STATE OF NEW MEXICO

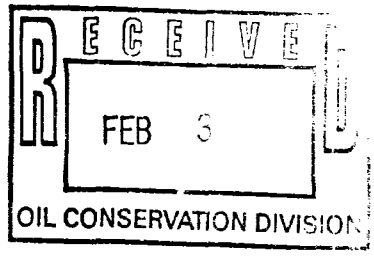
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF STRATA PRODUCTION COMPANY

CASE NO. 11,206



ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

February 16th, 1995

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on Thursday, February 16th, 1995, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, before Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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A P P E A R A N C E S

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By: SEALY H. CAVIN, JR.

* * *

WHEREUPON, the following proceedings were had at 8:20 a.m.:

EXAMINER STOGNER: Hearing will come to order. This is Docket Number 5-95. I'm Michael Stogner, appointed Hearing Examiner for today's cases.

Please note today's date, Thursday, February 16th, 1995.

At this time I'll call Case Number 11,206.

MR. CARROLL: Application of Strata Production Company for pool creation, the promulgation of special pool rules, and for an unorthodox oil well location, Lea and Chaves Counties, New Mexico.

EXAMINER STOGNER: Call for appearances in this matter.

MR. CAVIN: Mr. Examiner, my name is Sealy Cavin with the law firm of Stratton and Cavin.

I'm representing the Applicant, Strata Production Company. I have two witnesses.

EXAMINER STOGNER: Are there any other appearances in this matter?

Will the witnesses please stand to be sworn?

(Thereupon, the witnesses were sworn.)

EXAMINER STOGNER: Mr. Cavin?

MR. CAVIN: Mr. Examiner, the first witness for the Applicant is Ms. Jo McInerney.

JO McINERNEY,

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

DIRECT EXAMINATION

BY MR. CAVIN:

Q. Ms. McInerney, would you please state your name, home address, employer and occupation?

A. My name is Jo McInerney. My address is 1205 West 7th Street, Roswell, New Mexico. My employer is currently Strata Production Company. I'm an independent landman.

I have 21 years' experience. My -- Do you want me to start with my --

Q. Would you give us an idea of your work experience and your qualifications and certifications as a landman, please?

A. I began as a landman with Louisiana Lands and Exploration Company in 1974. I worked for Louisiana Land for four years. I then worked for Glen Aaron and Associates. I was with the Aaron Associates for another four years until 1981. I became an independent landman from 1981 until 1984. I was the land manager for Murphy Operating Corporation until 1991. I became an independent landman from 1992, and I'm currently an independent landman.

I attended Pennsylvania State University, and I

am a certified professional landman, registered with the American Association of Professional Landmen.

Q. Ms. McInerney, are you familiar with the land matters involved in this case?

A. Yes, I am.

MR. CAVIN: Okay. Mr. Examiner, are Ms. McInerney's qualifications as a landman acceptable?

EXAMINER STOGNER: They are.

Q. (By Mr. Cavin) Okay. Ms. McInerney, would you briefly state what Applicant seeks by this Application?

A. Strata Production Company is seeking approval for an unorthodox location for the drilling of an oil well in the southeast of the northeast of Section 36 in 12 South, 31 East, in Chaves County, New Mexico, to drill, to test the Devonian formation.

Strata is also seeking approval for special pool rules to provide for 80-acre spacing for Devonian oil wells in the proposed Caprock Devonian Pool area.

Q. Have you prepared or directed preparation of any exhibits in connection with this hearing?

A. Yes, I have prepared Exhibits 1 and 2, which have been provided.

Q. Actually, Exhibit 2 was prepared at your direction; is that correct?

A. Yes, it was, that's right.

Q. Okay.

A. That's correct.

Q. Let me refer you to Exhibit 1 and have you just explain generally what Exhibit 1 is.

A. Exhibit 1, the yellow outline is the area which represents a one-mile area from the proposed Caprock Devonian Pool area boundaries, which are outlined in orange.

The blue-shaded areas are the acreage on two sides of our proposed spacing unit where the proposed location for the Faisan Number 1 well will be located, 1435 feet from the east line and 757 feet from the north line -- Or am I backwards?

Q. I think you may have those backwards.

A. I'm sorry. Yes, 1435 feet from the east line --

Q. North line.

A. North line, excuse me, 757 feet from the east line.

Q. Okay. Now, would you look at Exhibit 2 and identify that and explain, in particular, what Exhibit A to Exhibit 2 is?

A. Okay, Exhibit A is the list for notice purposes. The Murphy Operating Corporation, the Fi-Ro Corporation are the offsetting operators within the one-mile area from the proposed pool area.

Q. Okay.

A. The remaining --

Q. Go ahead.

A. The remaining listed parties are the owners within the proposed spacing unit, which is the area shaded in green.

It was not necessary for us to provide notices on the two-sided area from the spacing units in green, since Strata Production Company owns all rights to those leases.

Q. Okay. Have you done any -- What sort of title work did you do to come up with this? Could you give us an idea of that?

A. Sure. For the offsetting operators, I utilized the monthly statistical report that is compiled by the OCD to obtain the names of the offsetting operators within the one mile.

For ownership under the tracts, I utilized the records of the federal and state land office, as well as the Lea and Chaves County records.

For the proposed spacing unit, I had current drilling title opinions, where I was able to obtain the current ownership.

Q. Okay. Ms. McInerney, were Exhibits 1 and 2 prepared by you or under your supervision or direction?

A. Yes.

Q. And can you testify as to the accuracy of such exhibits?

A. Yes.

MR. CAVIN: Mr. Examiner, I move for the admission of Exhibits 1 and 2.

EXAMINER STOGNER: Exhibits 1 and 2 will be admitted into evidence at this time.

MR. CAVIN: Mr. Examiner, that concludes my direct examination of Ms. McInerney.

EXAMINATION

BY EXAMINER STOGNER:

Q. Ms. McInerney, let me make sure I've got this straight. On the affidavit of mailing, before using what you show on page 3 -- and there's several of them, I guess, one long column and one short column --

A. Right.

Q. -- are those mineral interests or working interests?

A. The Murphy Operating Corporation and Fi-Ro were the offsetting operators. The remaining owners were actual overriding royalty interest owners under the spacing unit

Q. And the spacing unit -- These are the mineral interest owners under the green-shaded area?

A. Right, that's exactly -- Yes, sir.

Q. And you notified these parties because -- in this

particular instance, because they were --

A. They were under the proposed spacing unit, where the drill site is located.

MR. CAVIN: Mr. Examiner, we notified the parties within the spacing unit based on 1207 (a) 11, believing that they had an interest in knowing the 80-acre -- application for 80-acre spacing.

EXAMINER STOGNER: Now, as I understand, you're applying for 80-acre spacing within this new pool, which takes in roughly 480 acres, something to that effect?

MR. CAVIN: Yes, sir.

EXAMINER STOGNER: And that would affect all the parties within that yellow-shaded area; is that correct?

MR. CAVIN: Yes, and by our reading of the 1207 (a) 7, as far as the notice for the special rules, we gave it to all operators within one mile of the special pool that we were proposing.

EXAMINER STOGNER: Oh, so there's another list of --

MR. CAVIN: No, sir, this is the complete list --

THE WITNESS: Right.

MR. CAVIN: -- and the operators for -- who we gave notice to for the special pool rules are, I believe, Fi-Ro Corporation and Murphy Operating Corporation --

THE WITNESS: Those are the only two --

MR. CAVIN: Those are the only two --

THE WITNESS: -- operators --

MR. CAVIN: -- operators within --

THE WITNESS: -- for a mile.

MR. CAVIN: -- that area.

EXAMINER STOGNER: Counselor, you're more familiar with the *Uhden* case than I am. Is this adequate?

MR. CARROLL: The people listed on Exhibit A are all the -- just Fi-Ro and Murphy Operating --

THE WITNESS: Exactly.

MR. CARROLL: -- are the only two operators within the yellow-shaded area?

THE WITNESS: Yeah, all other wells are plugged. And most of these wells are within units, so Murphy Operating Corporation is the operator of that North Caprock Queen Unit, which is the only -- There's only one producing well, according to the statistical reports.

The only other producing well within that one mile was the Fi-Ro Corporation well. Both wells are producing from the Queen sand.

MR. CAVIN: And it's my understanding there aren't any unleased mineral owners, right? --

THE WITNESS: Exactly.

MR. CAVIN: -- within that yellow border?

MR. CARROLL: And if notice were to be given to

all royalty owners within the proposed pool boundaries, how difficult would that be?

THE WITNESS: Let's see, I believe that all the royalty owners within the pool boundary would be the state and federal government.

The overriding royalty interest owners within the pool boundary, I think there may be only one additional overriding royalty owner that may not have been notified within that pooled area.

But all of the owners within the spacing unit where the well is located have been notified.

But within the pool -- within the Caprock Devonian, our proposed Caprock Devonian Pool area outlined in orange, the royalty owner -- I think there's maybe one additional royalty owner there that may not have been notified.

MR. CAVIN: Royalty or override?

THE WITNESS: Override, excuse me.

MR. CAVIN: Okay.

THE WITNESS: Which was, I believe, George Livermore.

Q. (By Examiner Stogner) I have one other question on that Caprock Queen Unit that Murphy Operating Company owns --

A. Uh-huh.

Q. -- according to your Exhibit Number 1.

Does that unit cover the Devonian formation that you're asking for today?

A. No, the Queen sand only.

Q. The Queen sand only. So would Murphy actually be the operator of the Devonian within that area described as the Caprock Queen?

A. To my knowledge, there are no Devonian wells in the area, producing Devonian wells in the area.

MR. CAVIN: We tried to approach notice conservatively, and it just says operator of wells within one mile, and we just -- even though they're not Devonian wells.

THE WITNESS: Yeah, we elected to notify them.

EXAMINER STOGNER: This particular matter kind of falls under the same line as the *Uhden* decision that went to the Supreme Court, as you know, Mr. Cavin.

We'll go ahead and hear the case today. But give us a little time to review that particular decision to see if there might be some additional notice requirement. But I think we can go ahead and continue with the case today and then perhaps not take it under advisement, but hold the case open pending investigation of this matter, and perhaps any further notification requirements.

After all, you do know that we're going from 40

to 80, and therefore that could dilute somebody else's interest, which was the whole *Uhden* decision, as you're aware of.

Do you have any questions of this witness?

MR. CARROLL: No. Go ahead, Counsel.

MR. CAVIN: I was just going to say, just so there's no misunderstanding, as far as the actual 80 we're proposing right now, we have given everyone notice. In the proposed pool we have not given everyone notice.

EXAMINER STOGNER: And that's where the problem may lie. So...

Do you have any questions of this witness?

MR. CARROLL: No.

MR. CAVIN: If I could just, before we --

EXAMINER STOGNER: Sure.

MR. CAVIN: -- lose Ms. McInerney --

EXAMINER STOGNER: Yes, sir.

MR. CAVIN: You might want to explain that it is -- to be able to ascertain ownership with any certainty in that pool area could be quite expensive and complicated.

I don't know how certain you are about the override, but I know the title just in that 80 is very involved.

THE WITNESS: Yes, and -- Yeah, to ascertain the overriding royalty interest owners in the pool area, I

would -- it would require going back into the records, to the county records, to obtain the ownership.

I -- There was a George Livermore in one of our tracts, and I had tried to contact him on another matter and was unable to find him. And from what I remember, that is the only other overriding royalty interest owners, perhaps, in that pooled area I recall.

EXAMINER STOGNER: Okay. Unfortunately, I don't think the Supreme Court, when they make a decision, takes that into account. So we have to abide by whatever comes down from that particular -- But your comments are so noted on the record.

MR. CAVIN: Okay, thank you.

EXAMINER STOGNER: Okay, you may be excused.

THE WITNESS: Thank you.

MR. CAVIN: At this time, Mr. Examiner, we call Mr. John Worrall.

JOHN G. WORRALL, III,

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

DIRECT EXAMINATION

BY MR. CAVIN:

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

A. My name is John Worrall. I work with Strata

Production Company. I'm a geologist.

Our address is Suite 700, Petroleum Building, Roswell, New Mexico 88201.

Q. Mr. Worrall, could you describe for the Examiner your educational background, please, and your work experience?

A. I have a bachelor's from Rice University in geology and a master's in geology from the University of Texas. I'm a 12-year member of AAPG and have been employed with Strata for seven years in Roswell, New Mexico.

Q. And are you familiar with the portion of the Permian Basin which is located in southeastern New Mexico?

A. Yes, I am.

Q. And are you familiar with the Application filed in this case on behalf of Strata?

A. Yes, I am.

MR. CAVIN: Mr. Examiner, we tender Mr. Worrall as an expert witness in petroleum geology.

EXAMINER STOGNER: Mr. Worrall is so qualified.

Q. (By Mr. Cavin) Mr. Worrall, have you prepared or directed the preparation of any exhibits in connection with this Application?

A. Yes, I have. There's a total of four exhibits that I'll be talking from. They're Exhibits 3 through 6. And on these exhibits there's one that will be an

engineering exhibit, a 3-D seismic exhibit, a structural map, and also a cross-section.

Q. Okay. Now, I understand the reservoir data is on Exhibit 3, and that will actually be -- you'll be actually covering that last?

A. Correct.

Q. Okay. Mr. Worrall, going to Exhibit 4, would you describe for the Examiner what Exhibit 4 shows us?

A. Exhibit 4 is a structure map on top of the Mississippian limestone. It's the best, deepest seismic event we can look at. And it's a structure map that's based on a 3-D seismic grid, which is Exhibit Number 5.

And what it shows is that at the Mississippian and Devonian levels there's only been one well drilled in this area. It's located in Section 31, it's in the northwest quarter. It was drilled by Graridge in 1965, and the well is what we used to determine the engineering parameters and porosity and resistivity.

The main area of interest is in the east half of the northeast quarter. That's the primary -- of Section 36. And that's the area that we want to drill. That shows the configuration of the fault block.

Q. Okay. Is there anything else on Exhibit 4 we need to be concerned about?

A. No, sir.

Q. Okay. I refer you to Strata Exhibit 5 and would ask that you describe that.

A. Exhibit 5 is a seismic map, it's a structural depth map. And this map was constructed on top of the Mississippian lime again, which is at 11,000 feet in the Graridge well.

This map is done with ten-foot contour intervals, and on it, in -- There's one dry hole shown. That is the Graridge well. It's the middle of the page there, minus 6704.

This map was constructed from 110-foot seismic bins, and it's believed to be highly accurate in trying to tell the structure at depth.

And what we are looking at this map, again in the -- if you look at the Section 36 in red, we've colored in an 80-acre spacing unit, and the feature that we would like to drill falls within that 80 acres. It actually covers about 50 of the 80 acres. And the circle there is the location that we would like to drill.

And you can see that's a fairly narrow little structure, and we have to be accurate in pinpointing where we drill it in order to -- Well, we're concerned about making sure you hit the structure at 12,000 feet of depth, so you want to drill the middle of it in case you have any problems when you're drilling.

Q. Okay. In your experience, is this 3-D seismic fairly accurate in depicting these structures?

A. It can be very accurate. It can be within five or ten feet.

Q. Okay. Mr. Worrall, I refer you now to Strata Exhibit 6. I would ask that you describe that for the Examiner, please.

A. Exhibit Number 6 is a cross-section which is also shown on Exhibit 4, the orientation of this cross-section.

The well on the right is the Graridge well, and the well on the left is a more modern log that was drilled by Enserch three miles to the north, and we've used these two logs to determine our reservoir parameters.

The Graridge well is a sonic log. Colored in blue, the top 15 feet is porosity below four percent. It's believed to be a fairly tight, non-reservoir rock. Beneath that is the porous dolomite facies having over 13-percent porosity, and that is the reservoir that we are drilling for.

The second log, the well on the left, the Enserch well, has almost an identical-looking section. Again, there's a 15-foot tight cap overlying the porous reservoir.

And the whole objective of this prospect is to drill a well updip to the Graridge well, which had a show in the Devonian, to hit a structural trap.

Q. Okay. So -- Go ahead, sorry.

A. I'd also like to add, the Devonian is very porous. It's a water-drive reservoir, and it's -- Devonian wells are believed to be able to drain a lot of acreage because it's a water drive and very permeable.

Q. Okay. Mr. Worrall, what would -- In your opinion, if you were to drill this in an orthodox location, would there be additional risk? Could you expound on those, please?

A. Sure. The Devonian, we're drilling a block here that's -- We're trying to target a fairly small structure. And the drilling risk associated with that, even having a two-degree deviation can get you off the feature, if you have a two-degree deviation down to 12,000 feet.

So you have to try to hit these things in the very middle, because they're very small features. And if you don't have a structure, you will not be successful.

Q. Okay, Mr. Worrall, now I'll refer you back to Exhibit 3, unless you have anything further on the geologic.

A. I would like to add one last thing, because it has to do with Exhibit 3.

On our cross-section there were two drill stem tests run on the Graridge well that are pertinent.

The first drill stem test, DST Number 2,

encountered 900 feet of gas, 180 feet of oil and 900 feet of heavily oil- and gas-cut mud. It did not recover any water.

The second drill stem test, which started four feet below the first one and went deeper, recovered all water with no show of oil.

So in between those two drill stem tests intervals is where we believe the oil-water contact would be, and that is what we've used for Exhibit 3.

Q. Okay. With that, would you explain what Exhibit 3 is, please?

A. Exhibit 3 is an engineering calculation of the reservoir net feet above this oil-water contact. The third page gives the derivations of how this was calculated.

We assumed that we would have a structure similar to what's shown on Exhibit Number 4, that we would come in 75 feet high to the Graridge well. When we did that, the first 15 feet would be tight again, and below that we would have 35 feet of porosity with an average of 10.5 percent.

And this first map is a map of how many net feet of porosity we'll have above the oil-water contact.

Q. Okay. What -- Based on Exhibit 3, is it your opinion that one well would adequately drain 80 acres?

A. Yes, we believe it will. As you can see, our location is in the middle of that feature, which covers the

two 40-acre proration -- two 40-acre tracts in the east half of the northeast quarter, and we would be in the very center of that location, of that feature.

Engineering calculations. Using a 43-percent recovery factor, a 35-percent water saturation and the porosity as shown on the logs, we've come up with recoverable reserves of 328,000 barrels.

And pages 4 and 5 have to do with the economics of drilling that feature with one well or two wells.

Our cost to drill this well is $726,000, and the return on investment, if we're successful in recovering that 328,000 barrels, is a 5.5-to-1 return.

If we have to drill two wells, it would not be commercially successful for us. The best we could hope for is a 2.7-to-1 return, not counting any risk factors.

Q. Okay. Mr. Worrall, is it your opinion that the granting of the Application will be in the interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes. Obviously we feel that we can drain that feature with one location, and if we were to do that -- We own the interest on both locations, and the fairest thing to do for all the overriding royalty interest owners on both of those 40s is to have them pooled, and it's the fair thing to do, we believe.

Q. Okay.

A. It's also commercially the correct thing to do.

Q. Okay. Mr. Worrall, were Exhibits 3 through 6 prepared by you or under your supervision or direction?

A. Yes, they were.

MR. CAVIN: Mr. Examiner, I move that Exhibits 3 through 6 be admitted.

EXAMINER STOGNER: Exhibits 3 through 6 will be admitted.

MR. CAVIN: Mr. Examiner, I have no further questions for Mr. Worrall.

EXAMINER STOGNER: Before I ask Mr. Worrall a question, Ms. McInerney, you can sit there and answer the question from here if you talk loud.

The 80 acres which you're proposing today to be the proration unit in the east half of the northeast quarter, has that been unitized as an exploratory unit?

MS. McINERNEY: No, it has not.

EXAMINER STOGNER: Has that been discussed, that that was an option?

MR. CAVIN: I'm sorry -- ?

MS. McINERNEY: Actually, we hadn't discussed it. The --

MR. CAVIN: Just for clarification, are we speaking of communitization or unit- --

EXAMINER STOGNER: Exploratory unitization, I'm asking.

MR. CAVIN: Okay.

MS. McINERNEY: No, we had not, and the -- Actually, the operating rights are owned in common, and the overriding royalty interest owners would be impacted by the reduction of overriding -- 80-acre spacing. I --

MR. CAVIN: If I might interject, it's our intention to do -- if the 80-acre spacing is approved, we had intended a communitization agreement by all affected interest owners. That was our intention.

EXAMINER STOGNER: The reason I'm asking this question, because -- Tell you what, this caught me completely by surprise, and I was -- from the advertisement or the Application, I was seeing why I let it go this far.

You're seeking special pool rules on a pool that hasn't even had a well drilled to it yet. That is highly unusual. In fact, we have never done that before here. And not to say we never will, but this is somewhat precedent-setting.

And I was just wondering about the 80 acres in which you're proposing here, and according to the geology, from the seismic information, that perhaps that well drilled there would definitely impact both of those quarter quarter sections.

And if that be the case, had Strata Production given any consideration on how else it might be able to approach that matter in best providing all the parties in that 80-acres a fair share of the production in this essentially wildcat well, and definitely not a well that is in a pool that is well defined or has any other hard information, other than seismic information, and then information from a well three miles away, and then -- and of course I haven't even asked about this other well here that's not even in the pooled area. I'm assuming it was dry.

And so there's some precedent-setting matters here, and that's the reason I asked Ms. McInerney that question, and I believe she has adequately answered it.

So therefore I'll turn my attention to Mr. Worrall here.

EXAMINATION

BY EXAMINER STOGNER:

Q. Let's go into detail on that -- let me make sure I'm -- That is the Graridge Livermore State "G" Well Number 9?

A. Yes, sir.

Q. And that's the well one mile, approximately, to the east?

A. Right, that's the well in Section 31.

Q. Okay. Now, was that the main objective when that well was drilled?

A. Yes, sir, it was. The well was drilled in 1965. They tried to test the Devonian. They also tested the Morrow, and later they made a noncommercial well out of the Wolfcamp, made about 5000 barrels. And then it was plugged in 1967.

All other wells drilled on that lease map are Queen wells. There's never been any other wells drilled below the Queen. So this is the only well on the lease map that --

Q. Okay, what can you tell me -- Could you go into a little more detail about the Devonian formation that that well encountered? Was there any oil or hydrocarbons?

A. Yes, there were. On the east side of that log you'll see the drill stem test, drill stem test number 2. The interval is shown on the log.

It recovered 900 feet of gas in drill pipe, 180 feet of oil, 900 feet of heavily oil- and gas-cut mud, being 50 percent oil. It did not encounter any water.

They then dropped down five feet, or they drilled another 30 feet, and they took a second drill stem test that was started five feet below the first drill stem test, and that recovered salt water.

And so we believe that in between that five feet

is approximately where the oil-water contact would be. And we need to get structurally high to that well so that the more porous section, which is colored in red, and that sonic porosity is out to 13 1/2 percent, is in the oil-bearing section of the oil column.

Q. So the two interpretations on the DST 2 and 3, as I see, "Interpretation: formation oil-bearing but tight", and then you go down to drill stem test 3, "Interpretation: formation porous but water bearing" --

A. Right.

Q. Expound a little bit more on this tight area that's oil bearing. Is that same tightness, do you feel, going to be encountered in the -- upstructure or the --

A. Yes --

Q. I'm sorry.

A. It's present in both that well, as well as in the Enserch well, which is the well three miles to the north.

So using the only two control points we have, the correlations are very good, and I would assume that those two layers are fairly continuous.

So in our engineering calculations we've assumed that even though we've come in, hopefully, 75 feet high to the first well, we will still see this first 15 feet will be tight, and then we'll go into the porous dolomite facies.

Generally, we believe the Devonian is fractured, but we will not be able to get good recoveries out of that tighter rock, even with the fractures, typically. So we need to get into the more porous facies.

Q. What makes you feel that that oil-bearing -- let me rephrase that -- that tight area, is not going to be your main oil-bearing formation or your main oil-bearing rock in this higher portion of the structure?

A. We do believe it will be oil-bearing again, but because the Devonian is fairly interconnected with fractures, we believe that as you go upstructure, and if that is a reliable oil-water contact, the oil which is believed to be sourced in the overlying Woodford shale, which is the shale directly above the Devonian, that the oil will continue to migrate in to fill the structure.

It will migrate through the tight cap into the more porous rock, by a logic of, if it can migrate into the tighter rock, it can continue to migrate in the more porous rock, particularly if it's fractured.

And our knowledge of the Devonian is that it is not a -- it is fractured, because you typically have water-coning problems. A lot of wells, they just complete the very top of it because the fractures allow good vertical permeability. And it's just an historical assumption.

Q. What's the drainage of this tight area, would you

think?

A. The tight area, I don't think you would drain effectively even 10 or 20 acres. You can tell from the pressures that it just didn't have very much lateral extent.

The initial pressure was 3558 pounds, the final pressure was 2940 pounds, whereas the more porous rock below it, initial and final were 4575 pounds. That's more typical of true Devonian pressures.

Q. Now, you said that a formation such as this could have the potential to have water-coning problems. Does water-coning and drainage -- is there any relationship there, as far as drainage area?

A. Yes, if you have a -- In the Devonian in particular, more so than most formations in southeast New Mexico, if you have a -- Because it's a water drive, if you pull a well too hard, you'll pull the water up from below. The Devonian is very thick, it's probably 800 feet thick out here. And the rest of it will be water-bearing once you get through the oil section.

So if you do cone a well, if you produce it too hard, you'll end up -- the well will turn to water. And I've never heard of any Devonian well going back to oil once you start having water problems. So you won't get the drainage that you need. It will drain from below instead

of laterally.

Q. How will this well be completed in this upstructure?

A. The well will be drilled, we will drill into the Devonian until we encounter a porosity -- a drilling break, indicating porosity, take a drill stem test.

Then, assuming everything looks good, we'll run pipe to the top of the Devonian, drill out, cement and complete it open hole. I believe that's become a fairly standard practice in completing these Devonian wells.

Q. All the way into the oil-water contact area?

A. Generally what people try to do, because it is porous and fractured, they try to stay in the very top of it so as to limit potential water-coning problems.

Q. So how much open hole would one drill in this upstructured area?

A. If we encountered the same well as the Graridge well, we would probably drill the 15 feet of tight blue rock again, and then probably another 10 feet into the porous section there, colored in red.

Q. So you're talking maybe a -- or --

A. Twenty-five --

Q. -- about 15 feet?

A. Yeah, 25 feet.

Q. I know that this is a superimposed picture here

on this Exhibit Number 6, but what is your feeling of the top of that -- I'm sorry, let's go with the base of the Woodford shale, in the thickest part of this structure, to that oil-water contact. What kind of a distance am I looking at?

A. We believe we'll encounter the Devonian at minus 7525 and that the oil-water contact will be about 7621 to -25, somewhere in there.

Q. So roughly a hundred feet?

A. Roughly a hundred feet.

Q. So you're going to be drilling about 20 feet into the top portion of that 100-foot structure, you might say?

A. Or until we get porosity, whichever occurs first. You know, you drill until you get porosity.

Q. Assuming this well is drilled and it comes in good, like you're proposing here, and you drill 20 feet of open-hole into the porosity area and have good oil, are there potential for other wells to be drilled in this pool area to the south?

A. Yes, sir, we believe that this Devonian feature could be drained with a total of three wells, and those three wells would be in the northwest of the southwest, Section 31. On the seismic map, that is this feature there.

Q. Okay, I'm looking at -- The transcript is not

going to pick up "there", so do you want to describe it?

A. I'm sorry, that's the northwest of the southwest of Section 31. That's a seismic feature. It's similar to the first feature we want to drill, and then it's approximately 80 feet above the Graridge well.

A third well that would need to be drilled, assuming these are successful, of course, is in the southeast southeast of Section 36. Again, there's another structural high there that is along the lease line, colored in red.

Our engineering calculations suggest that those two wells could drain an additional 934,000 barrels.

Q. How about any potential wells down in Sections 1 and 6, to the south of 36 and 31?

A. Section 6, in the northwest northwest, is a possibility, particularly if our map changes as we drill and get more data.

But at this current time, I believe that the three wells we've proposed for the Devonian would be all that we would need.

Of course, when we drill a Devonian feature, we may encounter shallower pay objectives which would be on different spacing. So we may end up drilling some shallow wells in Section 6.

Q. When you say shallow wells, you're talking about

other formations?

A. Other formations above the Devonian.

Q. Okay. Now, let me make sure I've got this straight. The three wells, of course, the one you're proposing today --

A. Correct.

Q. -- and then one down in the southeast of the southeast of 36. That would be near that -- I'm looking at Exhibit Number 1. I guess there's a Well Number 16. Of course, I understand that's a higher San Andres well, but down in that quarter quarter section?

A. Yes, sir.

Q. Okay, where would the other well be?

A. The northwest of the southwest of Section 31.

Q. Just south of that blue-shaded area in Section 1?

A. I'm sorry?

Q. I'm sorry, I'm looking at Exhibit Number 1.

A. Oh, I'm sorry.

Q. And just south of that blue-shaded area?

A. Yes, just south of that blue-shaded area.

Q. And then with that 160 acres, that covers Sections 6 and 1. That would be a potential, depending upon the three wells?

A. Yes, sir.

Q. As far as the well three miles to the north,

that's that Enserch Well Number 1, Enserch Number 1 State 13, did that have a DST in the Devonian?

A. No, sir, they did not. They did not drill stem test it. They did perforate it, and they recovered water.

Q. Do you have any -- Oh, there it is. They swabbed 85 barrels of water; is that correct?

A. Yes, sir. I do not know how long that was.

Q. What kind of time frame is Strata looking at to drill this well?

A. We would like to drill it before March 31st.

Q. Okay, let's look at this particular location and the drilling of it either -- at a standard location, in either of those quarter quarter sections which makes up this subject 80 acres, and what could be the outcome or the downfall of that particular well between its success or failure?

A. Okay, if we had to drill a standard location, I would recommend we just move it a little south, into the southeast of the northeast.

My concerns would be, if we drill and have deviation, which is only natural when you're drilling a 12,000-foot well -- you can't keep it perfectly straight -- and the problem is, if we do get too far south and cross the faults, then we'll be unsuccessful. And so we're trying to stay in the center of the feature.

Secondly, if we did drill that well and the well could drain the acreage, it wouldn't be commercially smart for us to drill a second well and then -- I know the overriding owners in the northeast quarter are going to not, you know, like that. So we thought this was a fair thing to do.

We own 100 percent of the rights in each 40, so it doesn't impact us either way.

EXAMINER STOGNER: Counselor, do you have any questions?

MR. CARROLL: Not at this point.

EXAMINER STOGNER: Are there any other questions of this witness or Ms. McInerney?

MR. CAVIN: Could I just make a few final observations or closing statement, if you will?

EXAMINER STOGNER: Yes, please.

MR. CAVIN: Mr. Examiner, just by way of clarification, Mr. Worrall indicated that we'd like to be drilling by March 31st, and in fact there's some imperative to that because it is a year-end drilling deal, and so there are some tax implications.

Just so there's no misunderstanding, we do appreciate that this is somewhat novel and that we're coming in for special pool rules before we've drilled a well, and we want to make it clear that what's most

important to the Applicant is to be drilling the well and the approval of the unorthodox location.

If we can't get the special pool rules, we understand that. We would certainly like it on the 80 acres, if that's available. But -- Just to kind of put it in perspective for you, Mr. Examiner.

EXAMINER STOGNER: Thank you, Mr. Cavin. Your comments will be so noted.

As far as any other questions, these witness may be excused.

If there's nothing else further in this particular matter, I feel we can take it under advisement at this time.

MR. CAVIN: Okay.

EXAMINER STOGNER: With that, I'll take Case Number 11,206 under advisement, and I will take note of your request to come out with an order so the well can be drilling in a prompt manner.

MR. CAVIN: Thank you.

(Thereupon, these proceedings were concluded at 9:10 a.m.)

* * *

CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL February 17th, 1995.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11206 heard by me on 16 February 1995.

, Examiner
Oil Conservation Division