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 SOUTHLAND ROYALTY COMPANY

CASE NO. 10,891

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

January 6, 1994

Santa Fe, New Mexico

JAN 28 1994

This matter came on for hearing before the Oil Conservation Division on Thursday, January 6th, 1994, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

January 6th, 1994
Examiner Hearing
CASE NO. 10,891

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E X H I B I T S

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A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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* * *

WHEREUPON, the following proceedings were had at 8:44 a.m.:

EXAMINER STOGNER: Call next case, Number 10,891.

MR. STOVALL: Application of Southland Royalty Company for approval of a waterflood project and qualification for the recovered oil tax rate, Lea County, New Mexico.

EXAMINER STOGNER: Call for appearances.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of the Applicant, and I have three witnesses to be sworn.

EXAMINER STOGNER: Any other appearances?

Will the witnesses, all three of them, stand to be sworn at this time?

(Thereupon, the witnesses were sworn.)

(Off the record)

MR. KELLAHIN: Mr. Examiner, my first witness is Mr. Markus Thomerson. Mr. Thomerson is a geologist.

MARKUS D. THOMERSON,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, sir, would you please state your

name and occupation?

A. My name is Markus Thomerson. I'm a geologist with Meridian Oil, Midland District.

Q. Mr. Thomerson, on prior occasions have you testified as an expert geologist before this Division?

A. No, sir, I have not.

Q. Summarize for us your education.

A. I have a bachelor of science in geology from Midwestern State University, Wichita Falls, Texas; I have a master of science obtained from Texas Tech University in Lubbock, Texas; and approximately six years of experience as a petroleum geologist in the Fort Worth Basin, Delaware Basin and Illinois Basin.

Q. In what years did you obtain your two geologic degrees?

A. Bachelor of science was obtained in 1983, master of science was obtained in 1992.

Q. As part of your professional experience as a petroleum geologist, have you on prior occasions done geologic work in the San Andres formation?

A. Yes, sir, I have.

Q. Were you the primary geologist that did the geologic interpretation for this Application on behalf of Southland Royalty Company?

A. Yes, sir, I was.

Q. As part of that geologic study, were you able to complete a study to your satisfaction upon which you could base certain geologic conclusions?

A. Yes, sir, I believe so.

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

EXAMINER STOGNER: Mr. Thomerson is so qualified.

Q. (By Mr. Kellahin) Mr. Thomerson, let's identify for the record a couple of your exhibits. First of all, there is a base map, a locator map if you will, sir, that's marked as Southland Exhibit Number 1.

A. Yes, sir. This is a base map covering the Spencer Field Waterflood, proposed waterflood. The area in yellow is our Spencer DS lease. The wells in black are producing or shut-in wells, and the -- obviously, the dry holes represented as such.

Q. Your information is that this display contains wells that penetrated into the San Andres and either produced or were dry in that formation?

A. Yes, sir.

Q. To the best of your knowledge, does this display accurately show all of those wells in terms of their location?

A. Yes, sir, it does.

Q. And as it's been represented to you, the area for

the waterflood project is that colored in by yellow?

A. Yes, sir, it is.

Q. All right. Based upon that information, then, let's turn to your first geologic display.

A. Mr. Examiner, this first exhibit, C, is a structure map that is contoured on top of the San Andres.

Q. All right, hang on just a second before we confuse everybody. Exhibit Number 2?

A. Oh, I'm sorry, Exhibit Number 2. I'm --

Q. Yes, sir.

A. -- going the wrong direction. Pardon me.

Q. Hang on just a second. It's marked as Exhibit C because we used exhibit letters when we attached these to the Application. The Application follows a format for the enhanced oil recovery applications, and this is one of the submittals under the Division rules for that purpose.

This, in fact, is a new waterflood project. But that's the reason for the exhibit having two identifications. C represents the letter used for the Application.

For purposes of the hearing, Mr. Thomerson, let's use the numbers.

A. Yes, sir.

Q. All right. Having said that, what are we looking at?

A. Okay, this Exhibit 2 is a structure map contoured on top of the San Andres, across the Spencer Waterflood Unit.

As you can see from the structure map, we have an east/west-trending anticlinal structure. Based on the well data, it's very easy to determine this. And as you can see, the majority of closure is across our acreage.

Q. All right. This represents your work?

A. Yes, sir.

Q. You referred to the waterflood as a unit. In fact, it is a leasehold project area, is it not?

A. Yes, sir, it's just a bad choice of words.

Q. All right. Let's look at the geology now.

A. Yes, sir.

Q. Why was it of significance to you as a geologist to pick the top of the San Andres upon which to configure the structure of that formation?

A. Okay, if the Examiner would notice on the cross-section that is Exhibit Number 4, the one presented here in front, as you can see, the top of the San Andres is a very easy pick from the standpoint of using log data.

And the porosity development and so forth usually trends and follows the tops of the structures, so that was the reason for using the top of the San Andres.

Q. That marker, then, is a readily identifiable

marker for you as a geologist when you're picking the San Andres formation?

A. Yes, sir.

Q. Do you find that you have adequate log data from these wells on which to make a reliable pick of the top of the San Andres?

A. Yes, sir, I do.

Q. Were you able, then, to construct to your satisfaction an adequate structure map using that marker?

A. Yes, sir, I have, and that is, again, Exhibit 2.

Q. All right. When the engineers are investigating the opportunity for a waterflood project area and seek your assistance, what purpose can you and they utilize this structure map for when they're looking at a waterflood project?

A. Okay, the structure map is used to identify downdip locations.

Q. Help us do that.

A. Okay. Our proposed injector, which is the Number 4 State DS, you will notice --

Q. That's in the northwest corner of the project area?

A. Yes, sir, it is.

Q. And why, geologically, is that, in your opinion, justified as the initial injection well for the project

area?

A. This particular well was picked because one of its downdip positions you can readily see from the structure map.

Secondly, the only current producer that we have on the lease, to the best of my knowledge, is the State DS Number 2, and you can see the proximity between -- that Number 4 is downdip by approximately 65 feet to the Number 2.

Q. Number 2 is the next well to the east of the Number 4?

A. Yes, sir.

Q. What is the status of the remaining wells within the project area?

A. They are either shut in or they are in the process of being brought on line.

Q. All right. In looking --

EXAMINER STOGNER: I'm not sure I understand, I'm sorry.

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: The Number 2 well is the only one that's producing?

THE WITNESS: To the best of my knowledge, yes, sir, at this point.

EXAMINER STOGNER: Okay, I'm sorry.

Q. (By Mr. Kellahin) And the status of Number 4 then?

A. Number 4 is a shut-in. I couldn't -- I cannot tell you the details of the mechanics of the well.

Q. All right, we'll ask the engineering witness --

A. Yes.

Q. -- those kind of operational questions.

But for purposes of your study, the engineering witness, if you will, has selected the Number 4 Well to be the initial injection well?

A. Yes, sir.

Q. All right. Now, let me talk about the geology. Does that satisfy any geologic criteria?

A. Yes, sir, it does.

Q. And what are -- What is the criteria?

A. That criteria is that -- again, as I have stated before, we have -- the Number 4 is in a downdip position with respect to the Number 2, which is, again, the only current producer that I know of. And typically, you would always inject water for the purposes of hydrocarbon recovery in a downdip position.

So what we're actually looking at is, if you will, a pilot program between the Number 4 and the Number 2, to see if this will be effective.

Q. Do you have data or information to tell you if

there was any oil/water contact originally in place in the reservoir?

A. Yes, sir, we do. There was core data that was available on the Number 4 State DS, the Number 2 State DS and the Number 7 State DS and Number 5 State DS.

Q. All right. Approximate for us what in your opinion is the original position on the structure of the oil/water contact.

A. The original structure was at a minus 1190. Again, that was determined through the core analyses that had been performed on the cores.

Q. Let's see, we don't have an 1190 contour line, but you've got a minus 1200.

A. Minus 1200.

Q. All right. When we look at the structure map, then, and find well locations that are upstructure from that oil/water contact -- and I'm particularly interested in the correlative rights, if you will, of those interests that offset the project area. Are you with me?

A. No, sir, I'm not sure if I understand the correlative rights.

Q. Okay, let me explain it to you.

Look in Section 23.

A. Yes, sir.

Q. There's the Cotton Petroleum --

A. Yes, sir.

Q. -- Scharbauer State Number 1 well. That is not part of the project area?

A. No, sir, it is not.

Q. All right. Geologically, explain for me why, in your opinion, if you have an opinion, that portion of 23 that appears to be above the oil/water contact is not in the project area.

A. We don't believe that the Cotton Petroleum Number 1 Scharbauer would have been a very good candidate, simply because of the very poor production established out of the San Andres. Cumulative production is approximately 600 barrels.

Q. When you look at the northern side of the project area --

A. Yes, sir.

Q. -- again there is some transition area, if you will, between the original oil/water contact and the project area. Were there any penetrations?

A. Yes, sir, there were two penetrations north of the area. The Aztec Oil and Gas Number 2 State SS did produce from the San Andres, had a cumulative production of approximately 20,000 barrels which, in relation to production on our leasehold, is very poor.

Q. Okay, the Aztec Oil and Gas Number 1 State has

got a dryhole symbol?

A. Yes, sir.

Q. Is that well being utilized for anything?

A. Yes, sir, that is currently our water disposal well and will take every bit of water that we can give it.

Q. All right. So water produced from the one currently producing oil well in the project area --

A. Yes, sir.

Q. -- also produces San Andres produced water?

A. Yes, sir.

Q. And your knowledge is, that water is currently being put in the Aztec Oil and Gas Number 1 State Well?

A. Yes, sir, it is.

Q. Is that water going back into the San Andres formation or into some other formation?

A. I really couldn't say, sir. I'm not familiar with the mechanics of that well. I just know that it's an injection well.

Q. All right, we'll ask the engineer what he's doing with the water.

Back to my question, though. When we're looking at an area that geologically has the opportunity to be effectively waterflooded -- okay?

A. Yes, sir.

Q. -- the engineer tells you he wants to put the

water in at the Number 4 Well location, within your structure do you have adequate reservoir continuity within the San Andres to give that opportunity a chance to succeed?

A. Yes, sir, I do. Again, by -- Mr. Examiner, if you would notice the structural cross-section here, A to A', you can see the lateral continuity.

Q. (By Mr. Kellahin) Hang on, don't go so fast.

A. I'm sorry.

Q. That's Exhibit Number 4?

A. Yes, sir, Exhibit Number 4.

Q. My question for you, sir, is if there is enough lateral continuity in the reservoir to give the Number 4 Well, the injection well, the opportunity to affect the existing producer and other wells that may be put back into production.

A. Yes, sir, it is.

Q. How do you reach that conclusion?

A. That is based upon this -- As you can see from this structural cross-section running from west to east across our leasehold, you can see the continuity of the San Andres as well as porosity, the developments that continue across the lease.

Q. In looking at the continuity of the project area, we've looked specifically at Exhibit Number 4. Let's go

now to Exhibit Number 5, which is your northeast-to-southwest cross-section.

A. Yes, sir.

Q. It runs in a slightly different direction.

Take a moment and help the Examiner be oriented as to where Exhibit 5 runs in terms of the wells that are located on that cross-section.

A. Okay, Mr. Examiner, as you -- From A to A' ran more or less through the southern half of our leasehold, from the Cotton Petroleum Number 1 Scharbauer to the 5, to the 1, the 6 and the 7 State DS, respectively.

This is a north-south cross-section, approximately perpendicular to that, again to show that there are no lateral discontinuities as a result of going along strike with this anticlinal structure. This is more or less just to -- The two cross-sections are perpendicular to one another, again, to just enhance your ability to see the lateral continuity of the San Andres across this lease.

Q. At this point, then, in your study you have defined a structural component of the reservoir upon which you've concluded that this geologically should be a viable waterflood opportunity for Southland Royalty in the San Andres formation?

A. Yes, sir, I have.

Q. In addition, you have concluded that there is

sufficient reservoir continuity in both directions to give the injection well the chance to affect and communicate with the producing wells?

A. Yes, sir, I have.

Q. Did you also produce or generate any kind of isopach map so that we could see the relative thickness of the reservoir over the project area?

A. Yes, sir, I did. That is Exhibit 3.

Q. All right. Let's take a second and unfold it.

Again, this, as the other three exhibits, is your work product?

A. Yes, sir, it is.

Q. What does it show you?

A. Okay, this map represents the gross interval of San Andres above the oil/water contact at 1190, which in the case of this map, which is on the San Andres section, the zero line would be the oil/water contact at minus 1190. And then a measured thickness, measured in these wells above the oil/water contact, and then a contour map made of those values.

Q. What additional information does the isopach add for you as a geologist in terms of making conclusions about the effectiveness of this for a project waterflood?

A. What this shows is a thickening of the San Andres section from the outer perimeter, say at the zero line

where oil/water contact, and showing that we could still have, if you will, an oil column present up to a maximum of 120. And again, this is a gross interval thickness.

Q. Within the project area, it appears that you have two, four, six -- at least seven potential candidates from which to pick that first injection well?

A. Yes, sir.

Q. When you look among the seven potential existing candidates for conversion to injection, which of these wells in your opinion suits that purpose best?

A. That for the injection would be the Number 4 State DS, based on the mapping.

MR. KELLAHIN: Mr. Examiner, that concludes my examination of Mr. Thomerson.

We would move the introduction of his exhibits --

MR. STOVALL: -- 1 through 5?

MR. KELLAHIN: -- 1 through 5.

EXAMINER STOGNER: Exhibits 1 through 5 will be admitted into evidence.

EXAMINATION

BY EXAMINER STOGNER:

Q. I missed his last question, your answer. I've got a cold in my ear.

MR. KELLAHIN: Would you like --

Q. (By Examiner Stogner) Why did you -- Yeah, why

was this well chosen over the other seven, or the other six?

A. Okay, sir, Mr. Examiner, if you would refer back to the Exhibit 3, which is the gross interval isopach, you'll note that the Number 4 State DS has the thinnest gross interval of San Andres above the oil/water contact on our leaseholds.

EXAMINATION

BY MR. STOVALL:

Q. Put it in the thin section and drive the oil towards the thick section; is that the idea?

A. Yes, sir.

Q. Okay. Just kind of for my edification, as it gets thick, does the thick go up? Does the thickness come from the top side, if you will, of the formation above the -- I'm assuming the oil/water contact is fairly flat.

A. Right, I assume you're interested -- you're referring to the structure, will the -- or the --

Q. Right, well, yeah.

A. -- porosity structure is related to the structure? Yes, sir, they are.

FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. Some basic information, and I'm going to lead up to some stuff here.

What is going to be the injection interval in this injection well? What thickness?

A. To be perfectly honest with you, sir, I can't answer that. I'd like to defer that to the engineering, if I could.

Q. Well, geologically speaking, if you're going to inject throughout the whole interval or just any portion of it, do you see that -- the water plume, if you will, as it goes back toward the east and to the south, extending vertically or keeping within the confines of whatever the injection interval is?

A. I believe it will be within the confines of the injected interval.

Again referring to these cross-sections, you can see that the porosity is laterally continuous. However, it is bounded by very tight nonporous dolomite and anhydrite within the San Andres section.

Q. We see this whole pay interval of the San Andres that's proposed. Is that a somewhat homogeneous system?

A. No, sir, I would not say -- It is a heterogeneous reservoir. The porosity streaks themselves are homogeneous, however. There are varying concentrations of anhydrite, salt, so forth, and dolomite throughout the whole reservoir. Again, that's related to diagenetic effects after deposition.

EXAMINER STOGNER: I don't have any other questions of the geologist right now. I need to get more of a picture here, but perhaps I might have another question of him later --

MR. KELLAHIN: Certainly.

EXAMINER STOGNER: -- after I hear the engineer.

Do you have any other questions, Mr. Stovall, at this time?

MR. STOVALL: No.

MR. KELLAHIN: One follow up while we're at this point.

FURTHER EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Thomerson, with regards to the existence of barriers, permeability barriers to either vertical flow upward or downward, do we have a container in the San Andres?

A. Yes, sir, we do.

Q. So that if the engineer selects points of either injection or withdrawal out of the San Andres, is there some geologic assurance that that container will contain injection fluids?

A. Yes, sir. Again, I think that's illustrated by the cross-sections here.

Q. And when we look at the cross-section, find for

us a point that contains those fluids on the top end of the reservoir.

A. Okay. If you will notice the line where we have noted the top of the San Andres --

EXAMINER STOGNER: Are you referring to the B-B cross-section?

THE WITNESS: Yes, sir, to the B-B, the one here in front, sir.

EXAMINER STOGNER: Okay.

THE WITNESS: You'll see there's a tight streak that is immediately above -- In most cases I guess the best well to see that in would be the Aztec Oil and Gas Number 3 State DS. You can see that this is a neutron and sonic log. You note the sonic log is indicating a very high transit time, which is indicative of very tight -- very low porosity.

Q. (By Mr. Kellahin) On that log, can you get a footage reference for us?

MR. STOVALL: You can get down and --

MR. KELLAHIN: You're welcome to come down and find it on this --

MR. STOVALL: You're not required to have binoculars.

THE WITNESS: Okay. Yes, sir, right here. You can -- This here is the top of the San Andres at 4888, and

if you'll notice this is a time streak here, and transit times --

MR. KELLAHIN: Well, you're going too fast for me.

THE WITNESS: I'm sorry.

Q. (By Mr. Kellahin) The court reporter needs to know what you mean when you say "here", so let's go back and find the type log you're looking at.

A. Okay, again referring back to the Aztec Oil and Gas Number 3 State DS.

Q. All right, give us the footage that marks the top barrier for the pool.

A. The top of the San Andres is shown to 4888. And from approximately 4860 to about 4880, you'll notice the sonic log as well as the neutron are indicating a very tight interval, which would be our upward containment.

Q. Find us the point of the lower containment and identify for us on that exhibit with a specific well and a certain footage.

A. Okay, sir. Again, go back to the Number 3 State DS. You will see below, at 5000 -- approximately 5000 -- around 5070, notice the neutron log there is indicating a very tight section.

Q. Are you able to correlate, if you will, both the top and the bottom barriers across the project area?

A. Yes, sir, where wells have penetrated. A lot of these wells did not totally penetrate the San Andres section.

Q. Do you see any indication of faulting or hydrologic connections in the project area that would provide avenues by which fluids could migrate out of the San Andres formation?

A. No, sir, there are not.

MR. KELLAHIN: That concludes my examination.

MR. STOVALL: I have just one more question.

THE WITNESS: Yes, sir.

MR. STOVALL: Every once in a while I venture into geology to prove my ignorance.

FURTHER EXAMINATION

BY MR. STOVALL:

Q. Does that oil/water contact act as a barrier itself? Does it have any effect?

A. I would not say at this time, because this was the original oil/water contact. The Number 2 State DS is currently making oil and water, so we have had some encroachment. So I couldn't put a position exactly on the oil/water contacts.

Q. No, but I mean as far as -- I don't care what the particular depth is. But to the extent you've got an oil/water contact in that water level, does that tend to

encourage injected water to go upward rather than down into the --

A. Yes, sir, I would think so.

MR. STOVALL: Okay, that's all I want to know.

FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. While we're discussing the Number 3, Aztec Number 3 Well, does the original oil/water contact show up on that log?

A. Yes, sir, it's a -- from a point of -- I guess you could -- How to phrase this properly.

As I'm sure the Examiner is well aware, log analysis can be a -- sometimes a subjective art, if you will.

However, this oil/water contact, we're seeing changes in porosity, and I think that this also may have to do with the transit times involved with oil and water. Again, this is not the basis for us picking this. This was based strictly on core analysis and changes in saturation.

Q. And the Number 3 was cored?

A. Let's see. No, sir, I do not have any core data on the Number 3.

Q. Just the Number 2 and Number 4?

A. Well, Number 2, the Number 4 State DS, the Number 5 State DS and the Number 7 State DS.

Q. Do you know where the oil/water contact is today?

A. Again, the Number 2 State DS is making oil and water, and I would assume that it's -- that it could be breakthrough. I think that's beyond my expertise, sir. I'd like to leave that to the engineers.

EXAMINER STOGNER: Okay. I have no other questions of this witness at this time. Perhaps after we hear the engineer.

MR. KELLAHIN: Call at this time Mr. Maurice Gaddis. Mr. Gaddis is a reservoir engineer, and this is his project.

MAURICE P. GADDIS, JR.,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Maurice P. Gaddis, Jr. I'm a reservoir engineer for Meridian Oil in Midland, Texas.

Q. On prior occasions, Mr. Gaddis, have you testified and qualified as an expert reservoir engineer before this agency?

A. Yes, I have.

Q. And are you the project engineer, if you will,

for this particular waterflood project?

A. Yes.

Q. You identified yourself as an employee of Meridian Oil, Inc.?

A. Yes.

Q. Are you also appearing on behalf of Southland Royalty Company today?

A. Yes.

Q. It's a sister company, and the parent company is Burlington Northern, I guess?

A. Burlington Resources, that's correct.

Q. All right. Have you satisfied yourself as an engineer that you could reach engineering conclusions about the viability of this as a project area for which you could effectively waterflood the San Andres formation?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Gaddis as an expert reservoir engineer.

EXAMINER STOGNER: Mr. Gaddis is so qualified.

MR. KELLAHIN: A bit of housekeeping, Mr. Examiner.

The Exhibit 8 that you're to see soon is Mr. Gaddis's C-108. At page 11 of Exhibit 8 is the Midland Map Company area-of-review map.

Exhibit 6, which you're looking at now, is our

replacement for page 11. I asked Mr. Gaddis to construct a larger scale display so that we could find and recognize the wells in the area of review.

I failed to communicate to him that his map should contain wells within a two-mile radius, and if you'll look at Exhibit 6, we're slightly short of that area. If you desire, we'll certainly supplement this and provide the additional half section around this nine-section plat. But the mistake is mine and not Mr. Gaddis's.

EXAMINER STOGNER: I do appreciate that offer. At this time I don't see that that would be necessary. The reason for the larger map is mostly for the half-mile area of review, but perhaps after hearing some testimony there might be some need, but at this point I don't see any need to extend it any further than what you have here.

Q. (By Mr. Kellahin) Let's talk about the project.

A. Okay.

Q. And I think it would help us to look at Exhibit 6. Identify that display for us.

A. This is our exhibit that shows the wells within the half-mile radius of the proposed water injection well, the State DS Number 4.

Q. Okay. We're learned your presentation on the Exhibit 2 -- which is the structure map Mr. Thomerson had.

If you've got one of those, Mr. Gaddis --

A. Yes, referring to Exhibit Number 2 again, it is a structure map on top of the San Andres.

Q. All right. Let's talk about the project concept.

A. Okay.

Q. With Mr. Thomerson's geology to assist your illustration, describe for us what you see as a reservoir engineer as the purpose for this project.

A. There are two waterfloods, rather large floods, within the area here. You have the Lovington unit and the West Lovington unit, that have been successfully flooded. These wells are on 40-acre spacing, much like the other units. This is a San Andres zone. It's comparable and analogous to the other San Andres units.

We have a very well defined structure, as previously testified. We have a structure that will allow us to convert one well to test the viability of this prospect -- project -- and inject in a downdip situation. This would be our most optimum location.

Q. Do you know by the success of other San Andres waterfloods that an opportunity exists to make this successful?

A. Yes.

Q. The project area is a single leasehold, as I understand it; is that correct?

A. That is correct.

Q. When you look at the area to be included in the project, whether it's under a unitized operation or a leasehold waterflood, what about this project and its configuration led you to the conclusion that it was suitable for this single lease?

A. Okay, I would like to point out, to the south of the State DS lease are four wells immediately offsetting the lease. I am again referring to Exhibit 2. These wells did not produce hydrocarbons from the Spencer-San Andres Pool. They were non- -- They just would not produce. It would be a hundred percent water.

Moving to the west of the lease, you have the Cotton Petroleum State -- Scharbauer State Number 1. This well produced about 600 barrels of oil and was non- -- was just totally noncommercial.

Moving to the north, the Aztec State SS Number 2 -- that's directly north of the SRC State DS Number 3 -- this well produced about 20,000 barrels of oil. And everything else around it had -- they just had no production out of the San Andres reservoir.

What this allows us to do is to say, we have this confined structure with the oil column, the majority of it, very much the lion's share, on the State DS lease.

Q. Do you see any engineering justification to

having made the project area larger and included some of this offsetting leasehold area within the project?

A. No.

Q. Do you see any opportunity to impair or violate correlative rights by not including that offsetting acreage?

A. No.

Q. Do you see any opportunity for reservoir waste, if the project area is approved as you have requested?

A. We see no waste as the proposed unit is -- the proposed flood as we have it.

Q. Let's look about the project itself.

A. Okay.

Q. Where are we in the history of the depletion, if you will, of this portion of the San Andres formation within the project area?

A. We're in the very late primary stage.

Q. How late are we?

A. We have recovered approximately 800,000 barrels from this pool. There's approximately 35,000 to 38,000 remaining barrels, so we are on the last leg of primary production.

Q. Those numbers are generated for the project area?

A. Yes.

Q. What is your current producing rate for your

wells in the project area?

A. The SR State -- or Southland Royalty State DS Number 2 currently produces about 20 to 25 barrels of oil per day and will make between 250 to 300 barrels of water.

Q. What are you currently doing with the produced water from that one producing well?

A. It is being disposed of in the disposal well directly north of the State DS Number 2. That is a disposal well, and this is where we take all of our disposal water at this time.

Q. All right. Into what formation does this disposal water accept that water?

A. It is listed as part of the San Andres. However, it is significantly lower than the pay zone listed in the Spencer-San Andres Pool. The formation, I believe, is around 75 feet below the interval that you can qualify or quantify as Spencer-San Andres.

Q. When you look at choices and options, as a reservoir engineer, to initiate a secondary or an enhanced oil recovery project, and you've got two, four -- seven wells to choose from, how did you decide on what configuration for your injection pattern?

A. There are two reasons, one of them being that because it is such a small lease, the most optimum pattern that we felt like would be a peripheral type pattern, and

that's what Number 4 Well would represent.

Second reason is, it is a downdip well, and we felt like from our experience in the past, with structures such as this, a downdip injection well, just slightly downdip, is going to be much more -- You're going to have more favorable results.

Q. If you start with the Number 4 State as your initial injection well, describe for us an example of development, if you will, for secondary recovery. What happens then?

A. As mentioned, this is more or less a pilot. We would like to see the type of response that we expect from the State DS Number 2 and the State DS Number 5, which is now producing, just recently.

When we see the type of response we feel is within acceptable engineering limits of our prediction, then we feel like we have a choice to -- at least one more well as an injection well, possibly two.

Q. You're not yet prepared to make that choice or judgment about where to put additional injection wells or what producer wells might be converted to injection?

A. Not at this time.

Q. All right --

EXAMINER STOGNER: I'd like to hold you right there, Mr. Kellahin.

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: I apologize, but I want to make sure I get some stuff clear.

EXAMINATION

BY EXAMINER STOGNER:

Q. Let's go back to that salt water disposal well. That's the Aztec Number 1 to the north; is that correct?

A. Yes, that's correct.

Q. Okay. Do you have a feeling of how deep the injection zone or the disposal zone in this well is below the original oil/water contact at minus 1190?

A. Let me -- Okay, as described here, at minus 1190 -- I have to -- let me -- That would be just on the porosity interval as shown here as our pay zone.

In the State SS Number 1, those perforations that were originally in the zone to test it produced nothing but water. So we felt like this one was either right at the oil/water contact, it was too tight to really be productive of oil, whatever the case may have been, those perforations -- there were numerous ones -- they were all squeezed off and tested, and they held -- there was no flow into during the test.

Then they moved down into a porous and permeable zone below that, I would say at least 75 feet, which is my best recollection of that log, and perforated, and that's

where the water's being disposed of.

There appears to be no hydrological communication between that lower San Andres and the upper pay zone that we're concerned with.

Q. In your opinion, under normal disposal operations of the Aztec well -- I don't know if you're familiar with the Aztec disposal operations or not. Are you?

A. This is actually -- It is our well, and as familiar as a reservoir engineer would be.

My production engineer, as we have gone over this -- If that's what you need, yes, we have gone over it and we feel certain that we know where the water is going, is the disposal well.

Q. Do you know what kind of pressures you're utilizing in the Aztec Number 1 Well?

A. It's taking everything we can give it on vacuum.

Q. On vacuum. Which leads up to my next question. Is there any possibility, in the operations in which the Aztec well is presently disposing, of any vertical migration upwards? And I'm speaking more as a -- in the formation itself, as opposed to the well diagram or there being something drastically wrong with the well.

A. I believe -- I have reviewed the production data thoroughly on all of the wells, as well as doing a combined lease total, and I did not spot what I call the

quintessential gas/oil ratio collapse that you would see.

If you had that type of communication, you could say that gas/oil ratio had dropped off and stayed down, and you would come back to solution GOR.

Stretching out a lengthy answer, no, I have not seen anything that would really give me evidence at this time that that well is actually communicating with the Spencer-San Andres Pool.

Q. Speaking with -- Let's keep that same line of thought here. When, roughly, was the Aztec disposal well brought on line for disposal operations?

A. Let me dig through my notes, and I can tell you.

EXAMINER STOGNER: I appreciate this, Mr. Kellahin. While we were on the disposal well I thought it would be better to hit that, and then I can let you move on.

THE WITNESS: I may have made a liar of myself, but I can -- I will guesstimate.

Q. (By Examiner Stogner) Okay, that's all I'm asking.

A. Okay. I do have the exact date per our production department, but it was, I believe, either late 1971 or early 1972 when that -- I do have -- I'd like to mention, I have an exhibit later on in the presentation here to show the State DS lease production, and you'll be

able to see from that that there has been no response that we can quantify from any water injection.

Q. That's what I was leading up to.

A. Okay, I do have that.

EXAMINER STOGNER: Okay. With that, I'll shut up and hand it back over to Mr. Kellahin.

DIRECT EXAMINATION (Continued)

BY MR. KELLAHIN:

Q. Let's go through the C-108 process, Mr. Gaddis. Is that something you personally did yourself?

A. Yes.

Q. You've identified Exhibit 6 for us. Exhibit 6 contains, to the best of your knowledge, all wells that have penetrated to or penetrated through the San Andres formation?

A. That's correct, yes, sir.

Q. And within that half-mile radius, you have, then, to the best of your knowledge, properly located each of those wells?

A. Yes.

Q. Exhibit Number 7 is a tabulation of the project wells?

A. Yes.

Q. And gives the footages for those wells?

A. Yes.

Q. All right. Let's go to Exhibit 8. Identify Exhibit 8 for us.

A. Exhibit 8 is the form C-108 that has been filled out by me, and portions under my direction, for the wells within the half-mile radius and the other requirements that are necessary for completing the C-108.

Q. All right. Within the half-mile area reviewed, did you find any plugged and abandoned wells?

A. Yes, we did.

Q. Did you examine the plugging and abandonment procedures for each of those wells and provide a schematic of those wells?

A. Yes, we did.

Q. In each instance, do you find as a reservoir engineer that those wells have been properly plugged and abandoned?

A. Yes.

Q. Do you see any opportunity for injection fluids to migrate out of the San Andres injection intervals through the use of those plugged and abandoned wellbores to contaminate any freshwater sources?

A. No.

Q. When you look at the producing wells within the half-mile area of review, do you find any problem wells?

A. No, I do not.

Q. For any of the producing wells, did you have measured tops of the cements that are reported in your tabulation?

A. Yes, we have listed on pages -- portions of page 4, all of 5, 6 and the top part of page 7 the entire list of all the wells, both plugged and abandoned, producing within the half-mile radius of investigation.

Q. For any of the producing wells, did you have reported volumes of cement that were put into those wells?

A. We have reported volumes as well as temperature surveys on the majority of the wells, locating the top.

Q. Did you have to calculate cement tops on any of those producing wells?

A. Yes, we did.

Q. What was the criteria you used in making the calculation to verify the top of the cement in any of those wells?

A. We assumed that the yield on the cement was 1.32 cubic feet per sack and found in each case, even with a risk of 50-percent risk that our calculations could be off, that in each case we had sufficient cement across the Spencer-San Andres Pool.

Q. Describe for us in a summary fashion how you're going to set up the injection well for injection.

A. Okay. I would like to refer to page 14 first.

This is our current configuration of the State DS Number 4. Page 14 of the C-108, I'm sorry.

Q. Okay.

A. Okay, this is the current configuration. Our top of cement is at 3440, and this is by temperature survey, not calculated. Our current San Andres perfs in this well are 4964 to -94. That covers about 30 feet of interval. The log to this well is included in the package, of course.

Flipping over to page 15, our current configuration will consist of a Gulberson packer set at around 4900 feet, plus or minus. Our San Andres perfs will stay the same. We will use 2-3/8-inch internally plastic-coated tubing, and I would say that this is our proposed configuration.

Q. You have an internal plastic-coated tubing for the injection fluid?

A. Yes, we do.

Q. And you put some kind of fluid in between the tubing and the casing?

A. Yes, we will.

Q. And you monitor pressure on that space?

A. Yes.

Q. What have you forecast or anticipated to be the initial injection rates?

A. Our initial injection rates will be around, we

expect, 500 barrels per day, with a maximum of 1000.

Q. Based upon that assumption, have you forecasted what in your opinion is going to be the estimated additional oil that could be recovered from the project area?

A. Based upon analogous behavior with other fluids on the same spacing, we feel like that our secondary will yield about 500,000 barrels of incremental oil.

EXAMINER STOGNER: I'm sorry, what was that number again?

THE WITNESS: Around 500,000 barrels incremental.

Q. (By Mr. Kellahin) In your opinion, does the proposed injection pose any risk to the contamination of any freshwater sources in this area?

A. It does not.

Q. Have you identified what you believe to be the deepest known producing depth of any fresh water within the half-mile area?

A. Yes, the deepest fresh water is 100 to 150 feet.

Q. Describe for us what you have done to verify the location and the depth of any known fresh water.

A. There were two things that we did to verify the location of the fresh water wells.

Describing the first one, we called the State Engineer office in New Mexico, and by telephone he gave me

locations as he had them. And the notes that I took are listed with Exhibit Number 9. It's a topographic map.

Q. Just a second.

A. Okay.

Q. Let me trade Exhibit 9 with you. This has got some colors on it that may help you find those wells.

All right, Exhibit 9 represents what, sir?

A. Exhibit Number 9 is a topographic map with the location in the very center, small circle, of our proposed water injection well, with a mile radius drawn around it. And then the squares on here are the information from the State Engineer in Roswell as to what the locations of what he has -- what he understands to be water injection -- water supply wells, freshwater wells.

Q. Attached to Exhibit 9 are your handwritten notes?

A. Yes.

Q. And what do those represent?

A. Those are the actual locations as described to me of these water wells.

There's one other well on here that we did find. We walked -- The second thing we did was walk the area out here. We found one windmill, and it's almost due south of Section 24. It's in Section 25, you'll see it. It has a circle around it, plus a square in the middle of it. That is the location we have from our walking the land out there

of the only windmill that we could find within that mile radius.

Q. Does that windmill also show up on the State Engineer's list?

A. No, it does not.

Q. The color code on Examiner Stogner's Exhibit Number 9 has got some yellow dots, I think? I'd better show it to you --

A. Yes.

Q. -- so we can have you identify it.

A. That was just colored over the section number, yes.

Q. All right, I'm sorry. Based upon your investigation of the surface and the information available to you from the State Engineer's office, do you see any opportunity to have injection fluids contaminate any known or future freshwater sources?

A. No.

Q. Let me have you turn now, Mr. Gaddis, to Exhibit Number 10. Identify what it is we're looking at.

A. Exhibit Number 10 consists of the historical production since 1970 of the State DS lease. This is a combination of all of the producing wells on the State DS lease, historical production.

It also contains my primary -- remaining primary

projection, estimated remaining primary, as well as my projection for incremental waterflood. That's the line that you can see I have "incremental waterflood" posted on the production graph with "500 MBO" labeled after it.

Q. This display is identified as the State DS lease. That is the project area?

A. Yes, it is.

Q. And this is a State of New Mexico oil and gas lease?

A. Yes.

Q. What does Exhibit 10 show you?

A. Exhibit Number 10 shows -- Of course, one thing, it is a readily projectible decline curve. It is very typical of the San Andres under primary decline. It goes into a final decline anywhere between 8 to 12 percent, sometimes less. But this one exhibits a very good straight-line decline in the latter life around 10.6 percent decline.

It shows that as of November 1 of 1993, we accumulated around 778,000 barrels with remaining of around 35,000.

The waterflood, my projection of incremental waterflood, is shown on here, is 500,000, which would give this lease, as you can see on the right-hand side, an estimated EUR or an estimated ultimate recovery of around

1.3 million barrels from the State DS lease.

The other thing to point out from some earlier thoughts was, even though the water disposal well was in 1971 back here, there is really no break in the historical decline trend that would show a flattening or an uplift.

Q. Let me have you turn now, Mr. Gaddis, to Exhibit Number 11. Identify that for us.

A. Exhibit Number 11 is a -- just the entire State DS Lease production, and shown this way in tabular form instead of the graphical form in the previous exhibit.

We bring our prior columns up to date as of 1-1-89, and then monthly production of oil, water and gas, by month, a year through October of 1993.

Q. Have you estimated what you believe to be the cost of this project?

A. Yes. I don't have numbers in front of me.

Q. Did you sign a certification as the technical engineer with regards to the Application filed --

A. Yes.

Q. -- in this case?

A. Yes.

Q. And as part of that certification process, did you review the Division rules for enhanced oil recovery projects?

A. Yes, I did.

Q. And as part of that process, then, did you calculate what you estimate to be the cost of the project?

A. Yes, the capital facilities cost $120,000, and total project costs a little over $509,000.

Q. Have you also put a present value, undiscounted worth, on the additional hydrocarbons to be recovered if the Division approves the project?

A. Yes, I have.

Q. And what is that one?

A. Excuse me just a minute. In my economic runs I have put a value of around $3.8 million on it.

Q. Sir, let's turn now to the notification question. If you'll look back on Exhibit 8 and turn to page 9, there's a tabulation of offsetting interest owners.

A. Okay.

Q. Here's a copy of that.

A. Okay.

Q. Did you have representatives of your land department assist you in tabulating, to the best of your knowledge, an accurate list of offset operators and, in the absence of an operator, an offset interest owner for which then you caused notification to be sent of this Application and of this hearing today?

A. Yes.

Q. Let's turn now to Exhibit Number 12. It's the

certificate of mailing. You've got it right here. Does that certificate of mailing correspond to the notice list on page 9 of Exhibit Number 8?

A. Yes, it does.

Q. In your opinion, Mr. Gaddis, do you recommend to the Division Examiner that he approve this Application?

A. Yes.

Q. And in doing so, will it prevent waste and protect correlative rights?

A. Yes.

MR. KELLAHIN: That concludes my examination of Mr. Gaddis, Mr. Examiner.

We move the introduction of his Exhibits 6 through 12.

EXAMINER STOGNER: Exhibits 6 through 12 will be admitted into evidence.

EXAMINATION

BY EXAMINER STOGNER:

Q. Let's refer to Exhibits Number 10 and 11 in the tabulation of production. I currently understand that the Number 2 well is the only well producing, and you said it produced anywhere from about 20 to 25 barrels a day average?

A. Yes, sir.

Q. In looking at the tabulation, that being Exhibit

Number 11, is that the only well represented when I look at the 1993 production figures?

A. Yes.

Q. How about 1992?

A. Yes, and I believe we can say that somewhere possibly close from -- a portion of 1992 through 1993 will be only Well Number 2. I can give you exact dates at a later time. I don't have that with me.

Q. That's why I was looking at Number 10.

Now, you really don't show on there how many wells the production represents.

A. It represents all of the wells early on. The wells as they dropped off, they have a -- I have a knowledge of when the wells dropped off, and I do have that plotted up on another historical plot, showing when the wells dropped off, the total number of producing wells.

Q. I would like that information.

A. Okay.

Q. The reason being, looking at our injection rules and regulations, we do -- It's a simple designation, what's pressure-maintenance and what's waterflood, and it depends upon what a stripper well is. Twenty to 25 barrels a day is not a stripper well.

But however, in looking leasewide and poolwide in the Spencer lease, I'd like to designate that as -- more as

a waterflood.

MR. KELLAHIN: Yes, we have that available if you'd give us just a second.

(Off the record)

MR. KELLAHIN: It may be easier, Mr. Examiner, if we simply send you the individual production plots. I'll show you what Mr. Gaddis has. They are composites in which he has noted when certain wells went off production.

And that is not very definitive, perhaps, in response to your question. It would require some explanation. We're happy to do that. If you'd rather have individual plots, we'd be happy to generate those too.

EXAMINER STOGNER: If you can do individual plots --

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: -- I would like that.

And perhaps along with that information, perhaps you could include this --

MR. KELLAHIN: Certainly.

EXAMINER STOGNER: -- with a little bit of an explanation --

MR. KELLAHIN: Sure.

EXAMINER STOGNER: -- as opposed to trying to go through it. We've discussed it on the transcript, and we know what we're looking at and what we're asking for, but

if you can supply that information subsequent to today's hearing, and perhaps a little cover letter explaining, roughly, what we have, that way -- to complete the record.

MR. KELLAHIN: We'll be happy to do that.

EXAMINER STOGNER: It's a minor issue, but an issue that needs to be brought out.

Q. (By Examiner Stogner) In your preparation of your Exhibit Number 9, you testified that you spoke or contacted the State Engineer's Office in Roswell. In the preparation of your Exhibit Number 6, how did you determine that this was all the oil and gas test wells in that half-mile radius?

A. The wells that were actually in there, if I understand your question -- I think I've got a cold here too. The radius that we took there, of course, we determined not only from looking at the information that was available through completions and where the locations were set, but also through any type of production data. We scoured the records, of course, for that, and that's where we found that there was nothing ever productive out of the Spencer-San Andres Pool to the south and only the Cotton Petroleum Well to the west.

Q. Okay, I'm asking more of a general question --

A. Oh --

Q. -- a description of all wells, whether they be a

junked and abandoned shallow well, oil and gas test or a deep Morrow gas test.

Are all those wells, or if there are any in existence, would they show up in your half-mile radius in Exhibit Number 6?

A. Yes, they would.

Q. Okay. And there again, I'll ask the same question. How did you determine that there were no other deeper test wells, or shallow tests for that matter?

A. The best determination, I believe, that we have is a -- two -- One of them is a book, it's the Petroleum Information Locator Book that, to the best of our knowledge, does have every well that's ever been drilled in a particular area by its section, township, range and unit in a section. And this book allows us to locate each well.

And then the other cross-reference, of course, is that you use the other public sources available, to not only through Petroleum Information, also through *Dwight's* and scout tickets, on-line scout tickets, through the electronic services, as well as hard copies.

Q. And did you utilize those services?

A. Yes, we did.

Q. And since you operate the Spencer lease, I'm sure you looked internally?

A. Yes, yes, we did.

Q. I want to go over the cost again. You testified that -- Yes, I missed it. The project costs stated. Would you run those through -- by me again?

A. Yes, the facilities cost -- The upgrade of facilities in order to provide a water injection station was around $120,000. This cost estimate was provided for by our facilities and production group.

Q. Now, this $120,000 upgrade for your facility, is that just for this one injection well, or would it be able to contribute or bring other injection wells on line?

A. We are preparing a little bit ahead in that we have connections available -- The facility itself, in answer to your question, yes, and we will be able to service other injection wells if the opportunity does arise.

Q. What is Southland Royalty's proposed outlook for this pilot project? When will it be determined and what will Southland be looking for to determine whether they could drill or convert additional injection producers to injection wells?

A. Historically, we've seen other San Andres fields, which we based a lot of our projections on this field on their analogous behavior. And that would be, once you start injection, you see anywhere from nine months' to a year's delay time before you see any response. And then

after that you would like to see at least another time period of about, I would say, a year before you can really feel comfortable that you say, yes, my engineering projections are correct and we will achieve the kind of results we want for an economic project.

I would say two years is your outlook.

Q. Now, your Number 2 Well is the only producer, and you're bringing up some other wells as producer wells. In what order is Southland bringing those up?

A. The Number 2 Well, as you realize, yes, it is the current producing well, and just recently -- and unfortunately, I did not relay this information to our geologist -- the Number 5 Well has just been brought on producing. It's been cleaned up and equipment has been upgraded.

The other wells that we will bring on production will be the Number 6 and the Number 7.

Q. How long do you think it will take for you to prepare that additional data that we requested on the individual wells?

A. I will be able to FedEx it to you by, I believe, Monday afternoon. You should have it Tuesday morning.

Q. So sometime in the middle of next week?

A. Yes, sir.

EXAMINER STOGNER: Mr. Stovall, do you have any

questions?

MR. STOVALL: Huh-uh.

EXAMINER STOGNER: I'm sorry, was that yes or a no?

MR. STOVALL: (Shakes head) No, I have no questions.

EXAMINER STOGNER: Are there any other questions of this witness?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: You may be excused.

Mr. Kellahin, do you have another witnesses?

MR. KELLAHIN: My land witness is available to testify. I brought her here in case there was any question about notification. Mr. Gaddis has already testified as to that basic information, and you have my sworn certificate of notice.

I believe there's no necessity to call my land witness, and we would not do so unless you have a question about that issue.

EXAMINER STOGNER: Well, for the record, let's identify her.

MR. STOVALL: Identify the non-witness?

EXAMINER STOGNER: We did swear her in.

MR. KELLAHIN: We did. Ms. Swierc. It's S-w-i-e-r-c; is that right?

EXAMINER STOGNER: First name?

MR. KELLAHIN: Leslyn. L-e-s-l-y-n. Did I get it right?

MS. SWIERC: Correct.

EXAMINER STOGNER: Ms. Swierc, do you have anything additional to say at this time?

MS. SWIERC: No, sir, I don't.

EXAMINER STOGNER: Do you have any questions of her?

MR. STOVALL: No. I have a question of Mr. Kellahin.

Your affidavit, the exhibit on the affidavit only contains the certificates and the response cards. Is it the 108 that you sent? Is that what you sent?

MR. KELLAHIN: Yes. In fact, we sent the Application, and the C-108 and the whole thing --

MR. STOVALL: Okay.

MR. KELLAHIN: -- to all these people, and we've gotten no response or objection back from anyone.

That concludes our presentation.

MR. STOVALL: I guess, Mr. Kellahin, we probably don't need to run through the essay on how to comply with the EUR Tax Credit Act?

MR. KELLAHIN: No, sir, there's no reason to do that.

EXAMINER STOGNER: Oh, I do have one more question for Mr. Gaddis.

Q. (By Examiner Stogner) What is the source water going to be for this project?

A. That's part of the reason that we're putting some like the Number 6 and 7 well back on. They do make a lot of water. We will use the San Andres water produced from the other wells.

First off, to go back into them, that should provide us enough injection support for the immediately surrounding producing wells.

If we expand it, we will use other water sources, possibly that zone down deep. It's a, you know, very -- It appears to be, it could be a prolific water source if we need it.

Q. So right now it would just be --

A. -- produced water.

Q. -- produced water from the lease?

A. Yes.

Q. And if needed, additional San Andres off of surrounding leases? Is that what you testified to?

A. That is -- At this point in time, I would say probably so, unless we find another source that would be accepted.

Q. When you say "other source", other San Andres

source, or is there a possibility that you would use fresh water?

A. No, I don't believe we would use fresh water for this. I believe we can find something down deeper.

EXAMINER STOGNER: Okay, that's what I wanted to get clarified.

That's all the questions I have of Mr. Gaddis. You may be excused.

Is there anything further in Case Number 10,891?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: If not, this case will be -- I'll hold the record open until we get the additional information requested, and only for that purpose.

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: With that, let's take a --

MR. STOVALL: Well, we've only got just the submission of his stuff, I think.

EXAMINER STOGNER: All right. In that case, if we could just leave this here and I'll call this next case, and then we'll...

(Thereupon, these proceedings were concluded at 9:59 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 January 18, 1994.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1994

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10894, heard by me on 6 January 1994.

Oil Conservation Division, Examiner