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

14 September 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of TXO Production Corp. for compulsory pooling and an unorthodox oil well location, Lea County, New Mexico, and	CASE 9479
Application of TXO Production Corporation for an unorthodox oil well location, Lea County, New Mexico.	9455

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:	Robert G. Stovall Attorney at Law Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico
For the Applicant:	Chad Dickerson Attorney at Law DICKERSON FISK & VANDIVER Seventh and Mahone/Suite E Artesia, New Mexico 88210

I N D E X

E X H I B I T S

MR. CATANACH: Call Case 9479.

MR. STOVALL: Application of TXO Production Corporation for compulsory pooling and an unorthodox oil well location, Lea County, New Mexico.

MR. CATANACH: Are there appearances in this case?

MR. DICKERSON: Mr. Examiner, I'm Chad Dickerson of Artesia, New Mexico, on behalf of the applicant, TXO Production Corp., and I have two witnesses.

MR. STOVALL: Do you want to ask to consolidate these two cases?

MR. DICKERSON: Yes, and if you would not mind, call Case 9455 and consolidate that in the interest of time.

MR. CATANACH: Okay, at this time we'll call Case 9455.

MR. STOVALL: Application of TXO Production, Incorporated, for an unorthodox oil well location, Lea County, New Mexico.

MR. CATANACH: Are there any other appearances in either of these cases?

Will the witnesses please stand to be sworn in?

(Witnesses sworn.)

JOHN P. GILBERT,

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

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Mr. Gilbert, will you state your name, your occupation, and by whom you're employed, please?

A My name is John P. Gilbert. I'm an employee of TXO Production Corp. located in Midland, Texas.

Q And you are a landman, are you not?

A I'm a landman.

Q You have not previously testified before this Division as a landman, have you, Mr. Gilbert?

A That's correct.

Q Will you summarize for Mr. Catanach your educational and employment background briefly?

A I'm a 1977 graduate in the University of Oklahoma, major in petroleum land management.

I worked a year and a half for Mobil Oil Corporation in Denver, Colorado; worked a year and eight months for Burlington Northern, Inc., in Billings, Montana,

and have worked eight and a half for TXO Production Corp. in various locations, Billings, Montana, Denver, Colorado, Wichita, Kansas, and now Midland, Texas.

Q And are you familiar with the land title situation within the spacing unit of TXO's proposed well in these two cases?

A Yes, I am.

MR. DICKERSON: Is Mr. Gilbert qualified, Mr. Catanach?

MR. CATANACH: He is.

Q Mr. Gilbert, will you summarize the purpose of TXO's applications in Cases 9455 and 9479 for us?

A TXO Production Corp. is seeking an order to pool all the mineral interests from the surface to the base of the Atoka formation underlying the southeast southeast of Section 13, 17 South, 37 East, to form a standard 40-acre oil spacing and proration unit for all the formations within the said vertical limit space on 40-acre statewide spacing; or the east half southeast of said Section 13 to form a standard 80-acre oil spacing and proration unit within the Undesignated Humble -- South Humble City Strawn and Undesignated Humble City Atoka Pools, both aforementioned units to be dedicated to a well to be drilled at an unorthodox oil well location 1310 from the south

line and 660 feet from the east line of said Section 13.

Q Both those pool rules, the Undesignated South Humble City Strawn and Undesignated Humble City Atoka Pools provide for 80-acre spacing, do they not?

A That's correct.

Q And both of those pools likewise require wells located within the pools to be located within a 150-foot circle of the center of any governmental quarter quarter?

A That's correct.

Q And TXO is seeking exception to those requirements?

A That's correct.

Q Okay, identify for us what we have submitted, Mr. Gilbert, as TXO Exhibit Number One and tell us what your map reflects?

A Okay, Exhibit One is a shot of the area, a land map shot of the area; colored would be the east half southeast of Section 13; indicated in red would be the proposed location --

Q And your --

A -- 1310 from the south line and 660 from the east.

Q So your proposed location is actually only 10 feet away from the dividing line between the south-

est quarter of the southeast quarter and the northeast quarter of the southeast quarter.

A That's correct.

Q Is title to all mineral interests, overlying royalty interest and working interest throughout your proposed spacing unit uniform?

A It is.

Q Identify what we have submitted as Exhibit Number Two for Mr. Catanach.

A All right, Exhibit Two is a model form operating agreement, the 1982 version produced by the AAPL. It conforms with drilling figures in the past in the area. It identifies the east half southeast of Section 13 as the contract area.

Q And TXO is the proposed operator of this contract area?

A That's correct.

Q Mr. Gilbert, turn to Exhibit A of the joint operating agreement and tell us what that tabulation of interest and owners means?

A All right. On Exhibit A I've set out the working interest ownership throughout the east half southeast of Section 13 with the respective interest of each part delineated.

Q So the TXO Production Corp's present

interest is 51.33 percent of the unit?

A That's correct.

Q And then the respective working interest of all other working interest owners within the unit area are set out opposite their names and addresses.

A That's correct.

Q One of our later exhibits will identify another interest owner, Rebel Oil Company, as an additional party sought to be pooled by TXO in this case. What is the nature of Rebel Oil Company's interest in the spacing unit?

A Rebel owns 1/32nd interest throughout that 80 acres, net 2.5 acres.

Q Mineral interest.

A Mineral interest.

Q Unleased mineral interest.

A Unleased mineral interest.

Q So as an unleased mineral interest owner Rebel Oil Company has both the right to participate or execute an oil and gas lease, whatever.

A That's correct.

Q Has TXO been successful to this date in reaching voluntary written agreements pooling all the respective interests of the parties throughout the spacing unit with any of these other parties identified on Exhibit A or Rebel Oil Company?

A No, sir, we have not.

Q And in a moment with regard to another exhibit you will discuss the status of your negotiations and the joinder of those parties?

A That's correct.

Q Turn to the COPAS accounting procedure attached as Exhibit C to your joint operating agreement, Mr. Gilbert, and point out to Mr. Catanach the overhead rates sought by TXO and requested by it in the compulsory pooling portion of this hearing.

A Okay. TXO is proposing $5,500 as the drilling well rate and 10 percent of that number, $555 -- $550, excuse me -- as the producing well rate, which is consistent with other wells we've drilling in the area.

Q Has TXO recently drilled other Strawn or Atoka wells of an equivalent depth in the general area of your proposed well in these cases?

A That's correct. The TXO Hightower Well was recently drilled.

Q And these proposed rates were utilized in the drilling of your Hightower Well?

A That's correct.

Q What is the location of that well for Mr. Catanach's information?

A The northeast quarter of Section 3 --

excuse me, 4, I'm sorry, it's the same township and range, right northeast of this location.

MR. DICKERSON: And for your information, Mr. Catanach, I don't have it at my fingertips but that well was the subject of a hearing and an order by this Division last spring, as well. We can furnish that to you.

MR. CATANACH: Were those rates various rates -- were those rates cited in that order?

MR. DICKERSON: I'd have to review it. I think they were but I'd want to review it before I swore to you that they were.

MR. CATANACH: Okay.

Q Mr. Gilbert, refer to our instrument, exhibit, submitted as Exhibit Number Four and tell Mr. Catanach what that affidavit is.

A All right. Exhibit Number Four is an affidavit of mailing in accordance with Rule 1207 to all offsetting operators or owners of undrilled leases bordering applicant's spacing unit on a common boundary unit quarter as regards the unorthodox well location.

Q Okay, identify and discuss Exhibit Number Five.

A All right, Exhibit Number Five is an

affidavit of mailing in accordance with Rule 1207 to each known individual owning an uncommitted leasehold interest, and unleased and uncommitted mineral interest or royalty interest not subject to a pooling or unitization clause lands affected.

Q And I see I neglected to have you discuss our Exhibit Number Two, Mr. Gilbert. Will you return to Exhibit Number Three, I'm sorry.

A All right, Exhibit Three is a compilation of all correspondence to all the working interest owners and unleased mineral interest owners offering each of the parties -- well, let me go back to the letter, proposal letter dated July 15, 1988. We offered these parties the opportunity to participate with their respective working interests in the well or to farm out. An AFE accompanied the proposal.

On July 21, a week later, we amended the proposal to amend the total depth of the well to 11,900 feet and provided each of the parties with an updated AFE.

Q Now to this date you have not succeeded in reducing to writing an agreement by any of these parties to participate, farm out, or do anything in these wells?

A That's right. That's correct.

Q Now, summarize for us briefly your contact with these parties, your understanding of the status

of their intentions regarding joinder in this well.

A Okay. As previously stated, we proposed the well on July 15. We amended the proposal on the 21st.

The first week of August, 1988, and I'm sorry the date escapes me, but we flew to Houston and met with Louisiana Land & Exploration and Amerada Hess in two separate meetings, laid all of our existing data before them. They were very appreciative of such a showing.

Q Are they the two largest interest owners in the spacing unit other than TXO?

A That's correct. A representative of what's referring to as the LDM Group, it's the several individuals, the balance of the working interest owners on the Exhibit A to the operating agreement, a representative of their group came to our office in Midland and the same data was laid before him.

Q What's the current status of those parties as far as -- do you know their intentions or leanings regarding their participation or not in this well?

A Okay. There was a follow-up seismic line approved to shoot the 19th of August. It was immediately shot, a north/south line. Data was received in our office last week, immediately sent to LL & E Group and and Amerada did not participate, and the LDM Group picked up

the data yesterday, so we feel comfortable that we'll be making arrangements with those people here shortly.

Q Do you anticipate reaching voluntary agreement with many or all of those parties?

A All of them except the unleased mineral interest owners.

Q Okay, so while you're not certain of it expect to reach an agreement with these parties in all likelihood

A I'm sure we will.

Q One further question back on the joint operating agreement, Mr. Gilbert, the Exhibit A which you discussed with the ownership of the various parties.

A The purpose of any pooling order entered by this Division, the percent as set forth there also can be used to allocate the cost of drilling, completing, and operating expenses on the proposed well, can it not?

A That's correct.

Q Okay. To your knowledge, your requested overhead rates that you discussed, Mr. Gilbert, have not been the subject of any disagreement or any point of contention with any of your other partners within the spacing unit?

A That's correct.

MR. DICKERSON: MR. CATANACH,

I move admission of TXO's Exhibits One through Five at this time and I have no further questions of Mr. Gilbert.

MR. CATANACH: Exhibits One through Five will be admitted into evidence.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Gilbert, Exhibit A to your joint operating agreement shows all the working interest percentages. Now which ones have you not reached an agreement with?

A Okay, actually none of these. The Louisiana Land Group represents, of course, themselves. The Amerada Group will represent themselves, and the balance that you see on here, the David Petroleum on down to the Lucinda Herschenhorn (sic), they're in a joint venture called the ADM Group out of Roswell and we have been working with representatives of the ADM Group to commit their interest or farm, whatever.

Q Okay, the ADM --

A But three separate decisions is what we're expecting.

Q The ADM Group consists of from AH --

A Huh-uh, David Petroleum Corp. through Lucinda Herschenhorn.

MR. DICKERSON: That AH 1980 Program, Inc., has something to do, Mr. Catanach, with Amerada Hess Corporation. That was the Amerada Group that Mr. Gilbert --

A I'm sorry, AH is Amerada Hess 1980 Program, the --

MR. DICKERSON: -- referred to.

A -- drilling program.

Q Now they probably won't go into the --

A They -- Amerada has advised with budget constraints that in all likelihood they will not join.

MR. DICKERSON: Do you anticipate that in lieu of joining and paying their proportionate part of the cost that they will farm out to some of the other parties and make other arrangements?

A Yes, I do. I think something along those lines, either Louisiana Land may take up their interest or the ADM Group, or they may farm out independently to us. That's -- again, that's undetermined.

Q You mentioned something about Rebel Oil Company. I'm not sure I understand the relationship.

A Okay.

Q Can you explain that again?

A Yes, sir, I can. Rebel Oil Company owns an unleased mineral interest throughout the east half

southeast of Section 13, a net 2.5 acres. We had attempted to secure a lease with this party. We have given them the opportunity to participate with their respective interest in the well or to farm out their mineral interest on a drill-to-earn lease basis.

Q And they have not joined, either?

A (Not clearly understood.)

MR. DICKERSON: And if I may, Mr. Catanach, you'll notice that the parties identified as to whom notice of these hearings were mailed by -- shown by Exhibits Four and Five, are the same as the parties shown on Exhibit A to the joint operating agreement plus Rebel Oil Company.

MR. CATANACH: Okay.

Q Are the -- is the interest that each of these parties owns in either of these 40-acres the same?

A They're equally divided, that's correct. Uniform.

MR. CATANACH: I have nothing further.

MR. STOVALL: And I do have question.

CROSS EXAMINATION

BY MR. STOVALL:

Q You've indicated that the Exhibit A, and you don't have a total there, what does that add up to?

A Okay, that currently adds up to 96.867 percent, and assuming we acquired a lease on the Rebel Oil interest, that would be total 100.

Q Okay, so in order to actually make an allocation you would have to add in the Rebel Oil --

A That's correct.

Q -- interest and I assume -- would you do that on the basis of the 76-1/2 percent working interest, 12-1/2 percent leasehold?

A In that case I would assume that working interest.

MR. STOVALL: Nothing further.

MR. CATANACH: The witness may be excused.

GREG WILSON,

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

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Mr. Wilson, will you state your name

your occupation, and by whom you're employed, please?

A My name is Greg Wilson. I'm a geologist For TXO Production Corporation in Midland, Texas.

Q And, Mr. Wilson, you have previously and recently testified before this Division as a petroleum geologist, have you not?

A Yes, I have.

Q And you, have you made a study of the available geological data surrounding the applications of TXO in these consolidated cases?

A Yes, I have.

MR. DICKERSON: Okay, is Mr. Wilson qualified, Mr. Catanach?

MR. CATANACH: He is.

Q Mr. Wilson, will you identify what we have submitted as TXO Exhibit Number Six and review that production map for us?

A This is a map showing the area surrounding our proposed location with the production from the Strawn limestone. There is no other production in the mapped area other than from the Strawn.

There are --

Q And that's your principal objective in this well?

A Yes, it is the Strawn limestone.

Q Okay. There are six producing wells shown on this map. Of those one is a marginal producer which is the No. 1 Norris in Section 13 in the northwest of the southwest.

The remaining wells are -- are economic, and there are also five dry holes shown on this map, pretty much mixed in with and surrounding the producing wells. One thing I'd like you to note is the proximity of these dry holes to the good producers and the proximity of the very marginal well which I just mentioned to the better producers in there.

Q Give us a specific example of that, would you, Mr. Wilson, the proximity? Point out and compare for us the proximity of the dry hole to a good producer.

A Well, there's the Lee Farms No. 1, which is in the, let's see, that would be the southeast of the northeast of Section 14, and it's, oh, probably 1200 feet away from the Lee Farms No. 2, which is a good well, so less than one standard 1320 location away.

The, as I mentioned, the Norris No. 1 in Section 13, that's in the northwest of the southwest, is a little more than that; probably 13-1400 feet from the Lottie York No. 1, which is the southeast of the southeast of 14. The Lottie York has made 520,000 barrels and it's

currently making 242 barrels a day. That was as of April 1st, '88.

And the Norris No. 1 has only made 27,000 barrels and was making 4 barrels a day, so it's a marginal well. It's not even going to be enough to pay out their cost in drilling the well.

Q Do you have anything further to add with respect to Exhibit Number Six?

A Just that the production ranges, as I just mentioned, from 520,000 barrels per well to 27,000 barrels and the closest offset producer to both of those locations has made 106,000 barrels. One thing to note, that 92 barrels a day is somewhat misleading. They only produced the well for -- reported in the available production information we have, they reported 3 days production. So the actual production rate is something more like 8 to 10 barrels a day.

Q Mr. Wilson, refer to Exhibit Number Six and review this for us -- or Seven.

A This is a structure map which is mapped on the top of the Strawn carbonate interval. What this shows is that the production lines up around east/west trending structural noses, this structure is mainly due to the difference in the total Strawn thickness. A structure map on the base of the Strawn would show more of a regular

slope down to the east.

Our proposed location based on the well data, and this is also suggested by the seismic, lies essentially in the center of one of these structural noses.

Q Okay, refer to our submission as Exhibit Number Eight and tell us what that map shows.

A This is a map showing -- it's an isopach map of porosity in the Strawn limestone. My porosity cutoff is 4 percent, so this is showing any porosity greater than 4 percent. The reason for that cutoff is this seems to be a minimum amount of porosity for commercial production and it's also used by virtually everybody I've talked to that has mapped in this area, so there seems to be quite a bit of agreement that it's the appropriate cutoff.

What we're seeing here is four separate porosity pods all of which lie, as I mentioned before, along the crest of a structural nose. These are of limited size and we have fairly abrupt boundaries, as demonstrated by the proximity of the dry holes and that -- the marginal producer, the Norris No. 1.

The best production seems to be found where the test penetrates the central part of one of these porosity pods, the best example, of course, being the Lottie York No. 1 in the southeast of the southeast of Section 14; over 520,000 barrels.

The other feature on here of note is the seismic anomalies that we found in this area. We have on this map, let's see, one, two, three seismic lines shown; one east/west, which passes through our location; a north/south line which passes very nearly through our location; and an additional north/south line which passes along the section line east of our location.

What we found is that in agreement with the structure information from well data and the well data interpretation, we are finding seismic anomalies right across the center of our 80-acre tract and our proposed location. Our proposed location is at what we interpret to be the crest, the thickest part and the most distinctive part of the anomaly; also about the center of it.

We did see a small anomaly at the Norris No. 2, which is in, oh, the center of the south half of the south half of Section 13. In addition a small anomaly which would explain the production being less than some of the better wells in the area, and then we saw a good, distinctive anomaly over the Lottie York No. 1 in the southeast of the southeast of Section 14. So we think we have a couple of good templates to use to establish what type of -- or that we do have a seismic anomaly over our location.

Q The red dashed line shown on that is a trace of your cross section, which will be shown as a later

exhibit, Mr. Wilson?

A Yes, that's correct.

Q Okay. Are you through with this exhibit?

A Yes, I'm through with this exhibit.

Q Turn to Exhibit Nine and review for us the information shown on that exhibit.

A Okay. This is the cross section that is shown on Exhibit Number Eight.

Starting from the west, which is the lefthand side, there's the Lottie York No. 1. There's a very thick Strawn section here. The Strawn lime is the portion that's been colored blue on the gamma ray curve. There's about, oh, 260 feet of Strawn lime in the Lottie York. There's over 100 feet of total porosity section.

The next well moving to the right is the Inexco Norris No. 1. You'll note the very drastic thinning of the section. It goes to about 130 feet from 260 feet, so we've lost more than 100 feet of total Strawn section, and there is essentially no porosity developed within the Strawn. This well is producing from some perforations in the bottom of the Strawn. There's really no indicated porosity, and from a sandy clastic section which lies immediately below the Strawn. It has been classified as Strawn production and it is Strawn age sand, but it's not really

the same Strawn carbonate they're producing from in the Lottie York No. 1.

The third well from the left is the Norris No. 2. This is our closest offset producer to our location. They had 32 feet of porosity and again you can see that the thickening from the Norris No. 1 is very dramatic, and this is something else that we see on the seismic. We see a thickening in the Strawn section plus an apparent thickening going to the slower velocity in the porosity. The Strawn will appear to be thicker simply because it takes the sound waves longer to get through that slower velocity porosity.

And in the last well, the Inexco Norris No. 3, which is the closest test to our -- our location, and again a much thinner section in the Strawn and no porosity present within the Strawn section; I apologize for the quality of this copy, it was the only one that was available for the log surfaces.

Q Mr. Wilson, based on your review of the data set forth in your Exhibits Six through Nine, what conclusions do you draw respecting the best location for a well with an east half southeast spacing unit?

A Well, based on the structural trend in that direction, and the location of the porosity over the structures and based on the seismic anomalies that we found

on the lines that we shot and purchased in this area, our proposed location looks like the best spot.

Q Let's assume that TXO proposed to drill this well in the east half southeast at an orthodox location under the pool rules within 150 feet of either of the governmental quarter quarter sections, in your opinion would the risk of drilling a well at an orthodox location be greater or less than the risk involved in TXO's proposed well?

A It would be far greater; an orthodox location in the southeast of the southeast would put us at a northernmost legal location between the 20 and 30 foot porosity contours.

The seismic is a good tool but it's not perfect. We can't tell exactly where the edges of these are. We've seen some cases where you'll have an apparent anomaly and you don't get any porosity. So near the edges sometimes the porosity will be gone and the anomaly will trail out some.

So that would be rather a risky location and as I mentioned before, the best production has been found in the central portion of these porosity developments. And the same thing would apply to the north, a legal location would put us about on the 30 foot porosity contour and, as I mentioned, these things, the porosity

will terminate very abruptly and a matter of a few hundred feet can make all the difference and it's really the most prudent course of action to shoot for the central portion of these porosity pods.

Q Now notwithstanding your opinion, Mr. Wilson, that TXO's proposed location is the best location within the east half of the southeast quarter of this section in which to drill a Strawn well, what does the data you have reviewed say about the risk involved in drilling the well even at your proposed location insofar as the requested pooling order against these other working interest owners is concerned?

A Well, as is ably shown by Inexco, and who is now LL & E, these wells were all, by the way, drilled by the Inexco Company. Some show as LL & E because they are currently operated by them, but they drilled quite a few dry holes around and within their productive area. It's not hard to miss these things. There are other factors that can give you an apparent anomaly in the Strawn, even though there may be no porosity, and within a two or three mile radius of this area there have been several cases of finding a thick Strawn section with no porosity or with a (unclear) tight section.

So there's a number of risks involved and the standard risk factor used by our company in-house

is 55 or 60 percent and that's in a development well.

Q Comparing that to the maximum statutory risk penalty permitted under New Mexico law, Mr. Wilson, of 200 percent as a penalty in the compulsory pooling case, and based on your review of this data, what is your opinion as to an appropriate risk penalty to be imposed in any pooling order issued by this Division?

A I think a maximum of 200 percent would be appropriate.

Q And do you think your review of the information, the dry holes and the production history of those wells that you have reviewed for us supports your opinion?

A Yes, I do.

Q Mr. Wilson, next identify what was we have submitted as TXO Exhibit Number Ten and review that instrument for us.

A This is an AFE for Norris B No. 1, the proposed location. It was prepared by our Engineering Department.

The costs are based on costs incurred in two other TXO-operated wells that we've drilled this year in the area, which are No. 1 Hightower, which is four miles northwest in Section 4, and the No. 1 Penron Byers, which is three miles northwest in Section 3. There have been

some adjustments for current repair and drilling costs and this well is a little bit deeper than those, but overall it's going to be about the same cost as the two wells that we've already drilled.

Q If you did not, my attention was distracted momentarily, Mr. Wilson, isolate for us your anticipated dry hole cost and completed well cost.

A The dry hole cost will be $394,890. It's listed under the title "Total Drilling", in that column.

The completion costs would be listed as "Total Completion", and that's $240,500, and then our total well costs including production equipment will be $697,890.

Q And this AFE has been submitted to all the other working interests an mineral owners within the spacing unit, has it not?

A Yes.

Q And the fact that none of these parties has joined, to your knowledge, Mr. Wilson, is not indicative of any objection; you have not had any indication that anybody objects or finds anything about the AFE to be out of line for wells in this area?

A No. That would probably be addressed to our Land Department, but to my knowledge, no, there have not. There haven't been any objections to the AFE.

Q Okay.

MR. DICKERSON: MR. Catanach, move admission of TXO --

Q Let me ask you, Exhibits Six through Nine were prepared by you or under your direction and supervision, were they not, Mr. Wilson?

A Yes, that's correct.

MR. DICKERSON: Move admission of TXO Exhibits Six through Ten and I have no further questions of Mr. Wilson.

MR. CATANACH: Exhibits Six through Ten will be admitted into evidence.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Wilson, has TXO used seismic in this area before to define these structures?

A Yes. We used it to pick our locations on the two wells that we operate that I've mentioned previously, the Hightower and Penron Byers, and they came in very, very much as we expected.

So we feel our geophysicist has a good -- a good handle on finding Strawn anomalies.

The basis of these things, if you'll note -- refer back to Exhibit Number Nine, the cross sec-

tion, a tight Strawn section, which is the second from the left, the Norris No 1, you'll get a reflection, a seismic reflection, from the top of the Strawn when you go from the slow shale into the fast carbonate, and another reflection when you go from the fast carbonate back into the slow shale below the Strawn.

When there is porosity present, you get two different effects. You'll get a dimmer reflection off the top of the Strawn if there's porosity developed right at the top, because the contrast between the slow shale and the carbonate, if there's any present, you have a slower porosity section, or -- and/or sometimes you'll get both, there will be additional reflection when you go from the slow porosity within the Strawn to the tighter carbonate below the slow porosity, also within the Strawn, you'll get an additional reflection between the reflections at the top and the base of the Strawn.

Also you'll see a thickening of the Strawn section on the seismic based both on actual thickening of the Strawn and, as I mentioned before, it will appear to be thicker because it takes the sound waves longer to travel through the slower porosity. So it looks like it's a greater distance from the top to the bottom, so there's an apparent thickening as well as showing some real thickening, and we've done -- our Geophysical Department

has done a fair amount of computer modeling and we've looked at a lot of seismic that passes over many tight Strawn Sections and known producers.

So we feel like it's a very effective tool in picking locations in the Strawn.

Q Mr. Wilson, do you know if -- if there's any 40-acre oil production in this area, 40-acre oil pools?

A In the Strawn?

Q No, in this general area that you're -- and not only the Strawn but any shallower formations?

A To the northwest in the Lovington area there is San Andres, Grayburg, Paddock, let's see, I believe that's all; maybe some Yates production. I'm -- I don't have that information in front of me, that is on 40-acre spacing or less.

But all of the Strawn in this area, regardless of the field, all of the Strawn fields within a 15-mile radius or so, are on 80-acre spacing.

Q Right, but you're not -- you're not in a direct area that has 40-acre oil?

A No.

Q It would be located some distance away?

A Right. As I say, I don't have that directly in front of me here, that at least 5 or 6 miles to the south and probably 7 or 8 miles to the northwest.

Q So you don't really anticipate a 40-acre oil completion.

A No, there have been some attempts at San Andres completions north in Section 31, 16 South, 38 East. There was a well that made a few thousand barrels; it was not economic and it was never filed in a field. It was undesignated, and that's the closest San Andres production. There has not been any San Andres or any shallower production established in this area, other than Abo and Wolfcamp, which are, oh, approximately two miles northwest, and those are on 80-acre spacing.

But in this immediate area there is no other shallow production.

Q What concerns me about that is you're 10 feet from the quarter quarter section line and if you should happen to make a 40-acre oil completion you're going to be way nonstandard for a 40-acre well.

MR. DICKERSON: Mr. Catanach, the title for those two 40-acre units is exactly uniform undivided interest so that we're not encroaching upon anybody and we have not anticipated making a 40-acre oil well. My information is that my client thinks it is extremely unlikely. We simply requested approval of a 40-acre in the unlikely event that it does happen, as has occurred in the past on numerous occasions, we'd be relegated to coming

back and seeking approval for a well on an upper zone at that time and we're simply trying to kill two birds with one stone and keep the cost to the client down.

And it will be, it's anticipated, depending upon whether or not the other parties within the 80 acres join, farm out, execute a lease, participate in the drilling, regardless of Exhibit Number Two, the joint operating agreement pooling the entire working interest within the entire 80-acre tract will be executed prior to drilling the well.

MR. CATANACH: I'm finished with this witness. He may be excused.

MR. DICKERSON: I have no further questions.

MR. STOVALL: I have a couple questions. Recall Mr. Gilbert.

JOHN P. GILBERT,

being recalled as a witness and remaining under oath, testified as follows, to-wit:

RECROSS EXAMINATION

BY MR. STOVALL:

Q Do you -- if you were to hit a 40-acre

location, do you anticipate it would be possible rather than to form 40's that you'll develop some sort of working interest pool on an 80-acre basis to deal with that situation?

A I don't think that would be a problem, with uniform ownership and all being encompassed under one operating agreement. I would anticipate any problem with that at all.

Q I think -- my initial reaction would be that that might be in your best interest rather than being in a 10-foot offset on 40 acres might create serious problems.

A Yeah, I really don't anticipate any problem there at all.

MR. STOVALL: Nothing further.

MR. CATANACH: Is there anything else in Case 9479 or 9455?

MR. DICKERSON: No, sir.

MR. CATANACH: If not, they will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that 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 CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9055, 9077 heard by me on September 14 1988.

David R. Catanach, Examiner
Oil Conservation Division

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

31 August 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of TXO Production Corporation for an unorthodox oil well location, Lea County, New Mexico.	CASE 9455

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

For the Applicant:

MR. STOGNER: Call next Case Number 9455, which is the application of TXO Production Corporation for an unorthodox oil well location, Lea County, New Mexico.

At the applicant's request this case will be continued to the Examiner's Hearing scheduled for September 14th, 1988.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that 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 CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9455, heard by me on 31 August 1988.

Examiner
Oil Conservation Division

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

17 August 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of TXO Production Corporation for an unorthodox oil well location, Lea County, New Mexico.	CASE 9455

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Robert G. Stovall
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico

For the Applicant:

MR. CATANACH: Call next Case Number 9455.

MR. STOVALL: Application of TXO Production Corporation for an unorthodox oil well location, Lea County, New Mexico.

The applicant has requested that Case No. 9455 be continued.

MR. CATANACH: Case No. 9455 will be continued to the Examiner Hearing August 31, 1988.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that 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 CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9455, heard by me on August 17, 1988.

David R. Catanach, Examiner
Oil Conservation Division