STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,653

EXAMINER HEARING

IN THE MATTER OF:

Application of Armstrong Energy Corporation for special pool rules, Lea County, New Mexico

TRANSCRIPT OF PROCEEDINGS

ORIGINAL

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

January 7, 1993

A P P E A R A N C E S

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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 11:12 a.m.:

EXAMINER CATANACH: At this time we'll call Case 10,653. Application of Armstrong Energy Corporation for special pool rules, Lea County, New Mexico.

Are there appearances in this case?

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm Campbell, Carr, Berge & Sheridan.

We represent Armstrong Energy Corporation, and I have two witnesses.

EXAMINER CATANACH: Any other appearances?

Will the two witnesses please stand to be sworn in?

(Thereupon, the witnesses were sworn.)

ROBERT M. BOLING,

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

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you state your name for the record, please?

A. Robert Michael Boling.

Q. Where do you reside?

A. Roswell.

Q. By whom are you employed and in what capacity?

A. I'm an independent petroleum geologist, retained by Armstrong Energy to testify before the Commission in this case.

A. As part of your employment with Armstrong Energy Corporation, have you made a geological study of the area which is the subject of this Application?

A. I have.

Q. Have you previously testified before the New Mexico Oil Conservation Division?

A. I have.

Q. At the time of that testimony, were your credentials as a petroleum geologist accepted and made a matter of record?

A. They were.

Q. Are you familiar with the Application in this case which has been filed on behalf of Armstrong Energy Corporation?

A. I am.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: Yes, they are.

Q. (By Mr. Carr) Mr. Boling, would you briefly

state what Armstrong seeks in this case?

A. We seek to promulgate special rules for the Northeast Lea-Delaware field.

More specifically, we seek to increase the allowable from 107 barrels a day to 300 barrels a day.

Q. Initially I'd like you to go out of order, refer to what has been marked as Armstrong Exhibit Number 5.

Would you identify this and review what this shows for Mr. Catanach?

A. I will. Exhibit Number 5 shows in stipple the 480-acre Northeast Lea-Delaware field, which was formed in 1986.

There are three operators presently operating in the unit: Pennzoil in the southeast southeast of Section 35, Township 19 South, 34 East, with their Mescalero Ridge Unit Number 3 well; Harken Exploration in the northwest of the southeast of Section 2, 20-34, their Mobile State Number 1 well; and Armstrong Energy in the northeast of the southwest of Section 2, 20-34, in the Mobil Lea State Number 1.

Q. These are the only current operators or current wells in the pool at this time?

A. That is correct.

The exhibit also shows all the Delaware wells

within a mile of the subject well, the Armstrong well.

The Northeast Lea field is subject to statewide rules, 107 barrels a day allowable, 2000-to-1 gas/oil ratio, which gives an allowable of 214,000 cubic feet a day.

Q. Are you going to review the geological characteristics of this pool, and then we will have another witness to discuss engineering aspects?

A. Yes, I am.

Q. Let's go to what has been marked as Armstrong Exhibit Number 1. I'd ask you to first identify that and then review the information on this exhibit for Mr. Catanach.

A. Okay. Exhibit Number 1 is a stratigraphic cross-section that runs from the northeast on the right, the southwest on the left --

EXAMINER CATANACH: Hang on a second.

THE WITNESS: Okay. You need some help?

EXAMINER CATANACH: Got it.

THE WITNESS: Okay. Northeast on the right, southwest on the left, includes all the wells that are currently producing in the Northeast Lea field and all wells that have the subject reservoir productive in them, plus two wells that show the terminus of the stratigraphic limits of the producing interval in our

subject well.

To begin with, on the right is the Pennzoil Mescalero Ridge Unit Number 3 well. This was the discovery well that initiated the Northeast Lea field.

It is -- Let me state that there are four sand intervals that I have correlated on this cross-section. I correlated the bases of all these intervals, and I'll refer to them as the first sand, second sand, third sand -- which is the producing interval in our well -- and the fourth sand.

I might state for the record that within the general area of this cross-section, every one of those sands is a productive reservoir, or appears to be. There are shows or production established in every one of these sands that lie immediately on top of each other.

Back to the Mescalero Ridge Unit Number 3 well.

As you can see, the perforations are from 5780 to 5805, which is in a carbonate interval but is equivalent stratigraphically to where the second sand would be. The second sand has -- We've reached the point of no deposition of the second sand, but the porosity is present in the carbonate, which is limestone here.

This well was completed in 1986 for initial production flowing of 64 barrels a day. It's produced about 24,000 barrels and is currently producing about five barrels a day.

Interesting, two other things to note on the Pennzoil well is that you can see the base of the first sand, which is the first correlation mark up there, there's a remnant of the first sand present, but tight. So we're beyond the productive limits of the reservoir in the first sand at that point.

If you go down to the third, the datum base of the producing interval, you'll see that the only thing left of that third sand interval is the gamma-ray indication of more radioactivity. But there's no porosity to speak of in that sand. It's tight sand. That is the northeast stratigraphic limit of the reservoir, the productive reservoir.

You will see below that the fourth sand interval is also tight, but present.

So this is my control, my trapping mechanism for the overall accumulation that we're going to talk about that covers two and a half sections out here on the northeast updip side.

The second well from the right is the Armstrong Energy Corporation West Pearl State Number 1,

which is in the northeast northeast of 2.

This well is currently producing out of the Bone Spring at a rate of about 12 barrels a day. It is this week being plugged back, and a completion attempt will be made in the third sand interval in this well, which falls at approximately 5900 feet.

You can see that from one location to the next -- We've moved one location. We have now a sand that's got 24 feet of porosity greater than 15 percent. It's got shows of gas and oil. We have good fluorescence, we have a zone that we anticipate will be productive in this wellbore.

The stippled line, by the way, that is crossing this cross-section is the oil/water contact that we've determined for the producing interval through both observation and calculation, and I'll talk -- As I get to the wells where we encountered the interval, I'll talk about how we got that oil/water contact established.

But as you can see, the zone in the Armstrong Energy Corporation West Pearl State 1 well clearly lies above the oil/water contact, which is a minus 2269.

The third well is the Harken Energy Corporation Mobil State Number 1.

It's completed from 5626 to 5695. It was

completed in 1988 for initial production of 112 barrels a day. Its cumulative production is about 68,000 barrels. It's currently making about 17 barrels a day, and some water.

Interestingly enough, you see again, you move one location from the -- two locations from the Armstrong well over to the Harken well, you see the first sand goes from a remnant with no porosity, effective porosity, in the Armstrong well, to a zone that's 66 feet thick with porosity greater than 15 percent.

And the second interval develops also. Again in the Armstrong well to the northeast, only a remnant of porosity, zero porosity. We come -- The sand is now 86 feet thick, two locations away.

The producing interval in this well -- The third sand, which is our producing interval, is marked there. And as you can see, it lies just below the oil/water contact, within a foot or two of the oil/water contact. We anticipate that this zone is wet. There's 18 feet of porosity greater than 15 percent in that well.

As we move over to the subject well, the Armstrong Energy Corporation Mobil Lea State Number 1, you'll see that the first sand has thinned in terms of

net porosity isopach from 66 feet to about ten. This is one location west.

The second zone has increased. It's 110 feet thick, porosity, we had shows all through -- We had shows in the ten feet in the first zone, we had shows all through this 110-feet interval.

The subject interval, our productive interval, has gone from 18 feet thick one location away in the Harken to 86 feet thick with 60 productive feet of reservoir in the well.

And the fourth interval has thickened slightly and is wet in the Armstrong Energy Corporation well.

The fifth well there is the Spectrum 7 Mobile State Number 2 well, dry hole, in the southeast southwest of Section 2.

You see that the first sand thickened back up. There's 20 feet of porosity greater than 15 percent in that well.

We have approximately the same amount of second sand.

The third sand interval, 76 feet thick, so we lost a little sand.

And the fourth is approximately the same.

Now, when we were drilling the Mobil Lea

State Number 1 well, we drilled into this third sand, the productive interval, and lost shows. We drilled 60 feet of shows, and lost shows just like that. And when we calculated that point at which we lost the shows, it came out to a minus 2269. So at that time that was my initial indication that that may be the oil/water contact.

When I went in to remap this area after the well was drilled and looked at this Spectrum 7 Number 2 well, I noticed that the upper 20 feet of that reservoir exhibited similar resistivity and porosity characteristics as our well did. And in fact, there was a transition zone in that well. And when I went back and calculated the point at which it became 60-percent water saturated, which we think is effectively not productive, that came out to minus 2268.

So it looks to me like there's 20 feet of productive reservoir in that well that was never tested for some reason. I don't know what happened. But we have two indications there that the oil/water contact is at minus 2269.

The next well is the Read & Stevens North Lea Federal Number 7 well, which was drilled in the southwest of the northeast of Section 10.

As you can see, the second zone is quite

thick. This well had shows in the first interval, which is not shown entirely on this cross-section up there. Above 5700 they had a show in this thick sand, in the second zone. And then in the third interval they perforated from 5942 to 5962. They pumped two weeks on that and pumped a hundred percent water.

You'll see that the top of that interval falls at a minus 2289, another indication that the oil/water contact is above minus 2289 someplace, indicating that the minus 2269 is somewhere near where the oil/water contact is.

I might just say that in our well, the Armstrong Energy Corporation Mobile Lea State, when we produced that well, the first five days that well made 1406 barrels. It made 564 barrels the first day.

The next well is Read & Stevens North Lea Federal Number 6. It's in the northwest northeast of Section 10.

Again, first zone is very thick. It's not all on this cross-section. Show in that zone.

Anemic show in the second zone, about the same thickness.

Their third zone, the top was encountered at 5890. They perforated 5900 to 5920, IP'd that well at 117 barrels a day. When we looked at the resistivity

log and porosity log on this well and calculated the water saturation, we could actually see the transition zone about 15 feet thick in this well. And we calculated that that point at which we achieved the 60-percent water saturation or nonproductivity was again minus 2269, another indication that that is the oil/water contact.

The last well is the North Lea Federal Number 5, which is in the northeast of the northwest of 10, one location west of the Number 6.

And you'll see that the productive interval is completely gone. This is the stratigraphic limit on the southwest side of the reservoir.

Q. (By Mr. Carr) Mr. Boling, would you now go to what has been marked Armstrong Exhibit Number 2, your structure map on the base of the productive interval, and review the major structural characteristics of the Delaware in this area?

A. Okay, Number 2 is -- As Mr. Carr stated, this is a structure map on the base of the productive interval across this five-section area.

The two -- There are two features that are significant on this map.

The first is, you see a depositional low spot or a low spot running from the northeast up in 35 down

across to -- and snaking across the northwest quarter of 11 and dumping into the depositional low, which is in the southeast quarter of 10 and southwest quarter of 11.

There's a minor depositional low coming down across the southeast -- southwest quarter of 3 and crossing Section 10, terminating in the same depositional low in the southwest quarter of 10 and southwest quarter of 11. These are the migratory pathways that the sands are going to follow when they become deposited.

The other thing to note is that updip, at least in Section 2, is just to the northwest. And you see that updip in Section 3 is to the northeast. This is indicating a strong nosing feature in Section 3 and 2. And in fact, this is along a high trend that runs for about three or four townships northwest/southeast and has Devonian production established at depth and several -- Bone Spring production to the north of us on structures.

So that structural feature is well documented in several geologic horizons and is expressed here as a long, large northwest-southeast trending nose.

The other important feature to note is down in Section 11, approximately in the east half of 11, in

the east half, west half, there is another small high. What this has done, between the flank of the nose in Section 2 and the small high in 11 you have the depositional -- you have barriers to deposition.

So as the sand starts pouring down this low spot up in 35 and comes down into 2, it hits the barrier in 11 and the updip barrier in 2, and it acts as a funnel to funnel the sand right into these low spots that we see in the southeast quarter of 2 and down into 10.

And to a minor, lesser degree, the same thing is going to happen over in Section 3 and 10, in this depositional low that crosses 10. The effect is not as dramatic. So what we would expect is that we would get thicker sand accumulations over in 2 and 35 -- or in 2 than in 10, but the sand should be present.

Q. All right. Let's go now to your next structure map, Exhibit Number 3.

A. Yes. The next structure map is a map made on the top of the productive interval, and this map was -- The blue indicates our approximate oil/water contact, minus 2269.

We had to make a map on the top, because if we had put the oil/water contact on the base, it would have appeared that our well was wet, because the base

is below the oil/water contact, but most of the reservoir is above it. So we had to make one on the top to give you a clear indication of where the oil/water contact is relative to the subject wells.

This map would indicate that the southwest quarter of 2, possibly the south half of the northwest quarter of 2, portions of the northeast quarter of 2, the north half of the northeast of 10 and the south half of the southeast of 3, are all going to be productive in this reservoir. They all occur -- portions of that sand reservoir occur above minus 2269.

Q. All right. Let's go to the net porosity isopach, Exhibit 4.

A. The net porosity isopach map, Exhibit 4, basically shows the effective productive area of the sand based on porosity. And what we see here is what we expect to see.

There in Section 2, in the southwest quarter, the depositional thick, 90 feet of porosity, just where you would expect to find it, wedged between the high in 11 that acts as a barrier to deposition and the flank of the nose in 2 and 3 that act as barriers to deposition.

That's where the thick is going to be, that's where it occurs, and it comes on down to the lowest

depositional point out here, which is the southeast quarter of 10 and southwest quarter of 11.

If you use this map plus the base map, you can determine at which point you've lost your reservoir, and you're not going to have any more productive locations.

These two maps are the ones that indicate the production in the areas that I previously mentioned, in 3, 10 and 2.

Q. Mr. Boling, what conclusions have you been able to reach about this portion of the Delaware from your geologic study?

A. Well, there's several conclusions.

This is a -- These four sand intervals are separate reservoirs. They're not vertically connected.

We know that because we have oil in reservoirs that have water above them and oil above that, so we don't -- And that's exhibited in -- most specifically, in the North Lea Number 6 well where that's very evident. And in fact, they had oil in the third zone, water in the second zone, oil in the first zone, and there's another zone before that that's got oil in it, that's not present over in Section 2.

These are all separate reservoirs, and they all -- There's not a well out here, with the exception

of the Pennzoil well, that has not been completed with the capability of producing more than the top allowable depth bracket at this point, 107 barrels a day.

Read & Stevens has wells that they've maintained 100 barrels a day consistently because that's the allowable, but they have other reservoirs that could be exploited if the allowable were higher.

In our case, I know that what's going to happen is, when we drill the next well we're going to move updip from this well. And when we do that, if the reservoir capacity to deliver, the productive capacity, is the same, is dynamic, and it's the same updip as it is in this well and it's linear, we're going to move updip and we're going to have 40 feet of reservoir left.

We have 60 feet of reservoir in this well that's capable of making 350 or 400 barrels a day. We go updip, we're going to have 40 feet of reservoir. If the dynamic of the reservoir is linear, that well is going to make 250 to 300 barrels a day. But the fourth interval that's wet in our well will be updip. It will be productive, and we'll test it first.

So we have a sort of unique situation here. We have four extremely high quality reservoirs in terms of lithology and deliverability capacity that all can

be exploited, and in some cases we're going to have three of those quality reservoirs that are productive in the same wellbore.

Q. Will Armstrong also call an engineering witness to discuss the efficiencies or inefficiencies of producing these multiple zones under one allowable?

A. Yes, we will.

Q. Were Exhibits 1 through 4 prepared by you?

A. Yes, they were.

MR. CARR: Mr. Catanach, at this time I would move the admission of Armstrong Energy Corporation Exhibits 1 through 4.

EXAMINER CATANACH: Exhibits 1 through 4 will be admitted as evidence.

MR. CARR: That concludes my direct examination of Mr. Boling.

(Off the record)

EXAMINATION

BY EXAMINER CATANACH:

Q. Your Exhibit Number 4, is that just the net sand in the third --

A. Yes.

Q. -- in the producing interval?

A. Correct.

Q. Okay. Would you expect that Spectrum Mobil

State Well Number 2 to be productive in that zone?

A. Yes, I do.

Q. Do you anticipate that any of the remaining intervals will be as prolific as that third sand?

A. Well, that's -- The second sand is the only one that has not been tested in the area, production tested, even though we have shows.

It's kind of an enigma because it's quite thick in our well, we had shows all through it. It's quite thick in Read & Stevens' Well Number 6, northwest, northeast of 10. It's actually 20 feet higher, the top is, in their well, and their shows were different from ours.

Mud logs are not quantitative, but I would expect that at some point where we can encounter production into the second sand, it will be as prolific, yes.

With the exception -- With this one overriding exception: The grain size in the second sand versus the third sand is dramatically finer. When we look at these rocks in microscopic samples in the cuttings, there are two characteristics here that are unique.

They're very clean sands, which is unusual for the Delaware. We're very close to the source.

And the grain size differentiation between the second sand and the third sand is dramatic. The third sand is big grain size for the Delaware, and I think that's one of the reasons we have such deliverability in that sand.

But the second sand has a lot more vertical thickness over the area. So even though it's finer grain, the deliverability may be restricted because -- the permeability may be less, because the grain size -- we have a lot more H, and it's going to be -- Someplace, it's going to be a hell of a reservoir too.

And we know the first sand -- I don't know. Read & Stevens has completed four wells in that first sand, and I know that they've had wells that -- What's your best conclusion? 147 barrels a day?

So prolific reservoirs, yes.

Q. Okay. Would you expect all four reservoirs to be productive within about the same horizontal interval, I mean the same geographic interval?

A. Yeah, I've mapped all these sands individually across nine sections, and the third and fourth sands are going to be restricted to this area of the east half of 10 and 2.

They're not present in the west half of 10 or in 3 or around the corner in Section 9 or 4.

So this is the limit of the third and the fourth sand, right here.

The second sand, much greater lateral distribution. It goes around in 10 and up into 3, and it's thicker over there, it's consistently thick over there.

And the first sand is in fact much more widespread. It actually goes on up north of here, up into Section 33, up into the township to the north.

The productive portions of those reservoirs appear to lie -- of all those reservoirs -- appear to lie in these Sections 2, 3 and 10.

EXAMINER CATANACH: That's all I have.

MR. CARR: At this time we would call Mr. Stubbs.

BRUCE STUBBS,

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

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your name for the record, please?

A. Bruce A. Stubbs.

Q. And where do you reside?

A. I live in Roswell, New Mexico.

Q. By whom are you employed and in what capacity?

A. I'm a consulting petroleum engineer. I've been retained by Armstrong Energy to review the Northeast Lea-Delaware.

Q. And you've made an engineering study of the area?

A. Yes, I have.

Q. And you've prepared certain exhibits for presentation here today?

A. Yes, I have.

Q. Have you previously testified before the New Mexico Oil Conservation Division?

A. Yes, I have.

Q. At the time of that testimony were your credentials as a petroleum engineer accepted and made a matter of record?

A. They were accepted.

Q. Are you familiar with the Application filed in this case on behalf of Armstrong Energy Corporation?

A. Yes, I am.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: They are.

Q. (By Mr. Carr) Mr. Stubbs, let's go to

Exhibit Number 5 that Mr. Boling referenced in his testimony. Again, I'd like you to identify that and then in a little more detail review for Mr. Catanach what it shows.

A. Exhibit 5 is a one-mile radius around the Armstrong Energy well. It shows all the Delaware producing wells in that one-mile radius.

It also shows in the shaded area, the 480 acres that are attributed to the Northeast Lea-Delaware field.

Q. Are there any additional Delaware wells east of the acreage that is shown on this plat but within a mile of the pool?

A. No, we did a -- We pulled the records on all the wells, all producing wells in the nine sections surrounding that well, and they're in the pages attached to that first page, and there are no Delaware wells to the east of Section 2.

Q. What are the attachments to the initial plat in Exhibit Number 5?

A. Those are the listings of all the penetrations or all the producing wells in the nine sections surrounding the Armstrong Energy well.

Q. And those wells are indicated by a dark arrow?

A. Yeah, the Delaware wells are highlighted by a dark arrow.

Q. Let's move now to what has been marked as Armstrong Exhibit Number 6. Would you identify and review this, please?

A. Number 6 is a Delaware well summary, just so everybody can keep straight which zones we're talking about.

The first well is the Armstrong Energy Mobil Lea State well, producing out of the third sand at over 100 barrels per day.

The second well is the Mescalero Ridge up in Section 35. As Mr. Boling stated, it's producing out of a limestone. It's produced 23,000, almost 24,000 barrels to date and is presently producing about five and a half barrels per day. And that interval is equivalent to what we're calling the second sand.

Next well is the Mobil State, which is -- Mobil State Number 1, which is the Harken well. It's the east offset to the Armstrong Energy well. This is a first sand completion. It's cum'd about 70,000 barrels. They tested the third sand, and it was wet in that particular wellbore.

The next well, the Mobil State Number 2, is the south offset to the Armstrong Energy well. It

tested the first sand, and it was found to be wet. And as Mr. Boling stated, the third sand, which is the equivalent sand the Armstrong Energy well is completed in, appears to have about 20 percent -- or 20 feet of porosity that should be productive. And I'm kind of at a loss why they didn't test it.

The next three wells, the North Lea Federal 1-Y, Number 2, and Number 3, are Morrow gas wells. I've looked at those logs, and what we find on those logs confirms what Mr. Boling has discussed as far as the oil/water contact. All three of those wells -- or two of those wells are -- the third sand falls below the oil/water contact. The North Lea Federal Number 2, which is the far west well, have a facies change, and the third sand disappears and turns to a lime.

The North Lea Federal Number 4 is a first sand completion. It's presently producing about 85 barrels a day.

And Number 5 is a -- has been completed in three different intervals. The fourth sand was 6000 feet. The third sand equivalent, which is a lime in that particular well, and then the first sand. And that well is capable of making over a hundred barrels a day.

The fourth sand produced about 72 barrels a

day. The middle zone, the lime zone, produced over 50 barrels a day. And the first sand is producing over 107 barrels a day.

One comment on Number 5, and we'll discuss it a little bit more later, has had two casing leaks in the Seven Rivers Reef interval, and that gives us all some concern in this whole area.

North Lea Federal Number 6 is completed in the third sand, which is the same sand that the Armstrong Energy Well is completed in, and is also capable of producing over 107 barrels a day.

And as Mr. Boling discussed, the North Lea Federal Number 7 tested the third sand, but it's below the oil/water contact.

Next two wells, the Mark Federal Number 1 and Number 2, are on the west side of Section 3. They're first-sand completions, and both of those wells are capable of over 100-barrels-a-day production.

The last two wells are two kind of insignificant Delaware wells that kind of give you the boundaries on the south and to the west.

The Powell Federal Number 1 is in Section 4, which is west of the Read & Stevens wells, and it's a pretty poor well, making about nine barrels a day, eight barrels of water.

Union Federal A Number 2 is in the southwest of Section 10, making nine barrels a day and 75 barrels of water.

Q. And this exhibit basically confirms that we're dealing with multiple pay zones in this portion?

A. Yeah, there's at least four pay zones in this area.

Q. All right. Let's go to your production curves, Exhibit Number 7, and I'd ask you to review these for Mr. Catanach.

A. These are the decline curves for the wells in the Northeast Lea-Delaware field.

The first curve is just a summary, and -- of the two wells, the Pennzoil well and the Harken well -- and they've cum'd to date 93,583 barrels.

Then there's two separate curves for -- or one separate curve for each well, plus the daily production or monthly production figures.

The first one is the Pennzoil well up in Section 35, producing out of that carbonate equivalent to the second sand, and it started producing about 30 barrels a day and has since declined down to about five and a half or six barrels a day.

Q. How do these wells actually compare to the Armstrong well?

A. They -- Productivity-wise, they're not even in the same class. They more or less describe or determine the edge of the reservoir, in my opinion.

Q. Let's now go to the Mobil Lea State Number 1 well, your Exhibit Number 8, and I'd ask you to review that information for Mr. Catanach.

A. Okay, the Mobil Lea State Number 1 was frac'd and put on production October 28th, and this is a daily production test from that well.

As you can see, the first week or two they didn't know exactly what they had, and the first few days it made over 500 barrels a day. And they kind of got it under control and it leveled out, and then requested an exception from the OCD to produce it at twice allowable, and that's what they were shooting for at around 200 barrels a day. We had one period from about the 10th of December to a little after the 15th that we tested it at 275, 300 barrels a day.

What we were looking for during these tests was any indication that we were bleeding off excess reservoir energy or influencing water-coning or anything like that.

And now the next curve is the oil- and water-cut percentages. As you can see, the oil cut has been around 89 percent, and the water cut's been about 11

percent, and no real changes during any of the tests that we performed.

Third curve is the gas/oil ratio, and the gas/oil ratio has pretty well leveled out at 300 standard cubic feet per barrel.

Q. Basically, what this shows is, pulling the well at this rate you're not increasing the water cut?

A. We're not increasing the water cut, and it doesn't appear like the gas/oil ratio is increasing either.

Q. And what does this tell you about the possibility for causing reservoir damage by producing the well at the higher rate?

A. It looks like the well is capable of high-rate production without damage to your reservoir.

Q. Let's move to Exhibit Number 9. Could you identify this and then briefly review what it shows?

A. This is a calculation I did to derive a productivity index for this particular reservoir.

On December 17th, we ran a production test of 283 barrels a day, water production of 36 barrels, fluid level was at 48 joints, and casing pressure was 220 pounds.

The casing on this well has been shut in. We're not closing flowing gas off the casing, so it's

remained static.

Also, I might mention that on January 1st we shot another fluid level, and it was still at 48 joints. So that means the fluid level in the annulus is about 1488 feet.

To calculate a flowing bottomhole pressure I used 38-degree gravity API oil gradient of .38 p.s.i. per foot to the middle of the zone at 5905, gives me a hydrostatic pressure of 1722 plus the casing pressure of 220, gives us a flowing bottomhole pressure of 1942 pounds.

Calculated a static bottomhole pressure from a drill stem test that was run on the North Lea Federal Number 3, and also compared it to a drill stem test that was run in this zone in the Harken well. It appears that the bottomhole pressure gradient is about .43 p.s.i. per foot, which yields a bottomhole pressure of about 2539.

So we're running -- We're producing 283 barrels of oil and 36 barrels of water with a pressure drop from 2539 to 1942, yields .53 barrels of fluid per p.s.i.

If we're able to pump this well off and maintain just 100 p.s.i. pump intake pressure, the well is capable of producing over 1300 barrels of fluid a

day, being about 1156 barrels of oil and 147 barrels of water.

So at a production rate of 300 barrels a day, we're just barely lowering the bottomhole pressure by about 24 percent. We're not pulling the well very hard at all at that point.

Q. Let's go now to Exhibit Number 10. Would you identify the graphs that together comprise Exhibit Number 10?

A. Okay, Exhibit Number 10 is production decline curves for the Read & Stevens wells, the Powell wells -- or the Powell Federal well and the Union Federal well, and then the last about five or six curves are just some good Delaware wells located in Lea County.

And what I want to show in this is that the wells are capable, the Mark Federal wells are capable of producing over 100 barrels a day.

The first one is Mark Federal Number 1, and it's over 3000 barrels a month.

Mark Federal Number 2 has produced over 3000 barrels a month.

North Lea Federal Number 4 is now producing over 3000 barrels a month. It had a pump change. That dip is a pump change that was made on that particular well.

The North Lea Federal Number 5 has just been recompleted in those additional zones and the casing leak fixed, and it's up to 3000 barrels a month.

And then these two kind of poor wells, the Powell Federal in Section 4, Union A Federal in the southwest of Section 10, as you can see, that's again kind of showing the edge of the reservoir, not near the productivity that we're experiencing up in Section 2 in the North Lea Number 6.

And the last group of curves are some good Delaware wells, just typical good Delaware wells located in Lea County. I want to show that it is possible for these things to produce for a long period of time at 100 barrels a day.

The first one is a Cotton Draw well in the Paduca (Delaware), and it produced five years at 3000 barrels a month or a hundred barrels a day.

And the next Cotton Draw well produced over eight years at 3000 barrels a month.

And then the next three curves are some Inca Federal wells over in the Shugart field that are operated by Siete Oil Company, and again they produced two or three years at a hundred barrels a day before they showed any kind of decline.

Q. What is the reservoir drive mechanism you

anticipate in the subject portion of the Delaware?

A. I feel like in this area, because of the better permeabilities, we're probably going to have a combination of solution gas drive and a water drive, and that's -- As you can see in the decline curves on some of the Cotton Draw wells, that they're more or less constant rate, being that they start out at about 3000 or 4000 barrels of fluid a day, 3000 oil and some water, and then they end up toward the end of their life making 3000 water and some oil.

So I think we have a similar situation here with a water leg to the south and enough permeability where we can see the effects of that water leg.

Q. Would you identify what has been marked as Armstrong Exhibit Number 11?

A. This is a volumetric analysis of the third sand in the Armstrong Energy well, trying to get an idea of what the recovery might be for 40 acres in that particular reservoir, and came up with a number of 261,000 barrels.

Q. Let's move right on into Exhibit Number 12, and I'd like you to first explain what this is and then review it.

A. Okay, this is a proposed -- or a decline curve. I think this well could possibly produce -- the

way it possibly would produce at 107 barrels a day.

Using the 260-plus-thousand barrels ultimate recovery, it would produce about five years and then start some kind of decline. And I've run economics on that scenario, holding the rate constant for 5.4 years and 107 barrels a day, and then declining it.

And then the second curve is what would probably happen at a higher rate, 300-barrel-a-day allowable. It would probably produce for about a year and then go on approximately the same decline.

Q. How do the payouts compare under each of these allowable scenarios?

A. The payout at 107 barrels a day is about .82 years, and of course increasing the rate by a factor of three reduces the time by about -- to about one-third or .28 years.

Q. Why is this significant, other than just recouping your investment more quickly?

A. Well, it's significant for a couple reasons.

We want to recoup the investment early on so we have money to invest in the next well.

It also by a higher allowable is a much more efficient recovery of the reserves, because you shorten the life of the prospect or shorten the life of that particular zone from -- in this case, from 9.6 years to

6.7 years, so you save three years of lease operating expenses.

And by having a higher allowable, you would be more encouraged to complete the additional pay zones in the area.

Q. Have you experienced any kind of physical problem with the wells in this area that would -- corrosion, anything of that nature?

A. Well, I mentioned a while ago the concern we have about the Seven Rivers Reef interval. It is a very porous, lost-circulation zone that has lots of corrosive water moving around in it. And it not only causes problems drilling, but it has caused casing problems in the North Lea Federal Number 5, which has had casing leaks.

It is possible that if the life of these wells were drug out too long, that you could have a casing leak and lose the well and actually lose reserves.

Q. In view of that, is it more efficient to produce these wells at a faster rate?

A. In my opinion, it would be more efficient and prudent to produce them at as high a rate as possible.

Q. Let's take a look at Exhibit Number 13. Could you identify that, please?

A. This is copies of the logs on the Armstrong well and the Read & Stevens North Lea Federal Number 6 well, and as we've discussed previously that there are multiple pays in this field, and we feel like that each of these pays are capable of producing over the allowable.

There's two other zones in the Armstrong well, and at least two other zones in the Read & Stevens well that will be tested at some point in time.

Now, the economics we talked about previously, by not going ahead and completing those zones it will have a multiplying effect on the economics because you probably wait four or five, six years to complete those other zones and not realize any benefit from those zones for some period of time.

Q. Mr. Stubbs, in your opinion will approval of this Application prevent waste?

A. I feel like it will prevent waste and more efficiently produce the reserves from these wells.

The higher rates will mean quicker payouts.

It will reduce the operating costs, thus resulting in more capital for future investment.

Q. Okay, and what are the other benefits that are related to these quicker payouts?

A. Well, like we stated before, there are

problems in drilling these wells that add about $100,000 to the cost in additional casing and lost-circulation problems in the Seven Rivers Reef zone.

Because it costs more to drill these wells, there has been a reluctance to develop this area.

Higher allowables would generate more cash flow, which would be an incentive to go ahead and develop these wells.

Q. How would this lost-circulation problem, if you would state again, affect this overall Application?

A. Well, it's my concern that later in the life of the wells, if you have casing leaks, you could jeopardize a wellbore and you'd actually lose reserves.

Like I said before, we've had two cases where we've had casing leaks, and it's a distinct possibility that we're going to see more casing leaks as time goes on.

Most of the deep wells in the area have two strings of casing, so they have not experienced that kind of problem. But the shallower wells don't have the benefit of the deep intermediate through that zone to protect the production casing.

Q. If you encounter these problems with corrosion, could that in fact result in premature abandonment and ultimately loss of reserves in this

area?

A. I believe it could.

Q. Mr. Boling testified about four zones capable of production in this portion of the Delaware. How does that factor, in your opinion, affect this Application?

A. Well, it would be more efficient to produce all the zones at the same time and not delay completion or production out of those zones for a number of years. It would just be more efficient to go ahead and produce them all together, and it would save operating costs and reduce exposure to casing failures.

Q. Will approval of the Application cause reservoir damage?

A. I don't believe it will. The zones appear to be highly productive, the pressure drawdowns are not great, and we see no evidence of water influx or increased GOR ratios.

Q. Will approval of this Application protect correlative rights?

A. I believe it will, because most of the productive area lies on the Armstrong lease and on the Read & Stevens leases. And Read & Stevens, I believe, is in support of this Application for higher allowables.

Q. If the Division should decide to grant temporary rules for this pool, for how long a period do you think temporary rules should remain in effect prior to being called back to provide additional data on the performance of wells in the reservoir?

A. Well, it's probably going to take another six months to get a couple more wells drilled and get additional pay zones opened up.

And then I think you'd want to see at least 12 months, maybe 18 months of production, so you can get some idea of what kind of reservoirs you have and what kind of drive mechanisms and what the actual declines are going to be.

So a minimum of 18 months and preferably probably two years.

Q. Would you identify what has been Marked Armstrong Exhibit 14?

A. That's just a summary of our main reasons for requesting higher allowables.

Q. Is Exhibit Number 15 a copy of an affidavit confirming that notice has been given to all operators and unleased mineral interest owners, if any, in the pool?

A. That's correct.

Q. And also notice has been given to operators

of wells within a mile of the pool?

A. That's correct.

Q. What is Exhibit Number 16?

A. I believe that's the letter from Read & Stevens in support of our Application for higher allowables.

Q. Were Exhibits 5 through 16 either prepared by you or compiled under your direction?

A. That's correct.

MR. CARR: At this time, Mr. Catanach, we move the admission of Armstrong Energy Corporation Exhibits 5 through 16.

EXAMINER CATANACH: Exhibits 5 through 16 will be admitted as evidence.

MR. CARR: That concludes my direct examination of Mr. Stubbs.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Stubs, am I correct in my understanding that the wells producing from the Quail Ridge Delaware field are in fact not in communication with the Lea field?

A. The North Lea Federal Number 6, located in the northwest of the northeast of 10, is producing out of the same sand as the Armstrong Energy well, and so

those two are probably going to be in, you know, the same interval.

Now, they're quite a distance apart. The ones located over in the southwest of Section 3 are producing, I recall, in the first sand, and the Armstrong well is not completed in that sand at this time.

Q. The sands are continuous over that area, and they could possibly be in communication with the Armstrong well?

A. The first sands, yes, and also the third sand that we see in Number 6, Lea Federal. Those sands, I think, are -- as Mr. Boling stated, are continuous over that area.

Q. None of the wells in the Quail Ridge Delaware field are capable of the rates of production you're seeing in the Armstrong well?

A. Yes, they are.

Q. They are?

A. They're not capable of 300 barrels a day, but they can produce well over 100 barrels a day.

As we can see in the decline curve, they have pretty stable production at 107 barrels a day, 3000 barrels a month.

Q. In your opinion, would raising the allowable

in your field have an adverse effect on those operators in the Quail Ridge Delaware field?

A. I don't believe it would at this time. The Armstrong Energy well is 1980 feet away from the west line of Section 2, so it's at this time quite some distance from the Read & Stevens leases.

The Harken well has already tested the third sand and found it to be wet. So it won't affect anything in the Harken acreage.

Q. I presume Armstrong will propose to drill more wells in this field?

A. That's correct.

Q. Probably closer to the Quail Ridge field?

A. That's probably correct, yes.

Q. Mr. Stubbs, in your various production scenarios, 107 barrels a day versus 300 barrels a day, have you determined what the ultimate recovery would be in each of those cases?

A. Well, I held the ultimate recovery basically constant in the two cases at a little over 260,000 barrels, based on a volumetric analysis.

Now, because it's more efficient and you can get the production out earlier in the life of a well, it's possible that your operating costs would be lower early in the life of a well, and you could go ahead and

produce the well past what we've picked as the economic limit of this case, so you could have more reserves at a higher rate under that scenario.

Q. Could have more reserves --

A. -- at a higher rate.

Q. Could you also have less reserves?

A. Anything's possible. We don't know at this time.

Q. Is there not a way to estimate, based on the projected decline curves, what the recoveries might be from these wells?

MR. STOVALL: The decline curves, as I understand the way you did them, though, were based upon the projected ultimate recovery rather than the reverse, right?

THE WITNESS: Right, right. We don't have enough production history on this well to really have any kind of decline-curve analysis. We have two months' production, and it's basically flat.

MR. STOVALL: Let me ask you -- I think what the Examiner may be getting at is, do you have an opinion as to whether the producing at the higher rate could cause an earlier depletion of, I guess, reservoir energy of some sort, or do something in a physical way, rather than an economic way, to reduce the potential

ultimate recovery?

THE WITNESS: I don't believe so at this point in time.

There's quite a few cases where the Delaware is producing large volumes of fluid and it doesn't appear that they've been harmed in any way. Like in the Paduca (Delaware) field, they're producing 200 or 300 barrels of fluid a day down there out of the Delaware, and it's --

MR. STOVALL: In other words, it's not rate-sensitive as far as ultimate production?

THE WITNESS: No, it doesn't appear to be.

The mobility ratio between the water and the oil is about the same. The viscosities of the fluids at reservoir conditions are about 1.2 centipoise, and the water is about 1.2 centipoise.

So there's no reason the water is going to override the oil, and I just don't feel like it's going to be a problem.

Q. (By Examiner Catanach) At a rate of 300 barrels of oil per day, how long would it take you to finally establish a decline?

A. Well, if it follows my scenario, about a year, and then it would start showing some kind of decline.

But I think before that year was up, the other zones would probably be completed, and that might extend on farther past that.

Q. Which leads me to a next question. Would Armstrong propose that the various sands in the same wellbore be completed simultaneously?

A. If our higher allowable was available, it would be prudent to go ahead and complete all the sands at the beginning of the well, I think.

Q. Which may reduce the volume of oil you're producing from a single zone?

A. That's correct. You may -- If it was 300-barrel-a-day allowable, you may have, just for example purposes, 100 barrels a day out of each of the three intervals, if you had three intervals completed.

Q. Now, assuming that that was not the case, assuming you had a well that could not produce from the third sand and you wanted to complete in a different sand, you really haven't done an analysis of any of the other sands to see what kind of effect a higher producing rate would have on those reservoirs?

A. I've looked at the first sand completions over on the Mark Federal wells. And again, they're not as highly productive as this well, but they would benefit from the same scenario, being able to produce

at a higher rate.

Q. But have you done an analysis to determine whether that higher rate would be detrimental to the reservoir?

A. No, I have not.

Q. We are talking about four distinct and separate reservoirs?

A. That's correct.

Q. If you were producing at a 300-barrel-a-day rate, what evidence, if any, would you see if you were causing excessive water-coning in the reservoir?

A. If you had water-coning, of course, you'd see an increase in water production, and your percent water cut would increase.

We haven't -- Like I said, in our production tests, we have seen no increase in the water rates, water percentages.

Q. Do you believe that the test period that you've done in the Number 1 well is sufficient to demonstrate that there's no harm being done to the reservoir?

A. It's -- Well, it's two months, and that's a fairly long production test, and we've watched it pretty close. If there was going to be a drastic problem, I think we'd have seen some kind of indication

of water increases.

But we're quite a ways away from really the water leg itself, because we're -- This well is quite a ways updip.

EXAMINER CATANACH: I believe that's all I have.

MR. STOVALL: Mr. Carr, you're the one that provided the Affidavit of Notice.

MR. CARR: Uh-huh.

MR. STOVALL: Do you have sufficient information to say that that is everybody who would be entitled to notice under the --

MR. CARR: We believe we've given notice to everyone who is entitled to notice under Division rules.

We did not expand this to the Uhden test because we could not find anyone who would be personally affected by this.

The royalty owners in the area are only the state and the -- level.

MR. STOVALL: Well, I don't think the royalty owners are affected, because I don't think it changes --

MR. CARR: And so what we have done is, we have given --

MR. STOVALL: -- their interest.

What about within a mile of the pool?

MR. CARR: We've given to all operators of wells within a mile, as required by the rules.

MR. STOVALL: Okay. Yeah, I agree with you, I don't think it's a Uhden royalty owner case at all.

MR. CARR: And I don't believe there are unleased mineral tracts within the 480 acres, and so we have covered everything required by --

MR. STOVALL: Anybody that owns a working interest within the pool and a mile thereof.

MR. CARR: Well, either the owner or their operator has been notified.

MR. STOVALL: Yeah, okay, right.

EXAMINER CATANACH: Within a mile of the pool boundary?

MR. CARR: Yes.

MR. STOVALL: That's really the one we were focusing on, is the mile, more than --

MR. CARR: It says operator of wells within a mile, and they've been covered, because there aren't wells over there.

MR. STOVALL: Right. Well...

EXAMINER CATANACH: Is that it?

MR. CARR: That's all we have.

(Off the record)

EXAMINER CATANACH: There being nothing further, Case 10,653 will be taken under advisement.

(Thereupon, these proceedings were concluded at 12:20 p.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10653, heard by me on January 7 1983.

David R. Catanach, Examiner
Oil Conservation Division

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 10, 1993.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1994

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,563

EXAMINER HEARING

IN THE MATTER OF:

Application of Great Western Drilling Company for compulsory pooling and a non-standard gas proration unit, San Juan County, New Mexico

ORIGINAL

TRANSCRIPT OF PROCEEDINGS

BEFORE: MICHAEL E. STOGNER, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

October 1, 1992

A P P E A R A N C E S

FOR THE DIVISION:

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* * *

I N D E X

DENNIS L. HENDRIX (Continued)

* * *

E X H I B I T S

* * *

WHEREUPON, the following proceedings were had at 9:10 a.m.:

EXAMINER STOGNER: Call Case Number 10,563.

MR. STOVALL: Application of Great Western Drilling Company for compulsory pooling and a non-standard gas proration unit, San Juan County, New Mexico.

EXAMINER STOGNER: Call for appearances.

MR. HALL: Mr. Examiner, Scott Hall from the Miller, Stratvert, Torgerson and Schlenker law firm in Santa Fe on behalf of the Applicant.

We have three witnesses this morning.

EXAMINER STOGNER: Other appearances?

MR. COOTER: Paul Cooter with the Rodey firm in Santa Fe, appearing on behalf of Northwest Pipeline.

We may have one witness, may not, depending upon how the exhibits go in.

(Off the record)

EXAMINER STOGNER: At this time, will the witnesses please stand and be sworn?

(Thereupon, the witnesses were sworn.)

EXAMINER STOGNER: You may be seated.

Mr. Hall?

MR. HALL: Mr. Examiner, by way of background, we are bringing this Application pursuant

to the Order, Order Number R-9277, entered in Case Number 10,048, almost two years ago.

In that instance, the Applicant sought to dedicate a nonstandard unit to the J.E. Decker 11 well, the well in this case.

That Applicant was opposed by Northwest, who sought instead dedication of the well to a standard unit, consisting of all of irregular Section 8.

We are here today pursuant to provisions of that Order in seeking that dedication and designation of Great Western Drilling, its operator, and we also seek the standard coal well risk penalty of 156 percent.

I'll start with my first witness.

MIKE S. HEATHINGTON,

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

DIRECT EXAMINATION

BY MR. HALL:

Q. If you would state your name for the record, please.

A. Full name is Mike S. Heathington.

Q. Mr. Heathington, where are you employed and in what capacity?

A. Employed at Great Western Drilling Company in

Midland, Texas, in the capacity of landman.

Q. All right. Have you previously testified before the Division?

A. No, I haven't in New Mexico.

Q. If you would, please, sir, give a brief summary of your educational background and work experience.

A. Okay, I've got basically ten years of in-house land experience with two companies, Yates Petroleum and Great Western Drilling Company, a couple years of independent contract work running titles in west Texas.

Graduate of Angelo State University, 1980.

Q. And you're familiar with the well and the subject lands in this case?

A. Yes, I am.

MR. HALL: Are the witness's credentials acceptable?

EXAMINER STOGNER: Are there any objections?

MR. COOTER: No, sir.

EXAMINER STOGNER: This witness's credentials are acceptable, Mr. Hall.

Q. (By Mr. Hall) Mr. Heathington, what is it that Great Western seeks by this Application?

A. What we're trying to do here today is reach a

compulsory pooling of a the non-joinder interest we've had in the southeast quarter of our section.

We seek to be designated as operator of this standard proration unit, and we also seek the standard 156 risk penalty applied for Basin Fruitland Coal wells.

Q. And by the way, this is not a standard governmental section; is that correct?

A. That's correct, it's an irregular section. It's up against the state line of Colorado. The full section comprises 336 acres.

Q. All right. If you would refer to Exhibit 1, please, sir, and explain the land ownership situation?

A. Okay. Basically, like we mentioned, our proration unit comprises all of Section 8. Lots 3 and 4, in the south half of southwest quarter of said section is outside of the -- outside of a federal unit we're proposing to standarly pool with.

What is generally referred to as the southwest quarter of 8 is owned by Great Western Drilling Company, 64.476; percent; Dabble, Inc., 35.524 percent.

I believe lots 1 and 2 and the south half -- southeast quarter of Section 8 to be owned in these percentages: 23 percent by Williams Production

Company; Arco Oil and Gas Company, 50 percent; Coastal Oil and Gas Production, 27 percent.

Q. And which of those interests are permitted to the well and which do you seek to pool?

A. We have joinder, voluntary joinder under the Order 9277, from 74.97 percent of the parties.

Basically at this time we have not heard at all from our correspondence from Coastal Oil and Gas Corporation one way or the other. Northwest -- Excuse me, Williams Production Company, has executed our proposed JOA, conditionally subject to a revised Exhibit E.

So basically we're talking -- and have not -- They have not executed the necessary com agreements necessary to pool, necessary to produce our well.

So basically the interest of Williams Production Company and Coastal Oil and Gas.

Q. And you are seeking to pool across the unit boundary of the Cox Canyon Unit; is that correct?

A. Yes.

Q. And that's shown on Exhibit 1?

A. That is on Exhibit 1.

Q. If you would refer to Exhibit 2, is Exhibit 2 a compilation of the letters you have sent to Coastal and Northwest for Williams, seeking to secure their

joinder?

A. Yes, it is.

Q. If you could give me a detailed explanation of the sequence of events.

A. Well, again, pursuant to your Order 9277 on March 5th, we sent out what we felt was letters -- a letter to all parties in accordance with what the Order required us to do, and that was, we sent out the proposed joint operating agreements, com agreements, and we listed the -- Since this well had been already drilled and completed, we had a very good handle on the -- instead of an estimated cost, we have a very good handle on the actual cost of that well, and we informed all parties what the costs to that date were.

You know, it basically followed up from March 5th on with phone calls and subsequent conversations, trying to get all parties in pursuant to the Order we were under.

Q. Since you had actual costs, there was no need to send an AFE; is that correct?

A. Certainly we can document the actual cost number that we gave. We did not send -- AFE's had already been executed prior to drilling the well to begin with, with the parties in the original unorthodox location that was not approved.

Q. Orthodox, standard, you mean?

A. Yes, not -- Excuse me, nonstandard unit, that's correct.

So no, we didn't send out AFE's, again, since we had such a good handle on total costs.

Q. And the interest owners you seek to join were apprised of those actual costs; is that correct?

A. Yes, in our March 5th letter.

Q. In your opinion, have you made a good-faith effort to join those interest owners?

A. Yes, sir, I believe we have.

Q. Are you prepared to make a recommendation to the Examiner as to the risk penalty that should be imposed against those interests?

A. Our witnesses to be called here in a minute will talk about that more.

But yes, we see no difference in the risk that we incurred -- that anyone incurred prior to drilling. Even though this well has been completed, there's still certainly risk associated with it, and 156 penalty should be applied.

Q. All right. With respect to Exhibit 2 were those letters drafted by you or at your direction?

A. Yes.

MR. HALL: And Mr. Examiner, Exhibit 1,

although ths witness testified about components of it, it was prepared by witnesses. I'll tender it to those witnesses.

At this time we'd tender Exhibit Number 2.

EXAMINER STOGNER: Are there any objections?

MR. COOTER: No, sir.

EXAMINER STOGNER: Exhibit Number 2 will be admitted into evidence.

So I'm not confused here, Mr. Hall --

MR. HALL: I have some information on the ownership percentages.

We didn't seek to make that an exhibit, but if you'd like that --

EXAMINER STOGNER: In light of what could potentially be somewhat complicated, I would like it, yes.

MR. HALL: All right.

EXAMINER STOGNER: I want to make sure what party we're here to force-pool today. Is that Northwest Pipeline?

MR. HALL: Now known as Williams Production Company --

EXAMINER STOGNER: Okay.

MR. HALL: -- and Coastal.

THE WITNESS: Coastal.

EXAMINATION

BY EXAMINER STOGNER:

Q. So, for the record, when I refer to Order R-9277 and they talk about -- and that Order talks about Northwest Pipeline, we're talking about one and the same, Northwest Pipeline being Williams Brothers Production; is that as you understand it, Mr. Heathington?

A. Yes, it is.

Q. Okay. Now, where does Coastal Oil and Gas Corporation come in on this?

A. They're just a partner to the -- in the Cox Canyon unit, and they do own 27 percent of the -- of lots 1 and 2 in the south half, southeast quarter of Section 8, which is part of the Cox Canyon Unit.

Q. And what about Arco's interest again?

A. Arco is fully signed up to join, and -- as well as executing the com agreements that we need here to produce the well.

Q. Now, do these percentages -- and that's the Arco, 50 percent; Williams Production, 23 percent; and Coastal, 27 percent of this particular -- for convenience's sake, the southeast quarter of 8?

A. That's correct.

Q. Is that number also indicative of that unit

that is also shown in the Exhibit Number 1?

A. No, it isn't. We got those -- on our JOA, if you would like those numbers.

EXAMINER STOGNER: Are you going to present testimony on that later, Mr. Hall?

MR. HALL: No, sir, didn't plan on it. We'll -- like to get to that right now.

EXAMINER STOGNER: I guess I'm confused. I've got a unit out here, but we only have three parties. I thought that's the whole idea of a unit, that we have more than one interest in that unit.

MR. HALL: We're simply pooling across the unit boundary into the southeast quarter of 8 --

EXAMINER STOGNER: Exactly.

MR. HALL: -- along with the southwest quarter of 8. We're pooling that acreage in the southwest quarter of 8. The unit operator will be responsibe for distributing production proceeds, I assume.

THE WITNESS: If you would like the ownership percentages for the communitized Section 8, I've got those.

Basically the parties in question here would be -- Coastal owns the proposed 336 acres we propose to unitize. For purposes of Fruitland production, Coastal

would own 13.51607 percent.

Arco is joined.

Williams has 11.51369 percent.

Just over 25 percent of the proration unit, standard proration unit, is not fully signatory to our agreements.

EXAMINATION

BY MR. STOVALL:

Q. Give me that last -- that 11.369 was Williams?

A. Yes, that ownership I'm showing is for that acreage only, and I didn't break it out to the -- to the 336-acre proration unit. But we've got it on the operating agreements if you all would like a copy of that.

Q. The percentages you just gave were for the southeast of 8 --

A. Yes, sir.

Q. -- assuming that that's how we're --

A. Yes, sir.

Q. -- we're calling that particular tract?

A. Right. That the ownership of that tract. That's not ownership of the 336-acre well -- communitized unit.

Q. Who's got the rest of the other 75 percent of

that southeast quarter, did you say?

A. Arco owns -- Arco, Coastal and Williams Production company own those percentages I'm showing on my ownership exhibit for the southeast of 8, Great Western and Dabble own all the southwest quarter of 8.

(Off the record)

Q. (By Mr. Stovall) Great Western is not part of that unit in any way, are they?

A. No, sir.

Q. How familiar are you with the unit agreement and the unit operations and all that sort of --

A. The existing federal unit over here? I'm not that familiar at all.

MR. STOVALL: Mr. Hall, is it your contention that you know the lands are unitized --

MR. HALL: Yes, sir.

MR. STOVALL: -- and therefore you are force-pooling the unit and giving notice to Williams as the unit operator; is that correct?

MR. HALL: We -- Williams is the unit operator, is my understanding.

MR. STOVALL: Correct, okay.

MR. HALL: We're simply pooling the interest owners in the 336-acre proration unit.

MR. STOVALL: And so what you have done as

far as notice and naming parties, you are naming Williams as an interest owner in that southeast quarter and also as the unit operator; is that correct?

MR. HALL: Correct, yes, sir.

MR. STOVALL: And you are naming Coastal as an interest owner in the southeast quarter, although their interest may be governed by the unit agreement?

MR. HALL: That's correct.

MR. STOVALL: And Arco is voluntarily joined, but their joinder and participation may be affected by the unit agreement?

MR. HALL: It may be.

MR. STOVALL: And so when you do a Division order and a division of interest on your JOA, it may have to reflect the unit rather than the individual lessees within the southeast quarter; is that correct?

MR. HALL: For purposes of distribution to the unit participants, I assume that's correct. I assume Northwest or Williams.

MR. STOVALL: That could --

THE WITNESS: I'm not sure that they -- Excuse me. They will clarify, but that could be the unit ownership also.

MR. STOVALL: Well, that was going to be my next point, is, it sounds to me like what we're going

to have to do is finish up here, and then perhaps Mr. Gillen is familiar enough with the ownership and agreement that he can discuss who that is.

I guess for purposes of this -- As far as the force-pooling order is concerned, it isn't really particularly important what the percentages are, as long as you've got the parties named.

MR. HALL: We're just looking for the right to drill at this point, to dedicate the acreage.

MR. STOVALL: Coastal may be an extra in here if, in fact naming the unit is sufficient, but I think that you have given notice to presumably all parties who would be entitled to notice, and possibly more than really are required to have it.

MR. HALL: I believe that's correct.

MR. STOVALL: I think I can concur in that so far. We'll hear what Williams has to say here when we come up, but I believe that would be correct.

EXAMINER STOGNER: In that case, are there any other questions of this witness?

Mr. Cooter?

CROSS-EXAMINATION

BY MR. COOTER:

Q. Mr. Heathington, in brief review, when Great Western filed its Application for a permit to drill

this J.E. Decker Well Number 1, that Application showed as the land committed to that unit was all of Section 8, which is more or less the south half of a normal section?

A. I think that's right.

Q. And at that time, or prior to the drilling of that well, no effort had been made by Great Western to form or to have a communitization agreement which covered that south half?

A. That's correct. We had a miscommunication between our permanent people and the land people, which basically we had always in the past developed nonstandard proration units around the Cox Canyon partners.

We've been out there for quite some time, we've always developed Mesa Verde. And I basiclaly -- When we got into our Fruitland program, we basically prepared JOA's reflecting the way it always had been done in the past with our partners in the west half, west half of 17, and stayed away from the unit partners. And the permit was incorrectly filed, that's correct.

Q. And so when that difference was discovered, then Great Western filed its Application in that prior Case Number 10,048 to form the nonstandard proration

unit, being the southwest quarter of Section 8 and the west half of the west half of Section 17 to the south?

A. That's correct.

Q. Now, prior to that hearing in that case, Great Western had received -- well, at least more one letter from Northwest indicating that it would like the unit to be the south half of -- or all of Section 8, in making that proposal to Great Western and indicating Northwest Pipeline's willingness to join in that unit, had it not?

A. Prior to what date? I'm sorry?

Q. Prior to at least the hearing in that prior Case Number 10,048.

A. There was discussion, lots of discussion about that. I'm not --

Q. Well, let me --

A. -- expressly aware of any correspondence to that effect.

Now, after the hearing, of course, and pursuant to the Order, they did request us to submit JOA's and com agreements.

MR. STOVALL: Mr. Cooter, if I might, is that -- do you remember if that discussion was in the 10,048 case?

MR. COOTER: Yes, sir.

Q. (By Mr. Cooter) I'm going to refer to two letters. One is a letter of April 24, 1990, which was Exhibit 16, offered by Northwest in that case, and let me just hand that to you for ready reference.

A. Okay. Well, then, the answer is yes, if that's the case. I wasn't present at that hearing or working that case. I wasn't completely aware of that. I inherited this a few months ago.

Q. I can understand the difficulty in doing that.

But back even before the hearing in that prior case, Northwest had indicated its willingness to Great Western if they would but form a Section 8 unit --

A. Yeah.

Q. -- which is at a regular half-section?

A. That's correct. In fact, they insisted that we -- after the fact, after the well was already drilled, that we do that.

Q. Okay. Now, we're still talking about before that hearing. Let me refresh your memory a little bit further and show you a copy of a letter of May 14, which followed the prior one by not quite a month.

Northwest was still indicating its desire that the south half of Section 8, or the irregular

Section 8, be the standard unit?

A. That's correct.

Q. All right. And then when the --

MR. STOVALL: Mr. Cooter, was that second letter you referred to a part of the case, 10,048?

MR. COOTER: I don't believe it was.

Q. (By Mr. Cooter) It conformed more or less to the same terms and provisions of the prior letter, which is marked as Exhibit 16 in that prior hearing, does it not? I'm posing the question to you after I asked it. The second letter in May conforms to the prior letter of April, more or less?

A. I'm sure it's along the same lines of wanting to get the south half unit formed, or the Section 8 unit formed.

Q. Okay. Now, I have placed before you a series of three letters which I have marked in this case as Northwest Exhibits 1, 2 and 3. Actually, I think one of them is a duplication of your letter.

But after the entry of the Order Number R-9277, Northwest again wrote Great Western Drilling Company on October 26th of 1990, again proposing that the irregular Section 8 be committed to a unit for that Number 11 well.

A. That's correct.

Q. At that time, what was done?

A. Again, we've been through a reorganization, and there was quite some period of time before my March 5th of this year letters took place.

I was not involved with management at that time, but I was instructed after our reorganization in January to get this problem addressed, and that's when we submitted in March exactly what is requested here in this letter.

Q. Would it be fair to assume, then, that Great Western did nothing after the entry of the Order and its receipt of Northwest's letter of October 26th, 1990, until sometime in the early part of this year?

A. March 5th of 1992, yes, sir.

Q. And that is evidenced by your letter which is one of your letters in that packet. It's -- the letter mailed to Northwest is marked as Northwest Exhibit Number 2.

A. The March 5th letter; is that correct, Scott?

MR. HALL: Yes.

THE WITNESS: Okay.

Q. (By Mr. Cooter) All right. Now then, tell me, if you would, what transpired between Great Western and Northwest after that March 5 letter.

A. After several phone calls, finding out if the

agreements were success -- acceptable and that type of thing, on July 16th, I guess four months after that letter, they did conditionally execute the proposed joint operating agreement.

The only really complaint I have personally with that -- We really don't have a problem with the conditional acceptance of the JOA; we are just simply frustrated by the noncompliance with, you know, communitizing the section like we need to do, is really the only complaint we've got at this point.

I feel frustrated by the -- They requested signature pages to the com agreement as substitutes. We sent those by one of our letters and really felt we had no objection in order to conduct this, not specifically against Williams, mainly against Coastal, but I have to include Williams for failure to effectively communitize the Section 8.

Q. The communitization agreement was the subject of several discussions between one or more people at Northwest and one or more people at Great Western?

A. Well, myself at Great Western. And like I said, I did send revised signature pages on one of our letters to them, hoping to comply with their concerns and changes.

Q. Well now, your letter of June 23 refers to

two substitute pages which were made to the communitization agreement --

A. Yes, sir.

Q. -- was it not?

A. Yes, sir.

Q. And that, again, was prior to the return of the executed joint operating agreement from Northwest, dated July 16th?

A. (Nods)

Q. In that letter of July 16, they return the executed joint operating agreement with the substitution of a gas-balancing agreement for the one that was contained in the original one?

A. Correct.

Q. Was that acccepted?

A. Again, we don't particularly have a problem. I have not sent that back accepted. We don't have a particular problem with the proposal.

We didn't want to get into the situation with -- Arco was making some of the same comments that they were wanting a different Exhibit 8.

In answer to your question, since Arco is now joined, it probably will be accepted by management, yes, sir.

Q. Their revised Exhibit E --

A. Yes, sir.

Q. -- gas-balancing agreement?

A. Probably. We didn't want to get into a situation where we had three different gas-balancing agreements, so we were waiting until all parties sent their proposed changes to our agreements back to us before we agreed to Northwestern.

Q. Has the substituted gas-balancing agreement submitted to you by Arco been forwarded to Northwest for its consideration?

A. They were talking about it. They never made that request. They executed without exception.

But at the time Northwest said this, they were -- It was in their gas-contract area, and they were talking about making changes, is why this conditional acceptance from Williams has not been accepted, one of the main reasons.

Q. Be patient with me. I'm a little bit confused. Northwest wanted a different gas-balancing agreement?

A. Uh-huh.

Q. And they submitted that to you?

A. Uh-huh.

Q. You have not indicated whether that is acceptable or not?

A. That's correct.

Q. Arco also wanted a different gas-balancing agreement?

A. They were verbally making overtures about proposed changes. They did not -- Again, when it finally went through their system, they executed it without change.

Q. So they have accepted your original one?

A. Yes, sir. So now we've got the situation of accepting Northwest agreements or proposed change and getting approval from everybody or trying to -- You know, there's not that much difference in the agreements, between ours and theirs.

So I'm sure that that condition that they've executed can be worked out.

Q. All right. Then the other question that I would like to ask you is that in your letter of March 5, you refer to the figure of $329,000-plus as your costs incurred in that Decker Number 11 well.

Have you ever submitted to Northwest an itemization of those costs?

A. It's never been requested.

Q. It has not?

A. No, sir, we have not submitted it, and it has never been requested.

Q. If there was a provision that those costs be reasonable and appropriate and substantiating evidence given for them, that has never been done?

A. We are prepared to furnish copies of actual invoices upon request to any party asking for same, actual invoices for this well. We got it all ready and fully expect to furnish them when somebody requests them.

MR. COOTER: That's all I have. Thank you, sir.

EXAMINATION

BY MR. STOVALL:

Q. Mr. Examiner. What's the status of Coastal's -- We discussed Northwest or Williams' productions. What discussions have you had with Coastal?

A. Several verbal conversations after the proposal in March. They have recommended to management that they participate. They just can't get whoever in house is authorized to finally approve that. They just can't seem to quite get over the hump there, as far as getting the answer one way or the other. I have had no correspondence from them.

MR. STOVALL: Mr. Cooter, does Williams have a position as to whether or not as operator of the unit it can commit all of the unit interests to this well?

MR. COOTER: I don't think it can.

MR. STOVALL: You believe it cannot?

MR. COOTER: Cannot.

MR. STOVALL: Is Williams in a position where they can sit down and discuss this thing with Great Western, since you're in the same building, in the same place, and make a few phone calls and get something resolved here?

MR. COOTER: I would think so.

MR. STOVALL: Or would you rather leave it in our hands?

MR. COOTER: No, I would think so. I have -- No, in answer to your question.

But I have one additional question of the witness.

MR. STOVALL: Go ahead.

CROSS-EXAMINATION (Continued)

BY MR. COOTER:

Q. I'm sorry to be out of order, but I was just handed a page or a sheet of paper from your attorney that says actual costs for drilling completion, gas gathering and meter installation on the Decker Number 11 well is $367,218.

That's a different figure than what was said in your --

A. That's correct.

Q. What do you seek in this hearing?

A. Don't seek anything.

We've got -- As I'm sure you're all familiar, operating in the San Juan Basin, El Paso, when they put in your gathering systems and your meters, we did work in March of 1991 on this well, and -- I've got the invoice in here.

And about 14 months later, we got the additional invoice for the meter installation for the Decker 11 from El Paso, to the tune of about $37,000 more.

And my letter does say in March that that was the actual cost to date.

I didn't dream that El Paso would bill us 15 months behind actually doing the work, but in that case that's what's happened.

Q. And this represents your original figure of $329- -- or almost $330,000, plus the additional thirty-seven is a charge by El Paso?

A. For the meter installation for the well. The well is ready to be produced.

(Off the record)

MR. COOTER: Thank you.

MR. STOVALL: One question.

EXAMINER STOGNER: Mr. Stovall?

MR. STOVALL: Yeah, I've got one question.

EXAMINATION (Continued)

BY MR. STOVALL:

Q. Assuming there's no request dispute as to costs, and without discussion about that, am I correct in understanding that this -- that the most recent correspondence that we're seeing in this exhibit is Great Western is offering Williams the opportunity to pay their costs and join the well under the terms of an operating agreement?

A. Under the terms of an operating agreement and --

Q. And either become a participating party and pay a hundred percent of their costs, or go nonconsent under such an agreement?

A. Yes, sir.

MR. STOVALL: Mr. Examiner, I think we can spend a lot of time here discussing some penalty issues and other things.

I realize that Coastal is still an issue in this case.

But at this time I would like to recommend that we continue this case till the end of the docket and allow Northwest and Great Western to perhaps

resolve their differences, and I think this can shorten up this case rather quickly and get the parties to where they want to be, rather than where we put them.

EXAMINER STOGNER: I concur, Mr. Stovall, and I'm going to follow up on that and suggest that both parties do that, and we're going to proceed on instead of wasting the other people's time today, go ahead and hear theirs, and then we will come back to this particular case and hear what you have to say.

At this time, let's take a 15-minute recess so the next case, Yates, can get set up.

(Thereupon, a recess was taken at 9:50 a.m.)

(The following proceedings had at 12:46 p.m.)

EXAMINER STOGNER: Come to order.

We'll at this time recall Case Number 10,563.

MR. STOVALL: Mr. Hall, I understand that during the break you've met with Williams Production representatives and have resolved all differences with them and wish to dismiss them from this case at this time?

MR. HALL: For the time being. We don't have executed documents, of course, but we expect to shortly.

MR. STOVALL: Well, I guess that raises the question of -- I think at this point dismiss them if

you had to come back in, refile, because I think you'd have to start over anyway if you run into a problem with them.

And so now your question is, you've still got Coastal -- Let's see, what's we name of the Defendant?

MR. HALL: Coastal Oil and Gas.

EXAMINATION (Continued)

BY MR. STOVALL:

Q. Okay. And just for my -- and to clarify the record, during the prior discussion a lot of the discussion focused on what had gone on with Northwest.

And if I'm not mistaken, Mr. Heathington -- and you are back on the stand and still under oath -- is it safe to say, correct to say, your exhibits -- and I guess it's Exhibit Number 2, that package of letters, also summarizes your discussions with Coastal and is very similar to what has gone on with Northwet except that you have actually not gotten any -- quite as far in terms of responses and what Coastal would expect out of an agreement; is that correct?

A. Yes, haven't gotten a whole lot out of either party, but nothing out of Coastal, yes.

Q. You've had no reponses at all to your offers to join the well and participate in the

communitization?

A. Not any written response, no, sir.

Q. Oral?

A. Yeah, we -- they -- After calling them and following up on two of my letters, they have indicated they recommend participation in the well.

They don't have final management approval, and I'm trying -- I understand they're trying to get it, but as of today we don't have anything from them.

Q. So you understand that if we proveed with this hearing to force-pool the interest of Coastal, that any order can be negated by the effect of an agreement with Coastal, and you can proceed with negotiations and enter into an operating agreement with Coastal; is that correct?

A. Yeah.

Q. And I would only ask one other thing, is, if you should reach that agreement prior to the time of the entry of an order, that you contact us immediately and request the case be dismissed, which saves everybody a lot of time in terms of writing an order.

A. Sure will.

MR. HALL: We'll do that.

MR. STOVALL: And unless you've got any further questions, I think I -- I think we're clear

as -- where Coastal is in terms of negotiation and agreement, and the issues left to be resolved are the standard issues of operating costs and penalties and --

MR. HALL: That's correct.

MR. STOVALL: Presumably -- Also, I would say that your well costs, as shown in -- and perhaps, Mr. Hall, you're going to need to --

MR. HALL: Yeah, that's already in the record. We'll discuss that further.

MR. STOVALL: Yeah, they may be -- still may be challenged by Coastal if they end up under the force-pooling agreement.

EXAMINER STOGNER: With that, I believe all concerned is straight, that this Application now just pertains to Coastal; is that correct, Mr. Stovall?

MR. STOVALL: That is correct. It should be dismissed with respect to Northwest Pipeline and/or Williams Production Company, which are -- the latter being the successor to the former in name.

EXAMINER STOGNER: Okay, Mr. Hall.

MR. HALL: That concludes my direct of this witness.

We'll move on if there's nothing further.

EXAMINER STOGNER: No further questions of this witness.

RUSSELL RICHARDS,

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

DIRECT EXAMINATION

BY MR. HALL:

Q. For the record, state your name.

A. Russell Richards.

Q. Mr. Richards, where do you live and how are you employed?

A. I live in Midland, Texas, and I'm employed by Great Western Drilling as their district geologist.

Q. Mr. Richards, have you previously testified before the Division and one of its examiners and had your credentials made a matter of record?

A. Yes, I have.

Q. Are you familiar with the subject well and the subject clients in this case?

A. Yes, sir.

MR. HALL: Are the witness's credentials acceptable?

EXAMINER STOGNER: Yes, they are.

Q. (By Mr. Hall) Mr. Richards, if you would refer back to Exhibit 1, I understand that we are requesting a 156-percent risk penalty. If you could refer to the pertinent information on Exhibit 1 of

that.

A. Okay, before I talk in detail to the exhibit, I would point out, under the legend in the lower left-hand corner, we've noted that the only wells or other activities shown on the map are related just to the Fruitland formation.

The main point that I want to make off of Exhibit 1 regarding risk that was incurred at the time the J.E. Decker 11 was drilled is the fact that in this entire map area, which is basically a two-and-a-half to three-mile radius from the well site, the only well completed and capable of producing from the Fruitland formation is located in the east half of Section 15 of 32 North, 11 West.

This well is just about exactly two and a half miles away, and so at that point in time that the well was drilled, basically none of this other Fruitland Coal existed, although we are showing it now.

The fact that that distance of two and a half miles from established Fruitland production to our location, that in itself would classify the J.E. Decker 11 as a Fruitland wildcat.

The -- I do also want to make the point that I'm not implying that we did not know that there was coal present in the Fruitland formation in the

immediate area. But the main question was, What was the producibility of the methane gas in and under the location? And that was not -- We did not have the information to accurately estimate that.

The only other thing at this time that I would point out on Exhibit 1 before moving on to Exhibit 2 is the cross-section trace, A to A prime, which shows the subject well, as well as the two nearest Fruitland producers to it.

Q. All right. Let's move on to -- Let's mark that as Exhibit 3.

EXAMINER STOGNER: Before we move on, Mr. Hall, there's some statements here we need to get straightened out.

EXAMINATION

BY EXAMINER STOGNER:

Q. When was this well drilled?

A. It was completed in January of 1990. The actual drilling took place the last couple of months of 1989.

Q. Okay, and at that time you stated that this was a wildcat well?

A. Yes, I'm basing that statement on the fact that the only other Fruitland completion in this map area is located in the east half of Section 15, which

is on the far right-hand portion of the map.

Q. Are you familiar with the Basin Fruitland Coal Gas Pool?

A. Yes, sir, I am.

Q. And when was that pool designated?

A. Long before this time.

Q. And therefore it's not a wildcat well, is it, sir?

A. This area was not developed as to the Fruitland --

Q. Sir, what is the definition of a wildcat well, pursuant to the Rules and Regulations of Oil Conservation Division?

A. Greater than one mile from existing production, or outside of the pool boundaries.

Q. And therefore it's in the pool boundary, is it not?

A. I'm not aware that the pool boundaries included this acreage at the time.

Q. I thought you said you were familiar with the pool.

A. I am. I'm assuming that if it's not developed, how could it be within the pool?

Q. It's in the pool boundary, isn't it, sir?

A. I would have to say that I don't know that

for sure, Mr. Examiner.

EXAMINER STOGNER: I'm going to let you continue. Go ahead in asking your questions of this witness, Mr. Hall.

DIRECT EXAMINATION (Continued)

BY MR. HALL:

Q. Mr. Richards, I think your point is, for purposes of control on your A - A' cross-section line, the closest well at the time the subject well was drilled was well over two and a half miles away?

A. That's the point I was making.

Q. Okay. Let's move on to Exhibit 3, if you would, please. What is Exhibit 3, and what is it intended to reflect?

A. Exhibit 3 is three well cross-sections showing the J.E. Decker 11 in the middle and the two nearest offsetting coal producer -- Fruitland Coal wells.

Before I go further with Exhibit 3, I would just also note that the well on the right-hand side of the cross-section, the log exhibited there is not the log for the Cox Canyon 203, which is a Fruitland Coal producer. The log exhibit is the Cox Canyon Unit Number 22 well, which is approximatley 250 feet away from the Cox Canyon Unit 203. And the reason this log

is exhibited and not the 203 is that we were unable through our extensive efforts to obtain the log on the Cox Canyon Unit 203.

This well was drilled in November of 1990, and we tried, you know, through the commercial log services, through the BLM and through the District OCD office in Aztec, and at this -- as of early this week they had not released -- Northwest Pipeline or Williams Production had not released that log.

The -- One of the main risk factors that I would point out that the cross-section exhibits is that in this very short area, say a half-mile radius from the J.E. Decker 11, there is very drastic changes in coal thickness as well as where the coal is developed within the Fruitland section itself. That is a very substantial factor in risk.

The only other comment that I would make as far as risk that this Exhibit nor any other exhibit can directly address is the other factor that we did not know at the time that we drilled the J.E. Decker 11, was the extent to the development of the cleating system which -- within the coal interval. The cleating or fracturing is one of the main controls of production in the Fruitland Coal Formation.

Q. Do you have anything further to add with

respect to Exhibit 1?

A. Yes, I do. We've also noted on Exhibit 1 any locations which were staked in this area and subsequently abandoned in that they withdrew their permit to drill.

The most notable one is the abandoned location in the Cox Canyon unit. It's Cox Canyon unit number 204, located in the southwest quarter of Section 17.

One of Northwest Pipeline's primary points to their disagreement with our original Application for a nonstandard proration unit was that they needed the west half, west half of Section 17 to drill a standard location in the west half of 17. But the fact that they're -- When they drilled the Cox Canyon 203 well, located in the northeast quarter of Section 17, the well was subsequently such a poor producer that they abandoned the 204 location as well as four other locations that they had staked within the unit.

This in itself is another indication of economic risk to development of coal bed methane in the immediate area.

Q. And the location shown in Section 19, was that a northwest location as well?

A. No, it was not.

Q. All right.

A. Nor the one in -- the southeast of 20 has not been -- I'm sorry, southwest of 20 has not been abandoned, but it has not been drilled, and it's been staked for some time.

Q. All right. Were Exhibits 1 and 3 prepared by you or in conjunction with you?

A. Yes, they were.

MR. HALL: We would move the admission of Exhibits 1 and 3, and that concludes our direct of this witness.

EXAMINER STOGNER: Exhibits 1 and 3 will be admitted into evidence at this time.

EXAMINATION

BY MR. STOVALL:

Q. The subject well was drilled a couple years ago?

A. Yes, it was completed in January of 1990.

Q. And at that time -- again we're back to the old Order -- you got an order saying shut it in and form a proration unit?

A. That's correct.

Q. What happened in the last two years?

A. Well, here again, as Mr. Heathington testified, we have gone through a reorganization, we've

had changes in staff, and this has not received our full attention until this time, due to other priorities also.

Q. I was not in here in your first -- but how long have you been with Great Western?

A. For three years.

Q. And how long have you been involved in San Juan Basin Fruitland Coal?

A. Well, for most of that time. We've drilled 15 wells, Fruitland Coal wells, in the late 1989-1990-1991 period.

(Off the record)

MR. STOVALL: Do you have another witness, Mr. Hall?

MR. HALL: Yes, sir.

MR. STOVALL: Oh, okay. I don't have any more questions of this one.

FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. As Mr. Hall stated earlier today, this case was opened, you were seeking a 150-percent risk penalty; is that correct?

A. Yes, 156 percent.

Q. And that's the standard that has been issued out here from the inception of the first forced-pooling

applications that come out of this pool, that was designated covering this area back in 1990, back in 1988, based on that reason, because it was not a wildcat, it was put into a pool, so therefore the 156 percent.

So we've got 156 percent to play with here, and to be honest with you, I'm finding it very difficult to justify 156 percent on a well that's drilled. Maybe you need to help me here. What do I need to base this on? I mean, it's there. Do you have any collapsed casing? Is the well bore in good shape?

A. Well, I think Mr. Hendrix will address more of the engineering and mechanical risks in a minute. But although the well is present now, we did incur risk at the time the well was drilled, and we took that risk on and --

Q. I see, but you did it and the well is there, so where's the risk today, at this minute, right now?

A. Well, the well is not producing right now, so the exact quality of production is not known, which is a risk factor that Mr. Hendrix will address further.

Q. I'm trying to justify -- And you're the geological witness, correct?

A. Yes, sir.

Q. So how about the geological risk today?

A. Admittedly it's a lot less. I mean, we have all the geological data that we're ever going to get regarding the well. I mean, now it's a matter of production.

But are we not addressing the point in time that the well was drilled and the geologic risk was much greater at that time?

MR. STOVALL: We're addressing the time that the Application comes, is when we address that.

THE WITNESS: Okay.

MR. STOVALL: Because risk is to be evaluated at the time the Application with the Commission is filed.

EXAMINER STOGNER: So within -- I'm sorry, Mr. Hall?

MR. HALL: Just bearing in mind that the previous Order in the original case invited us at that time to come back for purposes of risk assessment, so conceivably it could apply retroactively to the time of that Application.

MR. STOVALL: Was the well drilled at that time in that case?

MR. HALL: Yes.

MR. STOVALL: Okay.

EXAMINER STOGNER: And that particular

Application came in in August; is that correct? Of 1990?

MR. HALL: I believe that's right.

EXAMINER STOGNER: September 19th of 1990, the Order was issued. And it came into hearing on August 22nd, 1990. Good point, Mr. Hall. Thanks for bringing that up.

With that, I don't have any other questions of Mr. Richards. You may step down.

Mr. Hall?

DENNIS L. HENDRIX,

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

DIRECT EXAMINATION

BY MR. HALL:

Q. For the record, state your mame.

A. Dennis L. Hendrix.

Q. Mr. Hendrix, where do you live and how are you employed?

A. I live in Midland, Texas, and I work for Great Western Drilling as a reservoir engineer.

Q. Have you previously testified before the Division and had your credentials accepted as a matter of record?

A. Yes, I have.

Q. You're familiar with the subject well and the subject area?

A. Yes, I am.

Q. All right. If you would, please, refer back to Exhibit 1 -- Well, I'm sorry, let me jump to another issue.

You're heard the testimony here today about the actual costs for the completed well, have you not?

A. Yes, that's correct.

Q. And again for the record, what are those costs?

A. Completed costs to date are $367,218.41.

Q. All right. And Great Western has drilled other Fruitland wells in the area?

A. Yes, that's correct.

Q. And you're familiar with what's being charged in the area?

A. Right.

Q. Are the charges and costs for this well in line with what's being charged in the area?

A. Yes, very much so.

Q. All right. What are the overhead and administrative costs for drilling and producing the well?

A. Overhead costs, on a drilling basis during

drilling the well, are $3783 per well per month, and on a producing basis, $378 per well per month.

Q. And are you recommending that these figures be incorporated into an order resulting from this hearing?

A. Yes.

Q. And Great Western does seek to be designated operator, does it not?

A. Yes, we do.

Q. All right. At this time let's refer back to Exhibit 1, if you would explain the production information on there, please, sir.

A. Okay, there's a few things that can be pointed out. First one is a little fuzzy now. I originally had thought when we were assessing risk that it could be applied back to when we actually incurred the risk of drilling the well, but that day may be sort of moving away.

But that was one major point, was at the time the well was drilled and completed there was only one other Fruitland Coal well that -- engineeringwise that you could compare any data to, that being over in Section 15.

Another thing that I think is a very important point that applies probably more so on Mr.

Stogner's question is the fact that you have wells -- and I'll point out a few -- in the immediate area of the Decker 11 that have high IP's, that don't necessarily have very impressive cums or current production.

One such well is directly to the north on the Colorado side of Section 23. The well is labeled the 231, and you'll notice on that one it IP'd in late 1990 at 1756 MCF per day. And current production is now down below 100 MCF, and a cum of about 68 million. That's considered probably a -- maybe a pretty marginal well. It could pay out at still a 91 MCF a day, but it's pretty marginal.

Another one that bears this out is the Decker 10, which was drilled in the spring of 1990 by Great Western, which is to the west of the Decker 11. That one, again, we had a fairly nice IP of 1557 MCF per day, but with a cum of only -- of less than 38 million. This is through May of 1992. The current production of 83, the well can be considered probably marginally economic, if economic.

At the same time, just to point out the risk involved in this area as far as completion and production data, you've got wells -- If you'd look at the Cox Canyon Unit Number 200 to the east of the

Decker 11, and you see sort of the opposite thing that goes on. You've got a much lower IP of 362. This well completed also in 1990. And you've got a current production of 379, which shows you the vaiability of production out here, and a cum of about 149 million, which appears to be fairly economic.

And keep in mind that these wells I mentioned, especially these other Cox Canyon unit wells, weren't drilled at the time. We had to do this.

The only other one I was going to point out was the Cox Canyon Unit Number 203, which is just south. It also came on with a fairly low IP of 212, but still has a current production of 148 and a cum of about 94 million. Again, that's a fairly mediocre cum, but it shows the fact that you can't just base IP -- You can't relate IP to cum or current production.

I think a lot of -- There may be several factors that will cause that variability, and I'm going to address a few of those when I talk about completion risk.

Q. All right. Does the information reflected on Exhibit 1, the production information showing the variability among the IP's and the cums for the various wells, does that indicate to you that at the time the Decker 11 was drilled that there was a chance the well

would not be commercially successful?

A. Yeah, I certainly do.

Q. It substantiates that to you?

A. Yes.

Q. In your view, was the recommended risk penalty appropriate?

A. I don't see any reason, upon the data that's shown on the map here, on the production map, that it shouldn't qualify for the full 156 percent, even though it's been drilled. There's no guarantees it's ever -- it's going to be economic. It still remains to be seen.

Q. All right. What are some of the other risks attendant with drilling coal wells?

A. There's a few completion risks that I wanted to bring out, and these are documented in some papers of people that have worked a lot in that area. I'll just name a few of them.

One of them is filtrate damage from drilling fluids, both susceptible to that. Research has shown that water introduced to dry coal can reduce permeability up to 50 percent, so you are susceptible to fluids.

Coal can react with just about anything, including nitrogen, which can be absorbed in the coal.

And coal fines are an operational problem, and that often requires setting of liners and introducing cement, and the filtrate, the water and the cement onto the coal, which can be a source of formation damage also.

And then just residual fines from fracture treatments through gel, gel fines, residue, that's also a potential plugging of your permeability, is involved in it.

Great Western, to try to alleviate some of this, we did try to drill -- or we drilled our wells with air to eliminate exposure of the coal beds to drilling fluids as much as we could.

Q. Mr. Hendrix, if you don't obtain the risk penalty you seek, is there a chance that the well may be prematurely abandoned?

A. Yes, I think there's a -- there's a very good chance, just based on some of the offset production -- it had high IP's at fairly low cums -- that it could be uneconomic.

Q. All right. In your opinion, will granting the Application be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, I do.

Q. Do you have anything further to add with respect to Exhibit 1?

A. No, sir.

MR. HALL: Okay, that concludes my direct of this witness.

EXAMINATION

BY MR. STOVALL:

Q. Question, I just -- You raised an interesting point.

Are you saying you would abandon the well if you didn't get a penalty? You've already sunk the cost.

A. No, the -- We wouldn't abandon the well. Economics would determine that, the premature abandonment.

Q. Well, I'm not sure I understand. I mean, if -- How does the penalty relate to the economics which could result in premature abandonment? You've got some costs, you've paid for the well.

A. That's correct, yeah. I guess the -- As far as leading to physical premature abandonment, I wouldn't -- You know, that wouldn't cause us to abandon the well where the penalty was assessed.

But I think the economics of not assessing the penalty with Great Western Drilling taking on all

the risk of drilling the well, I think it makes perfect sense to -- if you've got a well that's marginally economic, that you should be helped out by a penalty structure.

Q. Actually, if you've got a well that's marginally economic and may not pay out at all, the penalty structure doesn't do a thing for you, does it?

A. No. Of course at this point, we don't know if it's -- I'm just surmising it could be marginally economic, and it could be -- it could be a real good well.

Q. Correct. Yeah, I mean, we're kind of in a circular argument here that you say, If it's marginally economic, I ought to get a penalty, which I can never recover. And if it's a great well, then I haven't got any risk, so I don't need a penalty. So -- You can go around on that one.

A. Uh-huh.

Q. Do you understand that the Division -- the approach is that you are supposed to pool interest before you incur risk and drill the well and set the ground rules but go on in. Does that sound reasonable to you?

A. Right, that's the standard way we've done it in the past.

Q. And the fact that, you know, notwithstanding whatever internal problems Great Western has had, it seemed to have the cart way out in front of the horse from the beginning on this well, it looks like.

Yeah, I won't ask you to answer that. I won't --

MR. HALL: Not forgetting --

MR. STOVALL: Yeah, I won't ask you to answer to that.

MR. HALL: -- a nonstandard unit.

MR. STOVALL: Yeah, and I mean, there may have been some extenuating circumstances, but you came in and asked for a proration unit after the well was drilled, you came in and -- Your departments weren't talking to each other and filed incorrect plats at the time you drilled -- all sorts of problems on this that --

Q. (By Mr. Stovall) Another question more -- probably more relevant and more pertinent: You've indicated -- you've testified about well costs, total well costs of $367,218. I know Mr. Heathington talked about that a little but this morning.

But would you tell me the types of things that are included in that well cost?

A. Well --

Q. In addition -- I mean, assume there's your basic intangibles, drilling, you know, all the stuff that goes with it. It's -- How completed is it? Is it perf'd?

A. It's -- At this point, as much time has passed just with the invoice process, that should be a pretty complete cost, and that includes the cost of the drilling, the completion work, gas gathering, all the lines, metering. It's ready to go on line. It should be a complete, up-to-date total cost.

Q. Well, you understand that the penalty should not apply to surface equipment that would only be installed after production. Is that -- because you -- supposedly you don't install that until after --

A. Right, after this has all been worked out.

Q. So what would your cost be before the installation of surface gas gathering, measured out?

A. I think before the gas gathering and metering head, which we mentioned before was a late cost, that figure was $329,969.

Q. That's the one that's appeared in the letters you sent to Great Western and to Williams?

A. That's correct.

MR. STOVALL: Well, I'm going to make a suggestion at this point. I'm not sure there's any

more information we can get, but I think that, you know, the Division has been placed in a rather difficult situation in this case.

I would encourage Great Western to scramble and try to get a resolution with Coastal and get this case dismissed. It just does not have all the pieces that make for a good force-pooling case from the Division standpoint, and it think it would be in everybody's best interests if the parties can get move and get some things settled.

THE WITNESS: Yes, we're intending to do that very thing.

MR. STOVALL: I don't have any other questions.

(Off the record)

MR. STOVALL: I think the other thing that we'll make you aware of at this time is, if this case results in a force-pooling order, we'll, of course, require that you provide itemized costs to the parties, and I assume you will do so to all the other parties as well.

THE WITNESS: Uh-huh.

MR. STOVALL: And they will have the opportunity to examine those costs and, if necessary, come back and, as is always the case in force-pooling,

challenge the costs before the Division.

But again, I would indicate that those costs should not include stuff that you would not put on a non-producer, surface equipment, production equipment.

THE WITNESS: Right.

MR. HALL: I was going to say, I think the testimony was that they did offer to provide those costs to anyone who asked.

MR. STOVALL: Well --

MR. HALL: We now know where Northwest stands. We simply haven't been able to get any response from Coastal.

MR. STOVALL: I understand, but --

MR. HALL: We'll try again, but that's why we're here.

MR. STOVALL: In a normal force-pooling what you would do is provide an AFE, which would show the costs, and then you'd come back and compare actual costs.

Well, there's no point in providing an AFE at this point, because you've incurred the costs. But I think that the Order will require that actual costs be submitted. And that's not abnormal. I mean, that's standard procedure for a force-pooling order.

So with respect to Coastal -- At this point

you're in an operating-agreement phase with Northwest apparently, so you can have some discussion with them.

But you will be required -- Before you can withhold any costs of drilling from Coastal, they will have to see and have an opportunity to look at the actual costs as incurred.

MR. HALL: But you're not requesting that the itemized costs be made a part of this record? The Division doesn't need that?

MR. STOVALL: Well, I think that the order normally provides that those be provided to the Division, does it not?

EXAMINER STOGNER: Yes, it does.

MR. STOVALL: That is standard, a standard requirement in a force-pooling order from the Division. So yes, the answer to your question is, yes --

MR. HALL: Okay.

MR. STOVALL: -- we do need those costs.

EXAMINER STOGNER: But you could supply that subsequent to today's exhibit.

MR. HALL: Okay.

EXAMINER STOGNER: It doesn't have to be an exhibit at this point, but it will have to be filed some time or another.

With that, I do have some particular

questions about the completion risk.

EXAMINATION

BY EXAMINER STOGNER:

Q. There again, I'm trying to formulate some sort of a formula on the risk penalty in this particular instance.

A. Yes, sir.

Q. You did bring up some good points. The filtration damage. What causes filtration damage in a coal well?

A. Well, just introduction to filtrates and -- with the coal reacting with filtrates, and that can be, from what I understand, anything from water to, like I mentioned, nitrogen, which is typically considered pretty much inert, and it can just reduce permeability, reduce the quality, I guess, of the formation right around the wellbore.

Q. Well, what kind of damage would you expect with -- You said you drilled it with air.

A. We drilled with air. Of course, you've got -- we -- because of the coal-fine problems, I think that's why most people out here would go ahead and run liners or cement, because there again, when you introduce cement to a formation, you introduce -- you squeeze the water out of it, so you've got filtrate

damage from that.

But the liners themselves, that's another risk factor. You've got coal fines, if you try to complete open-hole, that can give you problems. So you go with the liner, and then you've got the problems with the cement filtrate.

So there's a lot of things. And what you do when you complete these wells is eliminate as many as you can.

Of course, subsequent to running liners you're going to have to do fracture treatments. And that's another inherent risk that in my mind, from an engineering standpoint, that was taken on the Decker 11, is that because there was only one other completion when we completed the well, we had no -- Typically, when you move into an area, you look at what fractures are working and what aren't in the area, and you can play off of that.

And at this point we -- there was only one completion in the area, so the frac design was sort of a -- not really a stab, but it was -- You know, you didn't have a lot of data to go on to design your frac. So that's, again, a risk they had to take.

Q. Now, you mentioned something about water introduction in dry coal. Is this dry coal?

A. I don't know. I'd have to refer to the geologic representative to see if it's -- I think that's -- that's some -- where I got that from was some data that was presented from a PhD that did work for Great Western when we were looking into drilling these areas. That's --

Q. (By Examiner Stogner) You came up with the parameters. I'm trying to --

A. Yeah.

Q. -- formulate some sort of a number. I've got anywhere from zero to 156 percent to work with. --

A. Right.

FURTHER EXAMINATION

BY MR. STOVALL:

Q. What you're saying, if I understand correctly, is that if it is dry coal, the introduction of water can adversely affect production; is that correct?

A. Yeah, they say up to 50 percent reduction of permeability.

Now, if it's not dry, if it's semi-dry, that may be -- But the point being, if you introduce water to coal, it's very possible and evident in research that it can drastically reduce your permeability.

Q. So your expert testimony as an engineer is

that -- what can happen, not what the condition of this particular coal is in this location?

A. Exactly.

Q. Now, again, I assume -- If I must just follow up one last thing on that, presumably you would not know, had you not drilled the well, you wouldn't have any information which would tell you, and that would make that risk factor more important than it is now.

If the risk were being assessed prior to drilling, you would not know whether you had wet or dry coal till you go there, right? Except based upon some generalized geologic information?

A. Right. I'm not sure if -- Yeah, I would say that, sure, you're -- You know, once the well is down, like Russell was saying, your geologic information is about there, and you hae that.

Now whether that -- Just because you have geologic information that says you don't have completely dry coal, I don't know that alleviates you from the risk of introducing water to a coal bed.

Q. That's something you don't find out till you actually start producing; is that what you're trying to say?

A. That's right, in a lot of cases. Sometimes you don't find out till maybe you see your production

down, and you might run a bottomhole, pressure bottom or something, and you see you've got damage. And then you backtrack and say, Well, maybe it was due to the cement job or due to -- The frac job went wrong, we had to put too much water on the well or -- Those are all factors. But...

FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. Does de-watering have to take place in these wells, in your knowledge, that surround this particular well?

A. From what I understand about the area, the de-watering isn't a big factor. It's -- There is some de-watering at the present, but not in -- not comparatively to a lot of the other areas that we've produced coal beds.

Q. Nitrogen absorportion, do you want to explain that to me?

A. Not really. That was another --

EXAMINER STOGNER: Okay.

THE WITNESS: That was another one that --

EXAMINER STOGNER: Then in that case, I have no other questions.

THE WITNESS: That was the PhD's --

EXAMINER STOGNER: Mr. Hall, do you have any

other questions of this witness?

MR. HALL: Did you want to address that at all?

THE WITNESS: I was -- I was joking with you, Mr. Stogner.

But actually, that was another excerpt out of that that PhD's work. The nitrogen would absorb on the coal and -- just to show you how sensitive it is. And that's just another factor you deal with when you're completing in the coal beds.

But as far as breaking out the chemistry, I wouldn't be able to track that down right now.

Q. (By Examiner Stogner) Within this map that you have supplied me, do you know of any wells that haven't been drilled or completed due to filtration damage, water introduced into the coal, nitrogen absorption or the coal fines or the residual fines from the gel fracs?

A. Did you say any wells that haven't been completed due to that?

Q. Yeah, in Exhibit 1 are there any wells that exist up here that haven't been completed due to these factors?

A. Now, I think that during the -- Well, there's two phases that you introduce these factors in, through

the drilling and the completion.

I would suspect the only reason a well wouldn't be complete out here is if they drilled and they didn't have any coal, or not enough to economically complete. But I don't think they could assess formation damage that would cause it not to complete the well.

FURTHER EXAMINATION

BY MR. STOVALL:

Q. Those are factors that would only occur after -- actually after completion in the case of water damager or possibly --

A. I'd say that completion --

Q. -- even nitrogen; is that correct?

A. Completion is much more important than probably even drilling, especially if you use air. You're probably not going to have much trouble there. The completion is where you take on a lot of risk.

And I don't want to lose the fact that an IP doesn't mean a good well, because I think that's --

Q. Would you -- Do you have an opinion or do you have any information with which to form an opinion as to whether -- In some of these wells you pointed out the low -- let's say the Decker Number 10, for example --

A. Uh-huh.

Q. -- IP'd 1557 and producing at 83.

A. Yes, sir.

Q. Is that -- Do you have any assessment of why that might be? Were any of these risk factors the cause of that production below the level of the initial potential?

A. I don't have any direct proof of -- You know, I can postulate some theories.

Now that I see some of the wells that were completed in the early Nineties, and I look at the fracture treatment, and I look at the fracture treatments that are in more recent completions, I think there's some evidence that the methodology has changed where we're getting away from -- they're doing -- The frac designs are made up of less fluids, gel and water, and a little larger sand, which gives you a larger frac.

I think when the earlier completions were done, they were scared that you didn't want to screen wells out, so they went with more water and lower -- hundred-mix sand, which is a lot smaller sand. And I think that in itself -- They're getting away from that, so I think that could be a reason that some of the earlier wells probably aren't performing good. But

that's just a theory.

I haven't got any further -- I haven't done any bottomhole pressure testing or anything to see if the formation damage is present in the Decker 10, for instance.

EXAMINER STOGNER: Any other questions of this witness?

MR. HALL: No, sir.

EXAMINER STOGNER: You may be excused.

Mr. Hall, do you have anything further?

MR. HALL: I need to tender the admission of Exhibit 4, which is our 1207 Affidavit on Notice.

And that concludes the direct.

MR. STOVALL: Shall we cross-examine you on this, Mr. Hall?

MR. HALL: I don't think so.

(Off the record)

MR. STOVALL: Let me see, Mr. Hall, did you get a card back from Coastal?

MR. HALL: I got cards back from everybody. I many not have given you those, now that I think of it. I'll get those to you.

MR. STOVALL: Actually, I think what you did -- Just let me look at this a moment. Just a moment.

MR. HALL: We got the cards mixed up on the copies.

MR. STOVALL: Yes, yeah, you got the Coastal cards showing on the -- But the Coastal card does not have a signature, that's why I was asking you.

MR. HALL: But we still got it back. I have the originals.

MR. STOVALL: I assume the origianl doesn't have a signature either, since it doesn't show up on the copy, right? One never knows about the postal service.

MR. HALL: Could have been blue ink or something.

MR. STOVALL: But I think -- I don't have any problems with the notices.

EXAMINER STOGNER: Anything else?

MR. HALL: No, sir.

EXAMINER STOGNER: In that case, I'll take Case Number 10,563 under advisement, and hearing adjourned.

(Thereupon, these proceedings were concluded at 1:33 p.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 October 11th, 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. 10563, heard by me on 1 October 1992.

, Examiner
Oil Conservation Division