STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,595

EXAMINER HEARING

IN THE MATTER OF:

Application of Southland Royalty Company for a high angle/horizontal directional drilling pilot project, special operating rules therefor, and an unorthodox oil well location, Rio Arriba County, New Mexico

TRANSCRIPT OF PROCEEDINGS

ORIGINAL

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

November 5, 1992

A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL
Attorney at Law
Legal Counsel to the Division
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FOR THE APPLICANT:

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I N D E X

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E X H I B I T S

APPLICANT'S EXHIBITS:

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WHEREUPON, the following proceedings were had at 9:00 a.m.:

EXAMINER CATANACH: At this time call Case Number 10,595.

MR. STOVALL: Application of Southland Royalty Company for a high angle/horizontal directional drilling pilot project, special operating rules therefor, and an unorthodox oil well location, Rio Arriba County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

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

EXAMINER CATANACH: Are there any other appearances?

Will the witnesses please stand to be sworn in?

(Thereupon, the witnesses were sworn.)

ALAN ALEXANDER,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. Yes, my name is Alan Alexander. I'm employed by Meridian Oil, Inc., in their Farmington, New Mexico, office as a senior land advisor.

Q. On prior occasions, Mr. Alexander, have you testified as an expert petroleum landman before the Division?

A. I have.

Q. Pursuant to your employment in this case by Southland Royalty Company, have you made a study of and are you familiar with the ownership within the spacing unit as well as the offsetting operators that are adjacent to this spacing unit?

A. I have.

MR. KELLAHIN: We would tender Mr. Alexander as an expert petroleum landman.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Mr. Alexander, let's for informational purposes have you turn to the exhibit

booklet and turn to exhibit tab number 1 and identify for the Examiner what you have placed in the exhibit book behind that tab number.

A. The exhibits that are behind tab number 1 consist of our Application to the Division to drill a horizontal well with the well name being the Tapacitos Number 3 well, located in Section 16 of 26 North, 2 West.

Attached to that Application are exhibits which consist of Exhibit A is a plan view of the well, and Exhibit B is a vertical view of the well, and Exhibit C is the offset operator owner plat, attached to the Application.

Q. As part of compliance with the notice procedures of the Oil Conservation Division concerning applications of this type, have you tabulated the ownership that may be affected by this Application?

A. Yes, I have.

Q. And let me show you what is marked as Exhibit Number 8 and ask you if the notifications that have been made have been made in this case have been made to all the appropriate parties?

A. Yes, sir, they have.

Q. Pursuant to --

MR. STOVALL: Mr. Kellahin, excuse me,

this is Exhibit 8?

MR. KELLAHIN: That will be Exhibit 8.

MR. STOVALL: Okay.

Q. (By Mr. Kellahin) Have you received any objection from any of the parties notified concerning this Application?

A. No, sir, we have not.

Q. All right. Let's turn now to exhibit tab number 2 and look more specifically at the proposal that Southland Royalty Company is seeking. First of all, what have you placed on the first display behind exhibit tab number 2?

A. This is a plat showing the position and the names of the offset operators. And behind the plat is attached a list of those participants and their addresses.

Q. When we look at the plat of the proposed surface location of the well, the target formation is what, sir?

A. It's the Niobrara.

Q. And have you determined for yourself your best understanding of the pool under Oil Conservation Division nomenclature to which this production would be dedicated?

A. Yes, we have.

Q. And what is that pool?

A. We believe it is the Gavilan-Mancos Pool.

Q. And what is the spacing in the pool that would apply for this well?

A. It is 640 acres.

Q. And to have a standard well location would require what, sir? You'll have to at least stay how far back from the side boundaries of the section?

A. 790 feet from the boundaries of the section.

Q. This well, then, is only unorthodox insofar as it is closer to one of the interior boundaries of the section, as opposed to one of the outside boundaries?

A. Yes, sir, that's correct.

Q. The -- How do I read the first display in terms of identifying the offset interest owners?

A. The offset interest owners are identified first numerically in their respective quarter or half sections, and then there is a reference to that numeric position or that numeric number at the bottom of the page that shows which operator corresponds to that numeric number.

Q. Okay, when we get to number 5, which is the southwest quarter section adjoining Section 16, we get to all these other additional owners shown on the

attachment?

A. Yes, sir that's correct.

Q. Okay. Let's turn now, sir, to Exhibit Number 3 and the information behind that tab, and give us a general idea of where we are located geographically in relation to other production.

A. Well, this exhibit consists of a nine-section area with the target section being Section 16 of 26 North, 2 West, Rio Arriba County, in the center of the display, and you will note that we are directly offsetting the Bear Canyon Unit that is located in this area.

Q. The Examiner may remember the multitude of cases generating out of the Gavilan-Mancos Pool. Where were those issues in terms of the well locations involved in those other cases?

A. Most of those issues were to the south of this Application.

Q. When we look to the immediate east we're in the Bear Canyon Unit. If you move down to the southeast, towards what area are you moving?

A. We would be moving down towards the Cañada-Ojito Unit and the offsetting production to the west of the Cañada-Ojito Unit that was the subject of a great many hearings in the past here.

Q. Okay. And in relation to Section 16, then, where is the American Hunter projects in the Mancos Reservoir that this Examiner is familiar with?

A. They would be located just several miles, not more than, oh, three or four miles to the north and to the east of Section 16, above the Bear Canyon Unit.

Q. To the best of your knowledge, information and belief, Mr. Alexander, have you provided proper notice to all appropriate parties in this case?

A. Yes, sir.

MR. KELLAHIN: That concludes my examination of Mr. Alexander. We would move the introduction of Exhibits 1, 2 and 3.

EXAMINER CATANACH: Exhibits 1, 2 and 3 will be admitted as evidence.

MR. KELLAHIN: As well as Exhibit Number 8, Mr. Examiner.

EXAMINER CATANACH: And Exhibit Number 8 will be also admitted.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Alexander, Section 16 is a fee lease; is that correct?

A. No, sir, it's a federal lease.

Q. It is a federal lease.

A. Yes, sir.

Q. All of Section 16?

A. Yes, sir, that's correct.

Q. And that's a common -- one common lease?

A. Yes, sir.

Q. And that Section 16 is currently dedicated to the Tapacitos Number 3 well, or --

A. Yes, sir, it was originally.

I'm not exactly familiar with the history of the wellbore, and our geologist can give you a more up-to-date history of that wellbore and what it's currently dedicated to.

Q. Okay.

A. But initially it was.

EXAMINER CATANACH: I don't have any more questions.

MR. STOVALL: Just interesting to see all the old names I haven't seen for a while, Coods [phonetic] and all the others.

No, no questions.

MR. KELLAHIN: Thank you.

I'd like to call at this time Mr. David Schoderbek.

He is a petroleum geologist with -- in this case, working for Southland Royalty Company.

DAVID SCHODERBEK,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. My name is David Schoderbek. I'm a geologist with Meridian Oil in Farmington, New Mexico.

Q. On prior occasions, Mr. Schoderbek, have you testified as an expert petroleum geologist before the Oil Conservation Division?

A. Yes.

Q. On prior occasions, have you testified concerning high-angle horizontal wells?

A. Yes, I have, most recently in the case of our Piedra Lumbre well that was heard last fall.

Q. Have you continued your involvement on behalf of Southland Royalty Company to look for high-angle wellbore opportunities in the San Juan Basin?

A. Yes, sir.

Q. Is this particular project one that you've identified as some opportunity for additional hydrocarbon production with a high bore -- high-angle wellbore technology?

A. Yes, it is. This particular project is in an area, specifically Section 16, where we don't believe the reserves can be recovered from the existing vertical wellbore.

Q. Based upon your studies, have you now come to certain geologic conclusions about this project and developed certain geologic maps and information for the Examiner to consider?

A. Yes, we have.

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

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Let me ask you first to turn to Exhibit 4, and before we look at the large displays on the board, let's identify for the Examiner the three displays behind exhibit tab number 4, starting with the first one. What is that?

A. The first display that is a foldout display is a small-scale schematic of the proposed high-angle sidetrack of the Tapacitos Number 3.

Q. All right. We have a larger copy on the wall of the hearing room?

A. Yes, sir.

Q. All right, let's turn past that and show me what the next display is.

A. The next display is an even smaller scale version, a similar display, but we've removed the type log from the right-hand side just for clarity.

Q. All right. And the last display behind exhibit tab number 4?

A. That's a one-section plat showing the existing surface location, 1540 feet from the north line and 995 feet from the east line. That's the circle on the right-hand side.

It also shows the 790-foot setback from all four boundaries of the section, and our proposed wellbore being a 2000-foot -- 2000 feet drilled in the azimuth of 270 degrees, or due west.

Q. And then finally in the pocket behind exhibit tab number 5, what do we find in that portion of the exhibit there?

A. There's a three-well cross-section that's also hung on the wall to the Examiner's right.

Q. Let me have you now go back to the first exhibit behind exhibit tab number 4 and go to the board, if you would, and let's discuss, then, the large copy of this display.

First of all, let's talk vertically. Show us what was accomplished with the Tapacitos Number 3 when it was drilled vertically.

A. This well was drilled vertically in late 1988 down to about 100 feet below the display. It did not go into the Dakota formation or the Greenhorn. It was drilled as a -- strictly a Niobrara test.

Shows were observed every -- throughout the section where you see these show symbols in the depth track.

Q. You've identified those show areas by nomenclature, using Niobrara "A", "B" and "C" that are the conventional nomenclatures to apply to the various producing zones that have any potential in the Mancos Pool?

A. Yes, that's correct. It's a standard but informal nomenclature.

Q. Describe for us what you found when you drilled and attempted to complete the well as a vertical well.

A. When we completed this well, we perforated and stimulated both the Niobrara "B" zone and the Niobrara "C" zone and tested the well at uneconomic rates.

Q. Uneconomic rates?

A. Uneconomic rates, yes, sir. It was approximately 2 1/2 barrels of oil a day and 30 MCF a day.

Q. Let's go now to the next display which gives us a locator map in addition to the structure.

A. Yes, that's correct. This is about a two-township area. Township 26 North, Range 2 West, is on the right-hand side. 26 North -- The east part of 26 North, 3 West, is on the left side.

This line that divides the two townships is the west boundary of the Gavilan-Mancos Pool.

MR. STOVALL: That's a dotted line; is that correct?

THE WITNESS: Yes, it is. All the -- all of our -- this is -- It's a dotted line, because this being reservation land, it's essentially an unsurveyed township.

Q. (By Mr. Kellahin) When you look at the locator map that you've superimposed the structure on, you've got a lot of wells on there other than Gavilan Mancos wells?

A. Yes, sir, that's correct. All penetrations are -- All wells are shown on this map.

The wells that penetrate the Niobrara "B" marker, which is the marker I've made both the structure map and on and hung this stratigraphic cross-section on, are shown with their -- there are symbols by them for datums.

There are about 35 penetrations of the Niobrara "B" zone in this roughly two-township area.

Q. Have you used a different type of well symbol to identify the Mancos or the Niobrara wells on the plat?

A. Yes, I have. Like in the plats that Alan described, a Gallup producing well, by our nomenclature, is an oil-well symbol surrounded by a diamond or a square turned 45 degrees.

Q. Give us the key wells that have helped you as a geologist define your project and helped you proceed, then, with the conclusion about the viability of a high-angle well.

A. Okay, I'll go right to the three wells that are in the stratigraphic cross-section. It runs from the Amoco Bear Canyon Unit Number 1 on the east or right-hand side through the Tapacitos Number 1, a Dakota test drilled in 1969, just north of the location where we subsequently drilled the Tapacitos 3, to an offset to our proposed Jicarilla 99 Number 17, that well being the Jicarilla 99 Number 16.

All three of these wells were either completed economically or tested the Niobrara "B" zone and "A" zone -- I'm sorry, "B" and "C" zone.

The Amoco Bear Canyon Unit Number 1 is our

best example of why we chose the "B" and "C" zones as the targets for our high-angle wellbore.

When this well was drilled in 1987, it was completed in just the Niobrara "C" zone for about 167 barrels of oil a day. It only produced about 40,000 barrels in its first year.

It was subsequently recompleted in the Niobrara "B" zone. The two zones were combined for initial production of 568 barrels a day, and it subsequently produced 333,000 barrels of oil and 460 million cubic feet of gas.

We estimate its ultimate recovery to be over 500,000 barrels of oil equivalent.

Q. How does the first well in the cross-section, that Bear Canyon well, how does it compare to other wells in this area in terms of its productivity?

A. It is among the best vertical Niobrara wells. There are six wells in the Bear Canyon Unit. Four of them are economic, two are uneconomic. It is the best of the economic wells.

Q. As you move to the west, how far west do you have to go until you get another Mancos well that is comparable to that high-capacity Bear Canyon well?

A. Well, if you were moving in a westerly direction you'd come on to our Cheney Federal B Number

2 well. That isn't in the cross-section, just because I wanted to pass through a well closer to the Tapacitos 3.

The majority of the wells in the intervening area, in the area between, say, the Bear Canyon Unit -- the Bear Canyon Unit part of the northern Gavilan Pool, and this economic unit of the Northeast Ojito Pool are uneconomic.

Basically, the vertical well success rate on this map is about 50 percent, unlike perhaps further south in the Gavilan Pool where there is a very well connected fracture system.

Here, the fractures appear to have been cemented in places. That's our interpretation of what we saw in the Tapacitos Number 3. We did see as we drilled that well, hydrocarbon shows. We saw a lot of free calcite. That would be an indication that fractures had existed at one time.

Our subsequent completion attempt convinces us that it is in an area essentially where the reservoir is tight.

Our goal in sidetracking it approximately 2000 feet west is to intersect the fractures that we interpret trend north-south.

Q. Give me a summary, then, geologically, of why

you've chosen a horizontal high-angle well to further test for Mancos production in Section 16, rather than another vertical well in that section.

A. We believe that as this is a fracture reservoir with vertical fractures that trend northerly, we have a much greater probability of encountering them in a high-angle wellbore than we do in another vertical well.

In addition, we can do that for about a third the cost of a new vertical well.

Q. That's the reason to use this well as a re-entry, then, for the horizontal attempt?

A. Yes, sir.

Q. Give us your geologic opinions concerning the fracture system that may exist in Section 16 and upon what data you draw that conclusion?

A. We believe the fractures in this area of the Gavilan Pool trend approximately due north from both subsurface and surface information.

In the Amoco Bear Canyon Unit Number 2 was recorded a borehole televiewer log. It's an acoustic fracture orientation tool. That log indicated due-northerly trending fractures.

High-resolution dip meters processed for fracture orientation run in these two Merrion wells in

the eastern side of Northeast Ojito Pool also have a northerly orientation, though they show other fracture sets as well. They have a north set.

Another strong factor is that right through this part of -- this land trends a dike on the surface. That dike indicates -- That dike is an igneous feature that was intruded into open fractures that existed approximately 25 million years ago. The fact that that dike parallels what we see in these borehole -- in these dip-meter logs and this televiewer log, in addition to other areas along the eastern side of the basin where dikes parallel north-trending fractures, that convinces us that the fractures are due north oriented.

So going west is our -- we can encounter the most of them that we can in a 2000-foot wellbore.

MR. STOVALL: Just for the record, to make it clear, you're talking about the dike as being at the -- basically at the west end of Township 2, Range 2 West?

THE WITNESS: Yes, sir. It's called Tapacitos Ridge dike. It's on topographic maps. It's a very obvious feature.

Q. (By Mr. Kellahin) Summarize for us now, using that display, what you attempt to do geologically with the high-angle horizontal well.

A. Our goal is to stay in what we determine -- what we interpret not just from the Bear Canyon Unit Number 1, but a study of wells on this map and adjacent to it, to get as much lateral exposure as we can in the Niobrara "B" and "C", which we view to be the primary reservoir zones in both the northern part of the Gavilan Mancos Pool and the Northeast Ojito Pool.

Q. Going back, then, to the vertical profile, show us how you propose to have the high-angle lateral cut the reservoir.

A. Basically, this is an enlarged version of any of those logs. This is actually from the Tapacitos Number 3 well, the well that we're sidetracking. Here's the Niobrara "B" zone and "C" zone, denoted as the main pay zone.

Our goal is to -- or our plan, I should say, is to mill out the casing up here and set a cement plug and then sidetrack on around the bend. We'll intersect the top of the Niobrara "B" zone approximately 200 feet west of the surface location and angle through it at 79 degrees for approximately 1800 more feet, giving us a total lateral extent of 2000 feet.

The dip, as you can see from that map -- those are 50-foot contours -- is very gentle. It's less than a degree in this area.

MR. KELLAHIN: All right. That concludes my examination of Mr. Schoderbek.

We move the introduction of his Exhibits 4 and 5.

You may return to your seat.

EXAMINER CATANACH: Exhibits 4 and 5 will be admitted as evidence, and I have no questions.

Do you?

MR. STOVALL: Well, let me see. No.

MR. KELLAHIN: Thank you, Dave.

PAUL ALLEN,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Paul Allen. I'm a drilling engineer with Meridian Oil in Farmington, New Mexico.

Q. Mr. Allen, on prior occasions have you testified as a drilling engineering expert before the Division?

A. Yes, I have.

Q. Tell us in what cases you have testified that involve high-angle horizontal wellbores.

A. The Huerfano Unit 300, the Huerfano Unit 306, the USA Number 2 and the Huerfano Unit 218.

Q. And have you provided the drilling engineering expertise for this particular project?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Allen as an expert drilling engineer.

MR. KELLAHIN: He is so qualified.

Q. (By Mr. Kellahin) Let me have you take one of the same displays that Mr. Schoderbek identified for us, and perhaps it's as easy for you to go to the large one on the wall.

Looking at the first one that gives us both the vertical and the horizontal profile of the well, let's have you summarize first the general elements of the drilling and completion program, and then we'll come back through and talk about the specific details.

A. Okay. We've got the original wellbore here. We'll be setting a cement retainer above the original production perforations and squeeze-cementing off that entire wellbore.

We'll then be cutting an 80-foot section in the pipe and setting a cement plug in that section. We'll then drill out and begin directional operations at that point.

We'll drill down to TD here at 2000 foot out. We'll then run perforated tubing throughout this interval, and that's mainly to keep cave-ins from shutting off production.

Q. How do you propose to complete the well?

A. With the perforated tubing, just by running that open-hole completion, perforating tube.

Q. Is there any type of stimulation program planned for the well?

A. No, there is not.

Q. Summarize for us how this well is different or similar to the other high-angle wellbores that you have testified about to this Division.

A. This well is very similar to the USA Number 2. We had 5-1/2-inch existing pipe with that well. This is 5-1/2-inch existing pipe.

The major difference is the lack of dip in this well. We had 12-1/2-degree on the USA Number 2 and no dip on this particular well.

Q. Take us back to the surface now and tell us how you keep yourself oriented to where you are and where you want to be.

A. We'll be using a wireline steering tool device that is a real-time connection to the drill string right above the bit. This wireline provides

data on angle and inclination and azimuth at all times.

Q. Do you have any reservations or questions about the drilling technology that is to be applied for this case?

A. No, I do not. I think the last two wells have proven it a viable option.

Q. Why do you propose to do a high-angle well versus another vertical well?

A. Well, really two reasons. The cost of another vertical well is approximately three times that. This is approximately $240,000, $250,000 to complete a well in this manner, versus upwards of $700,000 for a new drill. So economically it makes sense.

Also, the intersection of more fracturing along the wellbore paths.

Downhole damage to typical frac fluids is another element here. Typical frac fluids would do damage to the Niobrara zone. We've not touching that because we're drilling with a gas medium in this case.

Q. Are there any other components of the drilling or completion procedures that are unusual or different in this case than were used in the others?

A. No.

MR. KELLAHIN: Okay. That concludes my

examination of Mr. Allen.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Allen, I'd just briefly like to go back over how you propose to actually do the directional drilling.

You are going to cement -- entirely cement off the lower portion of the wellbore; is that correct?

A. Right, we'll be setting a cement retainer in the original pipe. We then sting into that with tubing and pump cement down into the original wellbore, and --

Q. Where -- Excuse me, where is your cement retainer going to be set?

A. Right -- Approximately 6950.

Q. Okay.

A. Right above -- Right below the kickoff point.

Q. Okay.

A. We then cement off the original wellbore, and then come above that and mill an 80-foot section of pipe, and that's just cutting away the pipe for 80 feet, 50 feet above the kickoff point and 30 feet below the kickoff point.

Q. Do you have those depths that you're going to be building the casing at? Do you have the actual depths?

A. Yes, it's actually -- The kickoff point is at 6877, so it will be 6822 to 6897.

Q. Okay.

A. 6827, actually.

We then fill that -- Well, actually, then we go in and under-ream that original hole out to the original wellbore. That gets us exposure to the original rock. And then pump a real dense cement slurry into that.

At that point we have a wellbore to work with for horizontal operations, and we begin drilling horizontally.

We drill down to our kickoff point with a packed assembly, and from that point on go in with our directional tools and begin building angle.

When we get to this point here, we come back out of the hole and go with a steerable assembly to TD here.

MR. STOVALL: "This point here" is -- say that -- Describe that in words or -- with relation to the exhibit.

In other words, you pointed to a point --

MR. KELLAHIN: The top of the Niobrara.

MR. STOVALL: -- on the exhibit. Where is that point?

THE WITNESS: Approximately 220 feet, 200 feet.

MR. STOVALL: Is that where you end your curve buildup and actually start --

THE WITNESS: Correct.

MR. STOVALL: Okay.

THE WITNESS: And that's right at the top of the zone we've identified here, the main pay zone.

We then drill to the TD with a 2000-foot lateral here. And this is an aggressive target at 2000 feet. The most optimal pay is in the top part of the zone, and that gave us a higher angle through that part of the zone.

We feel based on USA and the Huerfano 218 that we've got a very, very good chance of hitting our target.

Q. (By Examiner Catanach) You've already drilled the other two wells?

A. Yes, I have.

Q. Have you been able to -- Well, how's the drilling mechanism worked out in those wells?

A. Very well, actually. Very well.

Q. Okay. What's the longest lateral you've been able to drill?

A. Approximately 1100 feet, but that was not

really limited by any of the drilling mechanics. It was limited on the production we were receiving from the wellbore.

EXAMINER CATANACH: Okay. I have nothing further of the witness.

Is there anything further?

MR. STOVALL: I just have one question.

EXAMINATION

BY MR. STOVALL:

Q. Would Meridian be interested in suggesting a package of rules by which these could be processed administratively?

A. Very much so.

MR. KELLAHIN: We're already working on those, Mr. Stovall.

MR. STOVALL: I'd suggest if we -- I think the Division may be interested in doing that, but just -- They haven't had the time to sit down and work with it, and I'd prefer to see it come from industry, so...

MR. KELLAHIN: Well, that's been part of our problem too, is finding the time to devote to administrative procedure. But we've already discussed that and have began considering how to set up some administrative procedure.

That concludes our presentation in this case.

For the record, there is no Exhibit 6 or Exhibit 7.

Exhibit 8, then, is the Certificate of Notice.

EXAMINER CATANACH: Okay, there being nothing further, Case 10,595 will be taken under advisement.

(Thereupon, these proceedings were concluded at 9:31 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 November 5, 1992.

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. 10595 heard by me on November 5, 1992.

David R. Catanach
Oil Conservation Division