps are at a scale of one inch equals 2000 feet; the contour intervals vary.

The blue circles are wells that are productive from the first Strawn interval.

Exhibit Number Six is an Isopach map representing the total feet of clean carbonate within the First Strawn interval. Now, this -- this map is a result of the size, the shape, and the orientation of this blue color on this map, and by the way, this blue color does represent a phylloid algal reef growth within Strawn time.

Phylloid algal, it's an organism during Strawn time that flourished in relatively calm waters, and where it grew and was abundant is where we have the greater thicknesses of carbonate that we're looking for in these reservoirs.

This trend exists from just south, oh, four miles, or so, to the southwest of our location here in

the Carlsbad Strawn Field, and trends all the way through our location up through the Golden Lane Field, Big Eddy Field, and as far northwest as Strawn Lusk Field. We have mapped in detail this particular trend and have isolated the First Strawn and in our -- in our regional mapping of this interval, this is the relative size and shape that this particular reservoir will take. We've discovered (not understood) so far in those fields.

Exhibit -- pardon me?

Q Are there other reefs as shown in these Exhibits Six, Seven, and Eight, or Six and Seven in the region?

A Oh, yes, sir. Carlsbad South Strawn, Golden Lane Strawn, Big Eddy Strawn, Lusk has two such First Strawn (not clearly understood.)

Q And is this a typical type of reef as those other --

A This is typical for the Strawn time. We have examined cores taken from our wells here, compared them with cores, for instance, in the Lusk Field, and it's exactly the same environment.

Q Incidentally, let me ask what your experience has been with mapping Strawn and Morrow formations in the area?

A Well, we have -- I've been involved with

drilling eleven Morrow tests within this prospect area, the most recent being with Santa Fe; previous to that, with Coquina Oil Corporation.

Q Did Santa Fe Energy -- what was the relationship between Santa Fe Energy and Coquina?

A Well, Santa Fe Energy, when Coquina -- Fleur Corporation sold Coquina Oil Corporation, Santa Fe Energy bought their undeveloped properties, which this was part of.

Q Were you also part of that package?

A No, sir. I went my own way. I came later, though.

Q Let me ask you about Mr. Tower's proposal to Exxon of locating the well at the 1980 from the south and 660 from the west at a standard location.

How does that affect your proposed location or your mapping?

A Well, as far as the proposed location on this plat it would change it, would bring it approximately 1300 feet to the south, and in the Strawn reservoir it would -- it would probably enhance, according to the way my interpretation is drawn here, your location would be enhanced as far as total reervoirs that you would encounter.

The only negative aspect to moving to the southwest quarter would be that quite possibly you would be

moving down dip on structure.

Q Are you talking about six of one and half a dozen of the other as far as the location that's shown by the red -- as shown by the red square and another location, a legal location 1980 from the south and 660 from the west?

A For those two, yes.

Q Do you have a -- do you yourself have a preference as to which location you'd drill at?

A I originally located it at the indicated location on these plats because we have found in our development of this area in the Strawn that the optimum conditions are to get into the thickest part of the porosity or a reasonably thick part and stay up dip as far as you can and still stay within the reservoir.

Q Let me ask you, well, first of all, let me -- were you involved in choosing a standup proration unit, in other words, dedication of a west half proration unit?

A Yes.

Q Why was a west half proration unit chosen?

A Well, in -- in developing the Strawn through here we have kind of taken the attitude of developing it on what you would call a depositional strike, in other words, in the direction the reef is growing.

Again, I'll say that you want to stay within the thicker part of the reservoir and in a case like this with the orientation that these reefs take, for orderly development for Section 24, it just seems reasonable that a west half drilled first, of course, is the obvious next development well, use information from it; the next development well would be an east half.

Q Would you expect to participate on an east half proration unit?

A Yes, sir.

Q And you would actually participate the same amount that you're participating on a west half proration unit, correct?

A As much interest as we carry in there.

Q What kind of risk, Mr. Anderson, is associated with drilling a well in the west half of Section 24?

A The Isopach shows the risk here pretty good. In --

Q Why is that?

A Well, the well that's located in the southwest quarter of Section 26 was drilled in 1974, dry in the Strawn. They had a reasonable amount of First Strawn carbonate, all of which was tight and nonproductive.

Ten years later we offset it by one quarter mile to the -- no, excuse me, a half a mile to the

north, and encounter a reef build-up, extreme, prolific producer.

Q Which is that well?

A That's the Henry No. 1. That exhibits the risky nature of this -- this particular First Strawn reservoir. You can be one location off and miss it completely.

In doing our economics on this -- this particular well, we used a 20 percent success factor in finding the first Strawn.

Q What is your recommendation to the Division as to a risk penalty to be assessed against this well?

A The maximum, 200 percent.

Q Let me hand you what we have marked Exhibits Nine, Ten, and Eleven, and have you identify those for the examiner.

A Yes, sir. Exhibit Number Nine is an Isopach of the Dunn sand referred to before in Exhibit Number Five. This sand is interpreted to be deposited within Middle Morrow time as a deltaic sand.

Exhibit Number Ten is an Isopach map of what I've called the Henry sand. Let me step back just a minute.

The Dunn sand is named after the Santa Fe Energy Company No. 1 Dunn Well, which is now productive from

that sand.

The Henry sand in Exhibit Number Ten is productive in the Santa Fe Energy Company No. 1 Henry, located in Section 26. It was potentialed in that well before the well was plugged back and now producing from the Strawn.

Exhibit Number Eleven is a structure map on top of the Lower Morrow formation.

Q With respect to Exhibit Number Nine, as you have drawn to Dunn sand, is a location on the northwest quarter capable of producing the -- or encountering the Dunn sand?

A It has a reasonable, reasonable shot at encountering productive porosity within the No. 1 Dunn sand.

Q How about a legal location in the southwest quarter of Section 24? Would that be the same for that?

A About the same percentage chance. What these -- what these Morrow maps are showing us is that for the additional 1300 feet that we need to drill between the Strawn and Morrow formations, it's worthy of the additional 1300 feet to test these particular productive sands.

Q The application calls, Mr. Anderson, for forced pooling of the Atoka and the Wolfcamp. Can you tell us something about the Atoka and the Wolfcamp with regard to the application?

A Well, both Atoka and Wolfcamp formation in the area are gas or designated gas, so they would be under a 320-acre proration unit.

Their respect -- well, the Atoka formation is not productive within two miles of the proposed location; is not commercially productive within six miles. It's a possibility that it has potential here but it's very remote, very risky.

The Wolfcamp formation, now, is productive just to the north in Section 14 and to the northwest in Section 15. We have mapped the Wolfcamp through our area here and find that the No. 1 Dunn, which is in Section 25, and project Section 24 to be just off the shelf edge from what's productive over in the Carlsbad East Wolfcamp Field.

So there, again, we're not anticipating Wolfcamp formation but it would be a 320-acre proration unit if encountered.

Q You're going to test them, in other words, look at them on the way down.

A Yes, sir.

Q Based upon your mapping as shown in Exhibits Five through Eleven, why would you oppose a north half south half orientation?

A If done in a reasonable manner, I wouldn't oppose it. I think we'll have testimony in a lit-

tle bit showing that two west half locations for the Strawn formation would be waste; that one well in the west half can drain the Strawn formation.

A more orderly development would be west half to east half. You could do a similar development with laydowns, with an unorthodox to the south and a, possibly a standard location on the north half.

Q Where in the north half?

A This would have to be over in the northeast quarter. It would be waste in the northwest quarter.

Q Do you have anything further to add to your testimony, Mr. Anderson?

A No, sir.

MR. PADILLA: We'll pass the witness, Mr Examiner.

MR. STOGNER: Mr. Kellahin, your witness.

MR. PADILLA: Yes, Mr. Examiner, I'll offer Exhibits Five through Eleven.

MR. STOGNER: Exhibits Five through Eleven will be admitted into evidence at this time, if there's no objection.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q Mr. Anderson, what has been the extent of your involvement on behalf of Santa Fe Energy in the development of the Strawn and the Morrow within the area described on your exhibits?

A With Santa Fe Energy?

Q Yes.

A I've been involved with -- may I have Exhibit Number One? It covers more of the area, all of our acreage.

I was involved in drilling the Coquina -- well, we didn't get that one at Santa Fe -- Santa Fe No. 1 Walker Well, located in Section 21; the No. 1 Grandi Well, located in the northwest of Section 22; the No. 1 Neeley Well in Section 28; the No. 1 Weems Well in Section 27; and the No. 1 Henry in 26; Ferguson in 23; No. 2 Henry in Section 22; the No. 1 Lovelace in Section 27; and the No. 1 Skeen in Section 28.

Q Were you involved in the decisions or the geology concerning the Dunn Well in the northwest quarter of 25?

A Yes, sir.

Q And with the exception of the Dunn Well in 25, which is a Morrow producer, is it not?

A Yes, sir.

Q Didn't produce from the Strawn or it has not yet been completed in the Strawn?

A We ran a drill stem test in the Strawn but the Strawn or the Morrow formation looked to be the better of the two at this location, so we elected to produce the Morrow first.

Q Okay. With the exception of the Dunn which currently produces from the Morrow, am I correct in understanding that all the other wells that you've just identified for me are dedicated to spacing units that are laydown spacing units?

A Well, that's the testimony that came out earlier and I'd have to agree with it.

Q That's true then, is it?

A I'll have to agree with it. I'm not sure myself.

Q You said it was your recommendation and choice that the orientation of the spacing unit in a given section would be oriented to develop on depositional strike? I may not have understood exactly your full answer.

A Okay, well, deposition strike is -- what I would mean there is on -- on the trend where you would most likely find the Strawn Reef.

Q Let's look at the Strawn Isopach, Exhibit

Number Seven, and look at Section 26, at the No. 1 Henry. Is this the Strawn Well that your company operates that we could characterize as the best producing Strawn Well of these?

A Not necessarily the best producing Strawn well; the best well from the First Strawn, yes.

Q When we look at the First Strawn on your porosity map, the net porosity map on Exhibit Seven, explain to me how you would implement your opinion that the spacing unit ought to be oriented in terms of the depositional strike.

A Well, you would, well, just -- just try to follow the dots through the thickest part of the blue --

Q All right, sir. Are you talking about the thickest portion, for example, the Henry, it's got a north half dedication in Section 26.

A Yes.

Q All right, if we look at that Isopach thickness of 80 feet or greater --

A Yes, sir.

Q -- that pod has a certain shape or orientation to it, does it not?

A Yes, sir.

Q The axis of that pod generally runs from a northeast to a southwest orientation, does it not?

A Yes.

Q When you talk about depositional strike in relation to that axis that we've just described, what are you telling me? I don't know what you mean by depositional strike.

A Well, it would be like walking down the railroad track.

Q All right.

A You'd want to stay on the track.

Q Okay, I've drawn my railroad track, then, the axis of the pod running from approximately northeast to southwest --

A That's correct.

Q -- and it becomes my railroad track. All right, the decision to orient that spacing unit for the Henry Well to a north half spacing unit, is that consistent with what you're trying to convey to us as your opinion as to how to orient these units?

A No, sir.

Q This is not an example of how you would do it?

A Well, previous to the No. 1 Henry, our Strawn production in the area was from the Second Strawn. The No. 1 Henry was a surprise to us. We did not anticipate it.

Q Have you given me an Isopach on the Second Strawn interval?

A No, sir, that's not an objective at the proposed location.

Q All right. Okay. When we look at the No. 1 Henry --

A Yes.

Q -- is that an orientation, then, that is consistent with orienting the proration unit with the depositional strike as found in the First Strawn?

A Probably not. I think if I'd -- if I'd known it was there, I'd probably stand those up in 26.

Q How about when we turn our attention to Section 25? Would that be an orientation that is consistent with how the reservoir is mapped on this exhibit?

A Let's see, was Section -- was it done a standup or a laydown?

Q I'm sorry, it's Section 23 and it's the --

A Oh, okay, 23. Yeah.

Q -- Ferguson Well.

A Yes, that's consistent.

Q When we get over into Section 24 on this exhibit, Mr. Anderson, you've indicated to us that a north half/south half orientation would be acceptable to you if it

is done in a reasonable manner.

A Yes, sir.

Q Within Section 24 the proposed location that we now seek, requested by your company, would be a location that is not in the thickest portion of the First Strawn as mapped on your exhibit.

A That's correct.

Q Is there a correlation between the productivity of a well and the thickness of the Isopach as you find it?

A Well, within reason. If you're right around or approximately within the 80-foot range, you're going to do better than say, for instance, 10 feet or 20 feet, yes.

Q Can we look at Exhibit Seven and draw any comparisons between the Ferguson Well in 23 and the Henry Well in 26 in terms of the quality of those wells as they relate to the thickness of the Strawn porosity?

A Yes, sir.

Q All right, and what correlation can you draw as a geologist?

A A loss of porosity in the Ferguson as versus the Henry.

Q Would it improve the potential for the Johnson Well in 24 if that well is located at a thicker por-

tion of the porosity as you've mapped it?

A It would improve, yes, the total feet of reservoir.

Q Is there a location in the south half of Section 24 that represents a location with greater potential in the Strawn than the one you've shown in the north half of 24?

A Not necessarily when you consider the structural orientation. We -- we've tried to strike a harmony between getting enough reservoir and making a good well and trying to stay at a reasonable structure, you know, staying up dip as far as we could.

Q Let's look at your structure map, then, Mr. Anderson.

A Yes.

Q Exhibit Number Eight? The No. Henry Well is 26 is down structure from the Ferguson by a few feet?

A Yes, that's right.

Q And yet the Henry is the better of the two wells.

A Yes, sir.

Q How does the Henry No. 1 in 26 compare to the Henry No. 2 in 22?

A The Henry No. 2 is not -- it is having completion problems right now because it was completed first

in the Second Strawn and then in the First Strawn, so they're having water problems. Once they get those ironed out, we're finding that we don't have the same reservoir. We're possibly in some different facies of this particular Strawn environment.

Q By moving up structure then in 22, you have moved out of the porosity as defined in this particular reservoir, or reached the edge of it?

A Yes, sir.

Q If the proration units are laid down, Mr. Anderson, where would you propose that the wells be located to maximize the development of the Strawn formation for the entire section?

A I think the location in the northwest of the southwest initially, the most low risk location. Of course the further you step out the more risk you get involved.

Then the next location --

Q I'm sorry, I didn't hear you clearly, Mr. Anderson. If we're going --

A The northwest of the southwest.

Q All right, let's assume a nort half/south half orientation, all right?

A Yes.

Q All right, with that assumption, I would

like you to pick for me what your first choice is of an optimum well location for either the north half or the south half, looking at the whole section but assuming you've got to orient it north half/south half, where are you going to put the first well?

A Assuming that you have have to orient --

Q For the sake of argument, just assume that.

A -- in order -- okay, in order to develop it best I'd locate in the northwest of the southwest.

Q All right, and that would be the first choice over any other location for either the north half or the south half?

A To prevent waste.

Q Where is the next best location if you're committed to a north half/south half orientation?

A A location, after you get the information from the first well, and say it comes in as mapped?

Q Yes, sir.

A Okay, well, it would be in the north -- southwest of the northeast.

Q Would your two picks of those locations for the development of Section 24, would they change if you were required to have a stand-up unit?

A No, they'd be standard locations.

Q All right, I didn't make myself clear.

We have asked you your opinion for well locations in 24 under the assumption that you had to lay them down, and you've given me two locations.

A Uh-huh.

Q Now I want you to use the same information and tell me whether or not your locations would be different if you were required to stand the units up?

A Not just using the -- using the Strawn formation, no, I would say.

Q When we turn to the secondary zone, Mr. Anderson, and look at, I believe, the Morrow, the Dunn, and the Henry Sands, I believe they're Exhibits Nine, Ten, and then your Morrow structure is Eleven?

A Yes.

Q Will you turn to those for a moment?

A In terms of the same kind of question, Mr. Anderson, regardless of how you orient the proration unit, if you're picking two well locations in Section 24, what is your first choice and what is your second choice in order ot adequately develop the Morrow reserves that we hope are there?

A Well, if it -- if it exists as I have it interpreted here, I would drill a No. 1 Johnson location that is shown on -- on the maps here initially and then

drill a -- depending on the result of that well, probably the same location that I have indicated on -- on -- for the second well in the Strawn.

Q When we look at the Morrow isolated from the Strawn, and we analyze the two Isopachs, you would gain thickness in both sands by moving to your location in the northwest of the southwest, would you not, sir?

A Yes, sir.

Q When you put both potentials together, the Strawn potential and the potential, the secondary potential in the Morrow, would your locations for the two best locations in Section 24 be as you described for me earlier when we were picking the optimum Strawn location?

A Actually what you're dealing with is one location, because your second location is dependent on what you get from the first one.

Q Oh, I understand. We're going to have to assume --

A Either one of these locations is good, northwest of the southwest, or southwest of the northwest.

Q Let me show you Exhibit Number Seven one more time.

A Sure.

Q And that's your Isopach of the First Strawn.

Based upon your mapping of the Strawn on this Isopach, Mr. Anderson, does not a north half/south half orientation of the spacing unit according to your exhibit approximately split that reservoir --

A Yes, sir.

Q -- into two equal halves?

A Essentially.

MR. KELLAHIN: I wonder if I might have a moment, Mr. Stogner?

(Thereupon a recess was taken.)

Q One final question, Mr. Anderson. Looking at Exhibit Seven, the orientation of the thickest pod that we've found in the Henry Well in 26, appears to have a northeast/southwest axis to it, yet as you projected over towards 24, you've projected the thickest portion of that pod to have an axis that's more closely aligned east and west.

What is the data that you've used to cause you to change the orientation and have it move in a more easterly/westerly orientation?

A We had to sneak around that zero data contour -- data point there in Section 18.

Q Okay.

A Just to the northwest -- northeast, excuse me, in Section 15 of 22, 28, that's not on this map --

Q Yes, sir.

A -- there's a similar First Strawn Reef build-up that is on trend with this particular reef build-up.

So in order to get -- to get around this point of control in between that didn't have the porosity, I just used what I saw an an undulating, smooth trend through the area.

Q Would it continue to honor the available data, Mr. Anderson, to have that pod oriented northeast/southwest as the Henry pod is? Would that still be consistent with the available data?

A Northeast/southwest?

Q Yes, sir.

A Now you're just looking at the 80, 80-footer, right?

Q Yes, sir.

A Wouldn't have to turn it much to do that.

Q You could turn it a little bit, still honor the data, and continue with the orientation of the thickest portion of the pod as we've seen it in the Henry Well.

A Yes, you could, about 15 degrees, I

guess.

MR. KELLAHIN: Nothing further.

MR. STOGNER: Thank you, Mr. Kellahin.

Mr. Padilla, redirect?

MR. PADILLA: Just a couple of questions, Mr. Examiner.

REDIRECT EXAMINATION

BY MR. PADILLA:

Q Mr. Anderson, Mr. Kellahin has asked you to make certain assumptions and on the basis of the assumptions that you have made, if a well is drilled with a south half dedication in the northwest quarter or wherever it's drilled in the southwest quarter, you do not then preclude the well to be drilled in the northwest quarter.

A If one were drilled in the southwest?

Q Right.

A No, a second well drilled in the northwest would be, in my opinion, waste.

Q Okay, what you've talked about is that you would recommend a well to be drilled in the northwest of the southwest and the southwest of the northeast in Section 24.

A That's correct.

Q And that would be ideal if you were to lay them down, in your opinion.

A That would be the only way that I could see to optimize the development of the section and to -- to leave you with a better second location, yes.

What I mean by that, I think that -- that you wouldn't want to drill your second well in the southwest -- or in the southeast quarter.

Q Okay. If a well was drilled in the northwest quarter and a well was drilled in the southwest quarter with laydown proration units, in your opinion how would hydrocarbons be recovered in the east half of Section 24?

A Well, I think, if I got your question correctly, if you drill a well in the southwest quarter and a well in the northwest quarter --

Q Correct.

A -- how you drain -- you would have to drill an additional well over there, because the two wells in the west half would essentially the west 320.

Q Okay.

MR. PADILLA: No further questions, Mr. Examiner.

MR. STOGNER: Thank you, Mr. Padilla.

Mr. Kellahin, do you have any other --

MR. KELLAHIN: No, sir.

MR. STOGNER: -- cross examination?

I have no questions of this witness. You may step down.

Call your next witness, Mr. Padilla.

MR. PADILLA: I'd call Mr. Paradiso.

JOSEPH R. PARADISO,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. PADILLA:

Q Mr. Paradiso, would you please state your full name, where you reside, and by whom you're employed?

A My name is Joseph R. Paradiso. I live in Midland, Texas. I'm employed by Santa Fe Energy as a Senior Reservoir Engineer.

Q Have you previously testified before the Oil Conservation Division and had your credentials accepted

as a petroleum engineer?

A No, sir, I have not.

Q Would you briefly -- would you please briefly summarize your educational background and work experience in the oil and gas industry as a petroleum engineer?

A Okay. I graduated from Texas A & I University in 1970 with a Bachelor of Science degree in petroleum and natural gas engineering.

I went to work after that for Getty Oil Company and I performed duties as a drilling engineer, production and some reservoir engineer for six and a half years in East Texas, West Texas, south Louisiana.

Then I made a job change and went to work for Marathon Oil Company in West Texas and was there for about three years. At that time I was recruited by HNG Oil Company and decided to move over there, and I guess during the boom I kind of decided I'd try to go on my own, and promote some deals, turn some acreage deals. I even drilled and operated a well. Obviously was not real successful, though and have gone back to work.

So I took a job with Superior Oil Company for awhile and then I got a lot better deal and came to work for Santa Fe Energy as a reservoir engineer and have been there for two years.

Q Have you made a study of the Strawn, potential Strawn production from the proposed well that Santa Fe Energy proposes here today?

A Yes, sir.

Q And have you prepared certain exhibits for introduction concerning your testimony here?

A Yes, sir, I have.

MR. PADILLA: We tender Mr. Paradiso as an expert petroleum engineer, Mr. Examiner.

MR. KELLAHIN: No objection.

MR. STOGNER: He is so qualified.

Q Mr. Paradiso, I hand you what we have marked as Exhibit Number Twelve and have you identify that for the examiner.

A Okay. What we have here is P/z curve from the data collected from the Henry No. 1, which is what we hope to find in the Johnson No. 1 Well, and projected it out to give us our ultimate recovery. I feel like this is one of the best methods, if you have enough data, for determining ultimate recovery in a gas well.

And the next --

Q Is that Exhibit Number Thirteen?

A This is Exhibit Thirteen. This is used in connection with the calculations in Exhibit Number Thirteen, where

we calculate -- where I calculate the drainage area from a known ultimate, gross ultimate recovery of gas reserves, and that is 342 acres by this calculation.

Q Mr. Paradiso, assuming that two wells are located in the west half of Section 24, what do your calculations show, assuming laydown proration units?

A If I understand correctly what you said, you would have -- you would have one too many wells there to drain this. The way we have the reservoir mapped we can drain it with one well on the west half.

Q In your opinion would it be --

A In my opinion.

Q -- waste to drill two wells with laydown proration units, one to be located in the northwest quarter and the other in the southwest quarter?

A Yes, that's -- since laydown units do have a tendency to promote, probably promote a northwest and a southwest location, you would have too many straws, as we say, and would not drain -- it would not help the east half at all. You would not drain the east half, and two wells draining what one well can drill on the west -- on the west half.

Q What would the drainage pattern be at the proposed location or at a legal location in the southwest quarter? Would it be a circle or --

A Not exactly. I didn't do any work with that but it would -- depending on how the reservoir really, you know, how good we are with this, you'd have to map it in there just 342 acres --

MR. STOGNER: What are you referring to, Mr. Paradiso? I don't know what you're --

A Oh, I'm sorry. I'm referring to the Isopach, the Isopach map.

Q Exhibit Six.

A Exhibit Six. You would have to -- you would have to map in there 342 acres in a manner consistent with that mapping. It's roughly about a 2000-something feet radius, I believe, but you wouldn't know exactly without knowing the exact -- that's assuming if this was round.

Q Would it be -- it certainly wouldn't have a rectangular type of drainage pattern based upon north and south proration units.

A I certainly wouldn't think so.

Q Mr. Paradiso, have you examined and familiarized yourself with the AFE which we have marked as Exhibit Four?

A Yes, sir, I have.

Q Have you -- how did you familiarize yourself with that?

A Well, I've run the economics on our wells

and so they're of great concern to me when we have a -- we apply risk factors to them, and as to how much the cost of the well is.

Q Is that AFE as shown on Exhibit Four typical of AFE's used by Santa Fe Exploration and using -- in drilling its other wells in the area?

A Yes, it is. There are some changes. In fact, there's a possibility we could -- may drill this well for over $200,000 cheaper by cutting out this 7-5/8ths casing to 9200 feet; however, we have had trouble with one well in the area where we didn't case that off at the Bone Springs, and we lost circulation, and had some kicks, I believe, from the Wolfcamp, and wound up spending as much money on our mud bill.

So that's kind of --

Q Kind of what?

A Well, you know, that's a decision that can go either way (not clearly understood) and so you could spend just as much money without that -- that casing string in there, which some people do take a chance and go without it.

Q Nonetheless, is that a reasonable AFE for a well to be drilled to the Morrow formaiton?

A Yes, sir, it is.

MR. PADILLA: Mr. Examiner,

I'll offer Exhibits Four, Twelve, and Thirteen.

MR. STOGNER: Any objections?

MR. KELLAHIN: No, sir.

MR. STOGNER: Exhibits Four, Twelve and Thirteen are admitted into evidence at this time.

MR. PADILLA: Pass the witness.

MR. STOGNER: Mr. Kellahin, your witness.

MR. KELLAHIN: No questions, Mr. Examiner.

MR. STOGNER: I have no questions of this witness.

Mr. Padilla, is that -- are you through with this witness and your witnesses, Santa Fe's witnesses?

MR. PADILLA: Yes, sir.

MR. STOGNER: Mr. Paradiso, you may step down.

Mr. Kellahin, you may proceed.

MR. KELLAHIN: Yes, sir, thank you.

We call at this time, Mr. Examiner, Doug Robison.

DOUGLASS ROBISON,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Robison, for the record would you please state your name and occupation?

A My name is Doug Robison. I'm a petroleum landman for Exxon.

Q Mr. Robison, have you previously testified before the Oil Conservation Division?

A No, sir, I have not.

MR. KELLAHIN: We tender Mr. Robison as a landman, Mr. Examiner.

Let me ask you your background, Mr. Robison.

Q When and where did you obtain your degrees that would have assisted you in practicing your profession?

A I have a business administration degree in business management and labor relations from Texas Tech.

I have a Doctor of Jurisprudence, or a law degree, from Texas Tech University, 1982.

Q Subsequent to graduation, Mr. Robison,

have you been employed as a petroleum landman?

A Yes, sir. I was hired by Exxon in August of 1982 and have been with them since.

Q Would you describe generally what it is that you do for your company?

A For the past two and a half years I have been in the Pooling/Unitization Group for Exxon, responsible for New Mexico, Arkansas, and Texas, handling primarily joint operations and pooling with other companies, Exxon-operated and other company-operated wells.

Q With regards to Section 24, which is the subject of this hearing, what has been your responsibility concerning your company's interest in this section?

A Upon receipt of the initial proposal from Santa Fe, it was my responsibility to provide our geologist with a summary of our lease ownership, our royalty burdens in the area, and to act as contact between our group and other companies located in the acreage.

Q Is it part of your practice of your profession to negotiate on a voluntary basis agreements among working interest owners for the formation of spacing units such as are the subject of this case?

A Yes, sir, I'm responsible for putting together units that are drilled by Exxon containing working interest participation, and I'm also responsible for nego-

tiating the form of participation when Exxon is acting as a non-operator under another proposal.

Q For your company's acreage in this section, when Santa Fe Energy contacts your company concerning their proposals for this section, is and was that contact made with you?

A Yes, sir, it was.

MR. KELLAHIN: We tender Mr. Robison as an expert petroleum landman, Mr. Stogner.

MR. STOGNER: Are there any objections?

MR. PADILLA: No objection.

MR. STOGNER: Mr. Robison is so qualified.

Q We've had discussions earlier today, Mr. Robison, about Exxon's acreage position in the section.

A Yes, sir.

Q Would you summarize for us what is your company's acreage position in the section?

A Exxon presently has leased the north half of the north half and the southeast quarter of the northeast quarter of Section 24.

Q Approximately when and how were those leases acquired by your company?

A In March of 1985 we leased the northeast

quarter of the northwest quarter.

In November of 1985 we leased the remaining acreage which would be the northwest quarter of the northwest quarter, the north half of the northeast quarter, and the southeast quarter of the northeast quarter.

Q How many various leases does Exxon now hold with regards to its acreage position in the north half of Section 24?

A We hold two separate leases.

Q And who are the respective lessors in each lease?

A One is a Federal lessor; the other is a fee interest.

Q What was the basis of Exxon's acquisition of this acreage position in '85, Mr. Robison?

A Both acquisitions were made upon the recommendation of Barry Reid, a geologist in our Andrews District. He advised us as to acreage that he was interested or the group was interested in leasing, and it was our responsibility to obtain those leases.

Q Has Exxon made a determination how it proposes to develop Section 24?

A Yes, sir.

Q And what is that determination?

A It is our desire to form a north half

unit, developing the acreage we have in the north half (not understood) the acreage held by the working interest owners.

Q Is it your responsibility for Exxon to attempt to formulate on a voluntary basis the working interest ownership in the north half of Section 24?

A Yes, sir, it is.

Q What have you done towards that goal?

A I have contacted Read & Stevens, who have a lease ownership in the northeast quarter, it would be the southwest quarter of the northeast quarter. They have indicated that they are in agreement with a north half unit and have so indicated by correspondence, that they will join with us in the formation of a north half unit.

We have been in negotiations with Spectrum-7, having -- who has acreage in the south half of the northwest quarter, and those negotiations are continuing to date. We are looking either to obtain their participation or farm-in their acreage or purchase their acreage.

Q In terms of making an attempt to consolidate acreage for a spacing unit on a voluntary basis, what is your understanding of the industry practice?

A The way that we do it and the way that we have seen it done when we're involved from other companies, is that normally you propose a well to another company, you provide an AFE, joint operating agreement, any farm-in terms

which you may be proposing.

We count on about a 30-day period or more in which to evaluate the prospect and at that time there is usually negotiation back and forth as to whether or not the companies are going to participate and the form of joint operating agreement.

If they're not going to participate then you have negotiations as to sale or trade.

Q Have you received any contacts or communications from Santa Fe Energy with regards to the formation of a spacing unit in Section 24?

A Yes, sir, I have.

Q Let me show you what is marked as Exhibit Number One, and ask you, sir, to identify Exhibit Number One.

A This is a summary of contacts which I have prepared briefly detailing my contacts with Santa Fe and with the other working interest owners in the section.

Q Without reference particularly to -- to the exhibit, just tell me orally, Mr. Robison, what the form is and what proposal Santa Fe Energy has made to you to solicit Exxon's participation in a west half spacing unit?

A On January 10th, 1986, I met with Patrick Tower, a landman for Santa Fe, who at that time advised us that Santa Fe was proposing the drilling of a well in the

northwest quarter of Section 24, that such would cover the west half portion of the section.

We were not provided an AFE or joint operating agreement at that time.

He also told me at that point that Exxon would be named in a forced pooling hearing which would be scheduled for February 5th, 1986.

Q What, if any, response did you make on behalf of your company to that initial attempt by Santa Fe Energy?

A We, four days later I asked for an AFE and joint operating agreement, which was received on the 20th.

On the 22nd I called Mr. Tower and told him that Exxon was not agreeable to the formation of a west half unit; that we would rather see them drill their own acreage in the south half, leaving us the right to develop our acreage in the north half.

Q What, if anything else has transpired between you and Santa Fe Energy concerning the formulation ona voluntary basis of a spacing unit in the section?

A We have made requests several times that we be allowed the opportunity to meet with Santa Fe in order that they may discuss with us their desire to form a west half unit.

Beyond that there have been no negotiations as to any other possibilities of support or participation in this action.

Q Has the method in which Santa Fe Energy has attempted to obtain your joinder of a spacing unit been one consisten with your experience with regards to the formation of such a unit?

A It is not usual. In fact it's the first time I've been presented with a proposal the same day that I was presented with a forced pooling notice. We have basically been left with no room for negotiation or opportunity for discussion, and it is -- it's an unusual way of doing business.

Q Do you believe, Mr. Robison, that there remains unexplored opportunities to reach a voluntary agreement with regards to how Section 24 will be developed?

A Yes, sir, I do.

Q What is your company's past experience and practice with regards to the utilization of forced pooling to formulate spacing units?

A In my experience in the group we have never used forced pooling and in the experience of my supervisor, who has been there some six or seven years, Exxon has never resorted to forced pooling in order to obtain participation in one of our proposals.

Q How are you able to obtain a voluntary agreement for a spacing unit?

A By negotiation with the parties.

Q Is Exxon opposed -- let me ask you this: What is Exxon's position with regards to Santa Fe Energy's proposal?

A We are opposed to the proposition that Santa Fe gave us on January 10th, which is the proposition we are left with today.

It frustrates our work to develop the north half of the section based upon -- which we acquired leases based upon our geologic work in the area.

Santa Fe, we feel, has an alternative in forming a south half unit and we do not feel that they need to force us into their west half unit.

We would prefer to work on a voluntary basis and our efforts in the area have indicated that we are successful in doing this.

Q Approximately what percentage of the north half of Section 24 have you been able to reach a voluntary agreement with?

A 75 percent.

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

We tender him for cross exam-

ination.

We move the introduction of Exhibit Number One.

MR. STOGNER: Exhibit Number One will be admitted into evidence.

Thank you, Mr. Kellahin. Mr. Padilla, your witness.

CROSS EXAMINATION

BY MR. PADILLA:

Q Mr. Robison, is it your testimony that you have been unable to negotiate any type of deal with Spectrum-7?

A We have not concluded our negotiations. We have not reached a deal (not understood).

Q Assuming that you reach a deal with Spectrum-7, are you not entitled to 50 percent of a west half proration unit?

A That would depend on the sort of deal that we reach with Spectrum-7. If we were to purchase their acreage, then we would have a 50 percent participation in a west half unit.

Q That wouldn't entirely block your participation as to your acreage in the north half of the northwest quarter, would it?

A No, sir, it would not.

Q Would you agree that forced pooling is a remedy where voluntary joinder cannot be obtained?

A No, sir, I would not.

Q It's not your practice but it is a remedy, isn't it?

A It is a remedy, yes.

Q Isn't it a fact, Mr. Robison, that Exxon simply isn't interested in a west half proration unit?

A Not under the present Santa Fe proposal.

Q Well, you'd be participating to the -- on the basis of your interest in the west half of Section 24.

A That's correct. We would have a 25 percent participation; however, we prefer to, as we indicated to Santa Fe, to operate the north half or develop the north half unit.

Q What -- what have you proposed to Read & Stevens? In other words, where would you propose to drill your well?

A We have not made a specific well location proposal.

Q What proposal have you made to them?

A We have told them that Exxon will develop the northern acreage and protect their leases.

They have agreed to that and as a basis

of their -- first, their opposition to the Santa Fe proposal of a west half unit, which they've indicated to us, as well as their participation or their agreement to the formation of a north half unit.

Q Have you spoken with your geologist as to where you would locate a well in the north half of Section 24?

A Yes, sir.

Q Where would that be?

A In the northwest quarter of the section.

Q When did you start negotiating with Spectrum-7?

A Oh, the first contract -- contact with Spectrum-7 was January 29th.

Q It was after January 10th, right?

A Yes, sir, 1986.

Q You learned on January 10th that Santa Fe Energy was negotiating with Spectrum-7 over their acreage on the west half of Section 24, did you not?

A No, sir, I didn't. You could deduce that but I was not informed.

Q When did you learn that Santa Fe Energy was negotiating with Spectrum-7?

A I can't give you the specific date. The first indication I had was after we had been negotiating

with Spectrum and they - Mike Childers, landman with Spectrum, indicated that Santa Fe had made to them what he termed an entirely unsuccessful farmout proposal.

That was my first indication that Santa Fe and Spectrum were negotiating.

MR. PADILLA: I believe that's all the questions I have, Mr. Examiner.

MR. STOGNER: Thank you, Mr. Padilla.

Mr. Kellahin, redirect?

MR. KELLAHIN: No, sir, thank you.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Robison, how many -- what's the percentage that Exxon controls in the north half?

A 62-1/2 percent, I believe.

Q When did Exxon obtain the KGS sales lands over there in the northeast quarter?

A In November of 1985.

Q Does Exxon have an application to drill with either the Feds, or the U. S. BLM, or the OCD office in Artesia to develop the north half?

A No, sir, we do not.

Q Has Exxon obtained an agreement with Read & Stevens and Spectrum for their acreage in the north half to develop the north half?

A We have with Read & Stevens. We are continuing negotiations with Spectrum-7.

Q And when did the Read & Stevens negotiations begin? I'm somewhat confused.

A Read & Stevens?

Q Yes.

A We contacted Read & Stevens on January the 27th. Those negotiations were basically completed on February the 4th, when we received a letter from them indicating that they would join with Exxon in forming a unit covering the north half of the section; also at which time they indicated they would join with Exxon in the opposition of the Santa Fe proposal.

Our negotiations with Spectrum-7 began on January 29th, 1986, with a proposal/counter proposal being offered back and forth, at least once weekly, and they continued up till this morning, at which time we are still negotiating.

Q In your opinion what does Santa Fe have to gain in obtaining a west half proration unit?

A From a land point of view I couldn't see any gain.

MR. STOGNER: I have no further questions of this witness.

Are there any other questions of Mr. Robison?

MR. KELLAHIN: No, sir.

MR. STOGNER: If not, he may be excused.

Mr. Kellahin?

MR. KELLAHIN: Call at this time Mr. Jordan.

JOHNNY W. JORDAN,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A My name is Johnny W. Jordan. I'm a reservoir engineer for Exxon.

Q Mr. Jordan, have you previously testified before the Division?

A Yes, I have.

Q What is it that you do for your company

as a reservoir engineer that would be of importance for consideration of what the Division does with Section 24?

A I evaluated all drill well potential we have in the South Carlsbad area, as well as other areas.

I tried to -- I attempted to determine the most efficient and equitable way to produce Section 24, is what I've done.

Q How many years experience have you had as a reservoir engineer making those type of studies and evaluations?

A Two and a half years.

Q With regards to this particular acreage, have you made a study of how, first of all, to analyze the reserves underlying Section 24, and then have you reached some conclusions about how to allocate those reserves among the owners?

A Yes, I have made a study and the study I have done was to determine which proration unit orientation would most efficiently and equitably produce the reserves without waste of hydrocarbons in the Strawn Pool.

Q Okay.

MR. KELLAHIN: Let me tender Mr. Jordan as an expert reservoir engineer at this time.

MR. STOGNER: Any objections?

MR. PADILLA: No.

MR. STOGNER: Mr. Jordan is so qualified.

Q Would you describe for us, Mr. Jordan, what type of study that you undertook for your company with regards to Section 24 and the Strawn potential?

A Like I said before, I've done a study to determine which orientation would most efficiently and equitably drain the reservoir.

I needed several tools to do this type of evaluation and I needed a net porosity Isopach map prepared from a geologist to do this, and I needed, also needed reservoir data, acquired from comparable wells in the area.

Q Is this a type of study that you have conducted that is typical of engineering calculations and studies in evaluating prospects such as this?

A Yes, it is.

Q Have you been able to reach any conclusions based upon your study?

A Yes, I have.

Q And what conclusions have you reached, Mr. Jordan?

A My conclusions are laydown proration units would distribute the reserves more equitably to the owners of the section.

Stand-up proration units would contribute

to Santa Fe more than their fair share of reserves.

Exxon, Spectrum-7, and Read and Stevens correlative rights would be violated by stand-up proration units.

Q Let me direct your attention to Exhibit Number Two, which is the Isopach. You made reference to an Isopach, Mr. Jordan, that was prepared by Exxon's geologic staff, that you utilized as the data from which you made a study as an engineer of what to do with the orientation of the proration unit.

I've shown you what is marked as Exhibit Number Two. Is this a true and accurate copy of the Isopach that you utilized?

A Yes, I was furnished this net pay Isopach for the Strawn formation in this section, which was prepared by Barry Reid, an Exxon geologist.

MR. KELLAHIN: Mr. Examiner, Mr. Reid is my next witness after Mr. Jordan. If you'll grant me permission, I'll have Mr. Reid authenticate the preparation of this exhibit; at this time, however, I'd seek permission to have Mr. Jordan utilize this in order to describe what it is that he studied and what conclusions he made.

MR. STOGNER: Do you have any objections?

MR. PADILLA: None.

MR. STOGNER: Please continue, Mr. Kellahin.

Q Mr. Jordan, would you explain for us, using the Isopach, what it is that you did as a reservoir engineer to make a study of how to orient the spacing units?

A I used this net pay Isopach map to calculate the reservoir volumes under each lease or each quarter section, and I used a planimeter, which is a tool to measure area under -- on a flat plane, and using those contours, I calculated a reservoir volume under each quarter section of Section 24.

Q Have you prepared an exhibit, Mr. Jordan, that represents on an exhibit how you have distributed the reservoir within the section?

A Yes, I have.

Q I show you what is marked as Exhibit Number Three, Mr. Jordan, and ask you to identify that exhibit?

A Okay. This exhibit is a plat of Section 24 with each leaseowner being shown in the their appropriate location. Shown under each leasowner is the amount of reservoir volume calculated under their lease.

I broke this section into quarter sections to determine the reservoir volumes for each one of these quarter sections, like I said before, with a plani-

meter.

Q All right, let me stop you for a moment. If we take the net pay Isopach and then we take Exhibit Number Three, and if we look, for example, at the southwest quarter of Section 24, as shown on the Isopach, in terms of that 160 acres, what is it that you've done and shown on the reserve volume distribution?

A What I have done is calculate the reservoir volume of that quarter section by planimetering each contour. Once I have done that I've totaled up the total reservoir volume for each one of those contours and came up with a total reservoir volume for that quarter section, which is located in the southwest corner of the section plat, which would be 3627 acre feet.

Q So within that quarter section, and subject to the varous thinning and thickening of the Isopach, within that quarter section you have found for the southwest quarter that there are 3627 acre feet of Strawn reserves underlying that quarter.

A Yes, I found that much reservoir volume.

Q And have you displayed for us a similar reservoir volume number for each of the other three quarter section?

A Yes, I have, and they're listed in each such corner, each corner of the plat.

Q Having made those calculations, now, Mr. Jordan, what then did you attempt to do?

A I attempted to determine the best way to orient proration units and I have shown that Santa Fe has 5570 acre feet of reservoir volume under their lease.

After this was done I was ready to determine the effect of a unit proration -- proration unit orientation.

Below the plat is a -- of Section 24 is a table showing a comparison of the reservoir volumes that would be assigned to each owner with a laydown proration unit and a stand-up proration unit. These reservoir volumes are based on the appropriate interest and the different unit orientation.

I can see by these comparisons that Santa Fe -- as you can see by these comparisons, that Santa Fe woud increase their reservoir volumes by 2640 acre feet, which would be a 47 percent increase.

Exxon would lose 1860 acre feet, or 27 percent.

Spectrum-7, Read & Stevens, would also lose reservoir volume, which is noted on the right side of that table.

I conclude that the south half/north half proration unit orientation would more equitably distribute

the reserves to each owner.

Stand-up proration units would have given Santa Fe more than their fair share of hydrocarbons. This is because it distributes the poorer portion of the reservoir to the owners of the better reservoir.

Exxon's, Spectrum-7's, and Read & Stevens' correlative rights would be violated with a stand-up proration unit.

Q Let me direct your attention now to Exhibit Number Four.

All right, sir, would you identify Exhibit Number Four for us?

A Yes, I would. This exhibit shows how Santa Fe's and Exxon's portion of the reservoir volumes were calculated on the exhibit before this. These calculations are based on each company's appropriate interest with the different proration units, unit orientations.

These calculations were done for each company and shown on the attached table.

Q Let's forget for a moment, Mr. Jordan, who owns what where within the section and if you were simply given the Isopach and all you were told is that as you plotted it on Exhibit Number Three, there was a change in ownership but you don't know what companies they are, when we look at Section 24, can you tell us which of the four

quarter sections has the greatest value of reserve volume underlying it?

A Yes, I can tell from my reservoir volume calculations that the northwest quarter would have the greatest amount of reservoir volume.

Q What then is the next quarter section that has the next greatest reservoir volume underlying it?

A The northeast quarter.

Q And then what is the third quarter section with the next greatest reservoir volume?

A The southwest quarter.

Q And then the last?

A The southeast quarter.

Q All right. In conclusion, then, Mr. Jordan, would you describe for us what it is that you have concluded from making a study as to how to orient the spacing units?

A Based on what we've just said, I would recommend that the northeast quarter be prorated with the northwest quarter because the best reservoir volumes lie beneath these two quarter sections.

The owners of these quarter sections should be entitled to their just and equitable share of the best well.

Also based on my study, there would be a

drillable location in the southwest quarter section.

I conclude that laydown proration units would distribute the reservoir volume more equitably to the owners of the section.

Q Were Exhibits Two, Three, and Four -- I'm sorry, Exhibit Two is the Isopach -- were Exhibits Three and Four prepared by you?

A Yes, they were.

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

MR. STOGNER: Thank you, Mr. Kellahin.

Mr. Padilla, your witness.

CROSS EXAMINATION

BY MR. PADILLA:

Q Mr. Jordan, what wells are located in the section to the north of Section 24? I believe that would be Section 13.

A Section 13? None to my knowledge are completed in the Strawn.

Q Well, Section 18.

A Yes, there is one well in Section 18 in the northwest of the southeast.

Q Is that a dry hole?

A It was not completed in the Strawn. I'm not sure if it's a Morrow completion and hasn't produced yet. I think, based on our interpretation, it is not a productive well.

Q Did you make a study of that well in preparaton of this hearing?

A I looked at -- I didn't look at this well. The geologist looked at it to develop his maps. I looked strictly at the geologist's maps for my interpretation.

Q If the geologist is wrong, so are you. Is that basically what you are saying?

A For that one well. I did not look at that specific well, but I looked at the other wells in the area, the productive wells.

Q In other words, let me see if I -- based on Exhibit Two, you've got tunnel vision as far as any independent study that you made regarding Exhibit Two, is that correct?

A I don't know if you could call it tunnel vision, but I was in complete agreement with our geologist's interpretation, so I used it.

Q You made an independent study to justify the contents of Exhibit Two?

A Not a independent study but I worked with

him on his interpretation of this area.

Q Isn't -- doesn't really Exhibit Two make Section 13 highly attractive?

A Yes, it does.

Q There aren't any -- there's no well control up in Section 13 to tell us that, is there?

A No, but there's no well control telling it goes the other way in the way they have it mapped.

It's strictly interpretative. It's based on our geologist's interpretation of the trends of the area.

Q There is well control in Section 26 and Section 15, isn't there, to the southeast, the southwest?

A 26?

Q Yes, sir.

A Yes, there is, and that goes on the regional trend that our geologist used in his interpretation of the area.

Q Given the fact that there's no well control up in Section 13, or for the way this map is drawn, it's nothing more than an educated guess, isn't it?

A I can't answer that. That's something you'll have to ask the geologist.

Q Well, you worked along with him. I'm asking you. You've indicated you had some knowledge about this area.

A I would -- I would not call it an educated guess because we were playing trends, just like your geologist said he was doing. He was following the railroad, as he put it.

Q He was following the railroad from the southwest to the northeast, was he not?

A That's correct. Isn't this southwest to northeast?

Q Well, I'm not going to answer your question.

Did you do that Isopach of the Strawn No. 1?

A Our geologist will explain to you how he interprets the Strawn, how he breaks it up into different formations.

Q Okay.

MR. PADILLA: I don't have any further questions at this time.

MR. STOGNER: Thank you, Mr. Padilla.

Mr. Kellahin, any more redirect?

MR. KELLAHIN: No, sir.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Jordan, what's the orange dot in Exhibit Two?

A That's the location we feel is most favorable at this time.

Q Is that a drillable location?

A Yes, it is.

Q Where is the river?

A That's something our Civil Engineering Department will have to look into. That's something I do not do.

Q In your Exhibit Number Three, I use your calculations of acre feet in the northwest quarter and your acre feet in the southwest quarter, and I come up with 9890 acre feet, is that correct?

A The southwest -- yes, that's correct.

Q All right, and then I added the northeast quarter and southeast quarter and come up with 6,529 acre feet.

A That's correct.

Q All right. Now then, if we go the other way and add the northwest and the northeast, I come up with 10,850 feet -- acre feet, and then the south half being 5,570 acre feet. Are we in agreement on that so far, the

way I added those things up?

A Yes, ballpark, I haven't got those numbers exactly down.

Q Okay.

A I know the 5570 is correct.

Q All righty. Would the distribution of the acre feet be more equal if you had two stand-ups than two laydowns, or am I totally off (not understood).

A You would be giving, like the people, or the landowners in the northwest quarter and the northeast quarter, you would be giving them worst reservoir volumes or poorer reservoir volumes with, you know, if you combine those two, whereas if you laid them down, the more equitable share -- they would gain more equitable shares.

I believe the people in the north half is entitled to what we feel like is the best well because they have the best reservoir volumes under their leases.

Q Explain to me again what, in your opinion, Santa Fe has to gain by having two lay -- stand-ups.

A If they stand up the proration units, they will get -- they will be putting their acreage with better reservoir acreage which would entitle them to drill a better well; therefore increasing their net reserves, whereby decreasing everybody else's net reserves.

Q Only in the Strawn, right?

A This is only in the Strawn.

Q Did you do any calculations in the Morrow?

A No, I did not. Our geologist will talk about the Morrow locations.

MR. STOGNER: I have no questions of this witness.

Any other questions of Mr. Jordan?

MR. PADILLA: Yes.

MR. STOGNER: Mr. Padilla.

RECROSS EXAMINATION

BY MR. PADILLA:

Q Mr. Jordan, how would your location in the northwest quarter adequately drain the northeast quarter?

A It would drain it, you know, it would drain it as well -- better than a well in the west half, the well that you all have proposed. It would drain that considerably better and, you know, if you put the two stand-ups like you all proposed and according to our map you put the wells there, how would it drill the north have of the section? It would not drill -- it would not drain the north

half of the section because the best reservoir is up in the north half. We have all, I think we're all in agreement that these are very risky locations. You want to drill into the best reservoir rock you can and the best reservoir rock is in the north -- north half.

Q My question was would your location in the northwest quarter drain -- adequately drain the northeast quarter?

A If your question was that, yes, it would.

Q How many wells does Exxon operate in this area?

A What are you terming as the area? The south -- the entire Carlsbad area?

Q Well, no, let me ask you specifically about this township, 22 South, 27 East.

A None that I know of.

MR. PADILLA: No further questions, Mr. Examiner.

MR. STOGNER: Thank you, Mr. Padilla.

Mr. Kellahin, any redirect?

MR. KELLAHIN: Yes, sir, just a few questions, Mr. --

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Jordan, I want to see if I'm clear on how you've analyzed Exhibit Number Two in terms of the distribution of the reservoir.

If we have a north half spacing unit, will that orientation credit to those owners their fair share of the reservoir?

A Yes, it will.

Q In words that fully develop the north half, if you have a north half spacing unit, can you do that with one well?

A Yes, you can.

Q If we stand-up those spacing units, what are we doing to the reserves attributable to the people in the north half?

A We are diluting it.

Q In order to properly develop the reservoir in the north half, if the proration units or spacing units are stand-up units, how many wells are going to be necessary in order to develop the north half reserves?

A Would you say that question again? I'm sorry.

Q Yes, sir. Looking at the reserves in the north half, for the northwest and the northeast quarters,

you've told me that if it's a north half spacing unit one well can adequately develop for those owners those reserves.

If the spacing unit, however, is arbitrarily oriented stand-up, how many wells are you going to have to drill in order to properly develop the north half?

A You would have to drill two wells on this section, and I do not feel you would properly drain the north half with two wells.

Q Apart from the location of wells, Mr. Jordan, you have rated for us from one to four the value that each of the quarter sections has in terms of reservoir volume.

The best is the northwest; then the northeast; then the southwest and the southeast. Right?

A That's correct.

Q If the units are stood up, what does that do with the southeast and the northeast?

A It puts the second best quarter section with the worst quarter section.

Q And you have calculated the change in reservoir volume to credit Santa Fe Energy with a 47 percent increase in reservoir volume that they would not otherwise get.

A That's correct.

Q At the expense of Exxon, which loses 27

percent of reservoir volume.

A That's correct.

Q And that only results because the spacing units are stood up rather than laid down.

A That's correct.

Q All right. Now, which orientation is the one that closest -- most closely approximates the reservoir?

A The north half, south half laydown proration units.

MR. KELLAHIN: I have nothing further.

MR. PADILLA: No further questions.

MR. STOGNER: Any other questions?

No questions of Mr. Jordan. He may step down.

Mr. Kellahin?

MR. KELLAHIN: Mr. Reid, please.

J. BARRY REID,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q All right, sir. Mr. Reid, for the record would you please state your name and occupation?

A My name is Barry Reid and I'm a petroleum geologist for Exxon.

Q Mr. Reid, have you previously testified before the Division?

A No, I have not.

Q Would you describe for Mr. Stogner your educational background, when and where you obtained your degree in geology?

A I obtained a BA degree with a major in geology in 1979 from West Georgia College.

I obtained -- received a Master's degree in geology from Memphis State University in 1981.

Q Subsequent to obtaining your last degree in '81, Mr. Reid, would you summarize for us what has been your professional experience as a petroleum geologist?

A In June of '81 I was hired by Exxon and I've worked for them for almost four and a half years, a little over.

Q During that period of time, Mr. Reid, what have been your responsibilities as a geologist?

A My major responsibilities are prospect

evaluation and lease development.

Q Have you made a geologic evaluation of the Strawn and the Morrow formations as they affect Section 24?

A Yes, I have.

Q During your work experience with Exxon as an exploration geologist, Mr. Reid, would you describe for us how many prospects that you have developed for your company?

A Just in the last year alone I have recommended and received approval for ten Morrow prospects. Six have been drilled, and in previous years to that, several other wells.

Q Are you familiar with the Strawn and the Morrow geology underlying this section?

A Yes, I am.

MR. KELLAHIN: We tender Mr. Reid as an expert exploration geologist.

MR. STOGNER: Any objection?

MR. PADILLA: No objections.

MR. STOGNER: Mr. Reid is so qualified.

Q Mr. Reid, I direct your attention to Exxon Exhibit Number Five and ask you to identify that for us.

A Exhibit Number Five is a zone of comple-

tion map.

Q Have you made a study of the facts, geologic facts, available to you with regards to the well depicted on that exhibit?

A Yes, I have.

Q Is -- is your interpretation of the Strawn and the Morrow geology, based in part on a study of those wells

A Yes, it is.

Q When we look in the north half of Section 24, Mr. Reid, there is an orange dot in the northeast of the northwest of that section. What is that?

A The orange dot represents the most optimum location for a drilled well from our current geological interpretation.

Q Let's use Exhibit Number Five as a reference and let me direct your attention to the next exhibit, which we'll mark as Number Six. It's the Morrow net pay, net porosity map?

All right, we're on Number Six now. Would you identify that exhibit for us?

A Exhibit Number Six is a Morrow net porosity map of Interval No. 3.

Q Is this Morrow net porosity map a map that you prepared?

A Yes, it is.

Q Would you describe generally what it is that you have done to prepare this map?

A I have looked at the logs in the area. I have constructed a series of cross sections in the area that includes all the deep wells. I have correlated the Morrow intervals. I have split out these intervals based on local sea level changes.

Interval No. 3 is the one the No. 1 (not understood) is completed in and that's why I'm presenting this map.

Q What conclusions do you draw, Mr. Reid, with regards to the potential for Morrow within Section 24?

A Within Section 24 the acreage within the 15-foot contour line is the most prospective.

Q Do you agree with Mr. Anderson that the major objective in this area would be a Strawn test?

A Yes, I do.

Q So a Morrow would represent a secondary objective?

A Yes, it would.

Q Have you made a similar study and prepared a net porosity map on the Strawn interval?

A Yes, I have.

Q All right, sir. I believe that's already

been marked as Exhibit Number Two. Let me show you at this time Exhibit Number Two. This is the exhibit that Mr. Jordan testified about. Was that -- is that the Isopach that you prepared?

A Yes, it is.

Q And did you furnish it to Mr. Jordan?

A Yes, I did.

Q Why don't you describe for us the significant factors that you have utilized to construct the map and then I'm going to ask you what conclusions you've reached.

So first of all, describe how you prepared it and what information you think is critical to your evaluation of the Strawn?

A I have looked at every well in the area and correlated the tops, major formation tops, top of the Strawn and top of the Atoka, within the whole area.

I've also split the Morrow or the Strawn out into several different intervals.

The production from the Strawn in these wells on this map are from my Interval No. 2, and I think that would include their First Strawn and Second Strawn. I have tried to look at the best productive wells, picked porosity cutoffs, and constructed my map based on that.

Q Based upon your studies, Mr. Reid, what

conclusions do you draw from your study of the Strawn formation?

A Within Section 24 a location in the northeast quarter of the northwest quarter has the greatest potential. The northwest quarter has the greatest potential of any of the four quarter sections.

The location proposed by Santa Fe was the southwest of the northwest quarter, is a good indication of the relative value of the northwest quarter versus the southwest quarter.

There are two exceptional Strawn completions on the map. The No. 1 Weems in the north half of Section 27 had an initial potential CAOF of approximately 37-million cubic feet of gas a day.

Q That's the one you credited on your Isopach with, is that 41 net feet?

A Yes, sir, it is.

Q All right, sir.

A And also the Henry No. 1, which is in the north half of Section 26.

Q And you credited that well with 54 net feet?

A That's correct.

Q All right, sir.

A So moving to Section 24, the only loca-

tion within the 40-foot contour line is the northeast of the northwest quarter, which is an orthodox location for a lay-down proration unit.

Q Based upon your studies, Mr. Reid, do you see or are you persuaded that there is an orientation to the thickest portion of the Strawn reservoir as it's being discovered in this area? What is the orientation, if any, that you project for Strawn wells?

A Are you asking me the trend of the Strawn minerals?

Q Yeah, what's the trend?

A Northeast/southwest.

Q Okay. Mr. Anderson has shown us a trend through Section 24 that shifts from a northeast/southwest trend to an east/west trend generally. Did you see that exhibit?

A Yes, I did.

Q Are you in agreement with him about that shift in the trend?

A No, I am not.

Q What persuades you, what information persuades you, Mr. Reid, as a geologist, that the continuation of that northeast/southwest orientation is the one that is more probable to occur?

A I think that we are looking at shallow,

marine ramp, with carbonate accumulations on this ramp right at, let's say, the middle of Section 25 or somewhere along northeast/southwest, there's a change in the slope of this ramp.

The wells southeast of this changing slope of this ramp portray particular log character than the wells behind this changing slope.

The well in Section 18 shows that, from the log character, that it is southeast of this changing slope. There are no carbonate mound developments southeast of this changing slope or if there are, they're minor and probably nonproductive.

Q In analyzing the net porosity Isopach, Mr. Reid, do you have an opinion as a geologist whether -- if Santa Fe has a drillable location if the spacing unit is oriented north half/south half?

A I think they have a drillable location, yes.

Q And where would that be?

A I would probably put it in the northeast of the southwest; northwest of the southwest, I'm sorry.

Q To what significance, if any, do you attribute structure, the importance of structure, with regards to the location of wells in the section?

A The No. 1 Dunn, located in the northwest,

Section 25, appeared to have potential commercial development, and any well north of that location would be up dip structurally.

Q As a geologist examining this area, would you compromise or sacrifice net thickness of your zone for a gain in structure?

A Only if the wells down dip were exhibiting large water production would I may consider such a move.

Q Do these wells indicate or represent an indication of water encroachment or the kind of water problem that would cause you to reach the conclusion that structure ought to have preference over thickness?

A The information that I have does not indicate that you would want to move based on structure.

Q What is the relative quality of the wells in relation to their net thickness within the Strawn producers that you've examined?

A There seems to be large difference in the thickness of the pay and how good the production is in the well.

Q What is the relationship between the thickness and the quality of the well?

A The thicker the pay, the better the well.

Q When we look to the question of the orientation of the spacing unit, Mr. Reid, what is your

opinion as a geologist as to what orientation would more closely approximate the thickest portion the reservoir within Section 24?

A Laydown proration units.

Q Let me ask you, sir, to go now to another exhibit. I'd like you to show us your cross section on the Strawn so that we can see your interpretation of how certain wells tie together in the Strawn. Can you do that?

So the examiner has a clear understanding, Mr. Reid, of the information that you utilized in the preparation of your net porosity Isopach for the Strawn, I'd like you to take that exhibit and demonstrate for us on the cross section, Exhibit Number Seven, exactly what interval you're depicting on the Isopach.

A If I could direct your attention to the index map, you can see that this is an east/west cross section going from the Santa Fe No. 2 Henry in the south half of Section 22, to the No. 1 Henry in the north half of Section 26, across to the No. 1 Dunn in the north half of Section 25.

So from these three wells on the cross section -- the vertical scale is one inch equals 50 feet; there is no horizontal scale. These formation tops that I have indicated on the cross section have been correlated from an NMOCD cross section. Within the Morrow I have

delineated a zone called the Morrow Interval No. 3. The datum for this cross section is just below that, the bottom of Morrow Interval 3, and that is a very good marker in the area and is generally used in the industry for structure maps and whatnot. That is a good point of reference.

You can see moving up in the section on all the logs, up to the bottom of Interval No. 3, that it's picked right on a very correlatable shale peak and the definition of the top of the Morrow Interval 3 is at the base of a series of very high gamma reading -- gamma ray reading shales. These are very distinctive and correlate throughout the South Carlsbad Area, and I've highlighted the perforations in the No. 1 Dunn.

Q In selecting wells to put on a stratigraphic cross section, such as this, Mr. Reid, and with reference to our specific area, why have you selected these three wells?

A The No. 1 Henry, of course, is because it's had the highest initial flow rate, appeared to be the best well in the area.

The No. 2 Henry, because it is not quite as good and it is in an up-dip or shelfward position stratigraphically.

And the No. 1 Dunn because it continues that cross section perpendicularly across the Strawn mound

and also because it is completed in the Morrow.

Q Having bisected the Strawn perpendicular to the axis of this reservoir, what conclusions do you draw?

A In this particular bisection on this cross section, the thickest well has the most porosity development, the greatest feet of porosity development.

Q When you pick the zones to show on the Isopach, what have you picked off the cross section?

A I've picked the productive interval is what I have tried to pick.

Q And how is that shaded on the cross section?

A It is a -- I have picked a gamma ray cutoff of 50 API units. I have used the density porosity, these are all porosity logs, FDC-CNL. I have used density porosity for the porosity maps and a 6 percent cutoff.

Q Have you colored in on the Division exhibit those portions on the log in excess of 6 percent porosity?

A I have colored in all of the density porosity that is showing gas effect that is greater than the neutron log response.

Q And what color did you use to demonstrate that?

A Red.

Q And is that the interval, then, you have mapped when you show the net porosity Isopach?

A Yes, it is.

Q All right. Based upon your study, Mr. Reid, what conclusions can you draw about the trend or the orientation of the reservoir as it passes through Section 24?

A That the trend is northeast/southwest.

Q Was Exhibit Two, Five, Six, and Seven prepared by you? That represents your work product?

A Yes, they were.

Q In your opinion, Mr. Reid, will the denial of Santa Fe Energy's application to force pool Exxon be one that would protect Exxon's correlative rights, as well as the correlative rights of Spectrum-7 and Read & Stevens?

A Could you repeat that?

Q Yes, sir. I want to ask you whether or not, if the Commission denies the forced pooling application for a west half orientation, whether that denial would constitute a violation of someone's correlative rights, or in the converse, whether or not the correlative rights of the owners in the north half of the section would be protected?

A If the west half unit is denied --

Q Yes, sir.

A -- correlative rights, in my opinion, would not be violated.

Q If on the converse the application for a west half unit is granted, what, in your opinion, happens to the correlative rights?

A They appear to be violated.

Q All right, what causes you to say that they would be violated? What is the reason?

A The acreage in the south half with less porosity development, would be attributed to a well in the north half with greater porosity development, thereby producing the reserves from the north half only.

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

We'd move the introduction of his Exhibits Two, Five, Six, Seven, and Eight -- Seven, no Eight, strike that.

MR. STOGNER: Any objection?

MR. PADILLA: No objection.

MR. STOGNER: Exhibits Two, Five, Six, and Seven will be admitted into evidence.

Mr. Padilla, your witness.

CROSS EXAMINATION

BY MR. PADILLA:

Q Mr. Reid, your stratigraphic cross section, Exhibit Number Seven, clearly shows that the zones underlying the Henry No. 2, the Henry No. 1, and the No. 1, are found underneath and in the wellbores of those wells, isn't that true?

A You're saying that the interval within each of the different wells are the same? Is that what you're asking me?

Q Well, if the intervals are found within the wellbores of those three wells, the intervals that you talked about in discussing your cross section.

A I'm saying that what I'm calling Interval No. 2 is found in these three wellbores.

Q And that's all your cross section shows, isn't that correct?

A I think there's a lot more information in this cross section.

Q Did you include, for example, -- wouldn't your cross section have more relevance if you had included that dry hole, that well in Section 18?

A I have a cross section that has that well in it. I have a cross section that has every well in it and I have looked at every well. It was just infeasible (sic) to

bring all of that with me.

Q If you're trying to demonstrate something for us to justify your location in the northwest quarter, it would seem to me that it would be logical to include in your cross section the intervals as shown in your cross section that are also included in the well in Section 18, for example.

A The well -- when I was constructing a cross section network, I tried to keep some of these cross sections depth oriented and other cross sections strike oriented.

If I had included the well in Section 18 in this cross section, we would have been getting both components and the view through the mound would have been distorted.

Now I possibly could have included another cross section farther up, you know, along strike, to get a dip, which would have more accurately reflected the mound development, I think.

Q Well, then, isn't your northwest location in the northeast quarter of the northwest quarter somewhat distorted by virtue of leaping too far?

A Would you define that, please, leaping too far?

Q Well, the well -- the known well control

on a north -- southwest/northeast trend is in Section 23, and wouldn't it be more conservative and prudent to locate a well as proposed by Santa Fe or another legal location in the southwest quarter on a stand-up west half proration unit?

A Well, having acreage down there to propose a well.

Q Well, you're testifying as to conservation of oil and gas. We're not talking about land ownership. We're talking about conservation of oil and gas, irrespective of ownership.

Aren't you, in fact, leaping too far to the northeast of the northwest quarter from the no well control in Section 23?

A I think that if you have a viable location based on accurate geological concept, jumping out 1013-20 feet extra is not in my opinion leaping out.

Q Even for the Morrow formation.

A No, sir, I don't think so. With accurate geologic interpretation, the Morrow is there.

Q If I look at your Exhibit Number Five and I look at the blue wells, and I try to draw -- lay a straight line between the blue wells here, any way I do that, your red dot is to the north of that straight line.

Wouldn't that indicate that your drawing

in Exhibit Number Two is inaccurate?

A Oh, not at all, sir.

Q That's just your interpretation, isn't it?

A No, sir.

Q Well, what do you base Exhibit Two, the way you have drawn Exhibit Two?

A Comparing the wells that are colored blue on Exhibit Five to the Exhibit Number Two porosity map, we are not looking at on Exhibit Five with the wells colored blue, we are not looking at the productive limits of the reservoir. We're looking at well spots which your geologist has told me hit something it wasn't even looking for. We're not looking at -- it's not an accurate comparison.

Q Okay, I'm looking at the productive wells we already know. We already know that the Henry No. 1 is there.

A That's right.

Q And is a very good well. It wasn't expected to be there but it is known well control now, isn't that correct?

A Yes, it is.

Q So we draw a line between the blue wells, somewhere in the middle there, and it seems to me that anyway you look at it a straight line is going to be to the south of -- of your red dot, isn't that correct?

A A straight line through the wells colored blue on Exhibit Five is oriented the way you described, almost east/west, through these blue lines, which -- I don't know what it shows you.

MR. PADILLA: No further questions, Mr. Examiner.

MR. STOGNER: Thank you, Mr. Padilla.

Mr. Kellahin?

MR. KELLAHIN: I have nothing else.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Reid, I still keep wanting to come back to Number Two for some reason.

Over there in the zero input 20-foot lines you don't close those up. How come?

A Where are your referring to?

Q In Exhibit Number Two.

A The zero and the ten foot lines, coming all the way around?

Q Yeah.

A I think that it continues to the northeast.

Q How come you didn't show that?

A The -- some of, you know, the more interpretation I show, it's proprietary information, and I want to show as little as possible.

I have the --

MR. STOGNER: Any more questions?

Is there anything further, Mr. Kellahin?

MR. KELLAHIN: Yes, sir.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Let's examine Mr. Stogner's last question for you, Mr. Reid.

If we look into Sections 13 aznd 18 as we move to the north and east, is it not true that the last point for which we have current available well data is the well in Section 18 that had zero feet?

A That is the last well in the northeast that has a well data value on this map. Yes, sir.

Q Does it affect your interpretation with regards to Section 24 whether or not those contour lines are closed or open insofar as the reservoir applied to this section?

A It does not affect it.

Q Would it change your opinion if you had simply closed those contour lines through Sections 13 and 18, 7 and 12?

A It would not have changed anything in Section 24.

Q All right, sir.

MR. STOGNER: Mr. Padilla?

MR. PADILLA: I don't have any further questions, Mr. Examiner.

MR. STOGNER: Mr. Reid, have you proposed Exxon drill a well based on these interpretations today?

A I have not made a formal recommendation --

MR. STOGNER: Thank you.

A -- to management yet.

MR. STOGNER: Are there any other questions of this witness?

MR. KELLAHIN: No, sir.

MR. STOGNER: If not, he may be excused.

Mr. Kellahin, do you have anything further?

MR. KELLAHIN: I have nothing

further in terms of a direct case. We'll make a closing argument.

MR. PADILLA: Nothing further.

MR. STOGNER: I agree. We're all ready for closing arguments.

Mr. Kellahin, you may go first.

Mr. Padilla, I'm going to let you follow up.

MR. KELLAHIN: I'll try to be very brief, Mr. Stogner.

I think our position is that Santa Fe Energy's application represents to us what we think is an impermissible use of the police power of the State to force pool us where forced pooling is not required.

There is no need for forced pooling in this case because we can see that Santa Fe Energy has the south half of the Section, which they can dedicate to their well and there's no need to force pool us.

We believe that the only reason Santa Fe Energy wants to orient the unit as a west half unit is as Mr. Jordan has testified and as Mr. Reid has confirmed. We believe that the north half of this section has the greatest reserve potential in the Strawn.

I think it's important for the examiner to consider that the past practice of the Commission in deciding these kind of cases is you make the deci-

sion irrespective of the ownership. The most equitable way to make these decisions is you decide on the orientation in the section that will maximize the reserves underlying that section.

I think you can take either position by either geologist and it will cause you to conclude that a north half/south half orientation is the one that's most equitable.

For example, if you take Mr. Reid's interpretation of the Strawn, you can see very readily that the greatest thickness is in the north half. If you orient them as stand-up units it is our contention that you take what could be charaterized as goat pasture and put it in with better acreage.

We don't want you to do that. There is no need to do that. Santa Fe Energy is not caught in a predicament where they must force pool someone regardless of the orientation; they've got a clear choice.

We, in fact, are proceeding with a vuluntary unit on the north half. We can't come to you today and say we have proposed a well today; that we've got one permitted; that we're going to force pool Spectrum-7. We're not ready to do that and I don't want to mislead you, it's going to take us a little time to get it done, but that does not mean that Santa Fe Energy can use the forced

pooling statute to take from us what we think is rightfully ours.

You don't have to decide this case by listening to anything that Exxon has said. You can forget about everything you've heard for the last two hours and stop at the end of Mr. Anderson's testimony, because I think he's told you in the exhibits what the orientation ought to be. He's demonstrated to us that it is equitable and reasonable and it came out of his very mouth that he said it would be reasonable to locate them north half/south half; he said that.

You can see from his Isopach that that's true. If you believe his interpretation, then the south half orientation gives the south half owners the same kind of reservoir quality as Mr. Anderson's projected for the north half owners. That's certainly consistent with our interpretation. We draw the reservoir differently and we think we're right. We think Mr. Anderson has distorted the orientation causing it to move to the east without a reasonable basis.

But the key point is that Mr. Anderson tells us that the well should be located in the northwest of the southwest. He picked that location. He says that's where you'd put the first well and that's certainly consistent with everything you've heard here today.

It's consistent with the step out from these other wells and it's consistent with the south half unit.

No reason to force pool us; what other -- what other reason can you think of unless it's to take from us what belongs to us.

If you want to pick the thickest location on the Isopach, you can move 1980 from the west boundary, 660 from this north boundary, and you put it in around the 100-foot thickness line. Our geologist says that structure is not terribly significant to you, and you can see that. You can demonstrate it to yourself by looking at the exhibits.

In conclusion, Mr. Stogner, we would request that you continue with the practice of the Division, and that is make a determination of what the orientation of the unit ought to be based upon the geology. You can select either one. Either selection, in our opinion, would constitute a north half/south half. We believe that any other orientation is going to violate our correlative rights.

Mr. Padilla, is going to argue for you that if it's a west half unit then it will preclude Exxon and Spectrum-7 from having a direct, immediate offset to their first location.

This is not a forced pooling

case, Mr. Stogner. This is a case where they're trying to orient the unit to protect themselves and their acreage from having an offset well.

The other thing they accomplish is down the line by standing them up you're sure not going to drill a well in the southeast quarter, that's the least of the four favorite. It's going to be up here in the northeast quarter, and what happens, by standing it up Santa Fe Energy captures the reserves on the north half which they're not entitled to. They're going to share greatly disproportionate to the value of their property, when in fact we know that one well up in the northeast of the northwest is going to be adequate for those interest owners to participate.

You're going to compel the drilling of an unnecessary well for these owners and you're going to dilute their interest and we see no reason to do so.

MR. STOGNER: Thank you, Mr. Kellahin.

Mr. Padilla?

MR. PADILLA: Mr. Examiner, I think the whole issue of this is trying to prevent the drilling of unnecessary wells.

It's the testimony of Exxon

that they're going to drill a well in the northwest quarter, I mean that's where they're going to drill it. We don't have any objection to a legal location on the southwest of -- 1980 from the south and 660 from the east, or from the west, in the southwest quarter.

The geology showing a legal location from -- 1980 from the north or 1980 from the south is equally attractive if the only reason a northwest location was chosen is because it was higher on structure.

But the testimony is that either of those locations would be virtually the same.

There's no question but that Santa Fe Energy has considerable experience in this area. We have shown that -- by our testimony that we propose the logical development of Section 24. The reservoir data that we presented would indicate the two wells in the west half of Section 24 would be inappropriate. The questions that obviously remains, what would happen to the east half if you have two wells in the northwest quarter.

Santa Fe Energy is optimistic about the east half as well as the west half. There's no problem with the east half. Mr. Kellahin points to -- to the east/west orientation that Santa Fe Energy has drawn but there is a dry well up in Section 18. We went by their own exhibits, Exhibit Number Two, if you draw a straight line

across there, that's going to be an east/west orientation. We went one way of the dry hole; they went the other way of the dry hole. We believe that based upon our experience and on the basis of logical development, that east/west proration units are far more attractive.

As far as prevention or impairment of Exxon's correlative rights, there will be none. They will share as to their proportion and acreage in the west of Section 24.

They obtained the Spectrum farmout. They'll share 50 percent on that well if they participate. If they don't, I think a penalty should be assessed.

I don't believe that they would go for a penalty on that basis. It's attractive acreage. They paid a considerable amount of money for their lease, so they -- they should know the value of that acreage.

Again, the same argument, Mr. Kellahin says it should be based on conservation and not on acreage position. Their case is based on acreage position. They say we own almost all the north half; therefore let us -- don't cheat us out of the north half. That's not the way you should look at that.

We maintain that we make a recommendation for a west half proration unit and at the same

time we'd also ask for a speedy resolution of this case inasmuch as we still have a farmout extension and extension problems. It's not as bad as it was before but it certainly will be upon us soon. (Not clearly audible.)

MR. STOGNER: Thank you, Mr. Padilla.

Point of clarification. What were the proposed overhead charges?

MR. KELLAHIN: 4900 and 490.

MR. PADILLA: Yeah, that's correct.

MR. STOGNER: I'm sorry, what?

MR. KELLAHIN: 4900 drilling well rate and $490 producing well rate.

MR. STOGNER: Okay. Is there anything further in Case Number 8820 at this time?

If not, this case will be taken under advisement and we will recess this hearing until 8:00 o'clock in the morning.

(Hearing concluded at 5:20 p. m.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8810 heard by me on 19 February 1986

Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

9 July 1986

EXAMINER HEARING

IN THE MATTER OF:

The disposition of Cases ~~8932~~, 8933, 8936, ~~8820~~, 8937, 8938, 8939, 8940, 8866, which were called and no testimony was offered.

Transcript in Case 8933

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

23 July 1986

EXAMINER HEARING

IN THE MATTER OF:

The disposition of Cases 8912, 8936, 8820, 8939, 8940, 8946, 8948, 8950, 8951, 8952, 8932, and 8933, which were called and for which no testimony was offered.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

6 August 1986

EXAMINER HEARING

IN THE MATTER OF:

The hearings called on Docket 23-86 for which no appearance or testimony was presented.

CASE 8941 et al, 8912, 8934, 8936, 8955, 8820, 8957, 8939, 8940, 8958, 8595, 8961, 8962, 8948, 8849

BEFORE: Michael E. Stogner, Examiner

Transcript in Case 8941

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Jeff Taylor
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

3 September 1986

EXAMINER HEARING

IN THE MATTER OF:

Hearings called on this docket but for which no testimony was presented. CASE 8305 8936, 8820, 8972, 8971, 8849, 8984

Transcript in Case 8305

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: No attorney present.

For the Applicant: