STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 12,012
APPLICATION OF OCEAN ENERGY, INC., FOR SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

July 23rd, 1998

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, July 23rd, 1998, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

July 23rd, 1998
Examiner Hearing
CASE NO. 12,012

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* * *

A P P E A R A N C E S

FCR THE APPLICANT:

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AISO PRESENT:

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NMOCD Environmental Geologist
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* * *

WHEREUPON, the following proceedings were had at 10:20 a.m.:

EXAMINER CATANACH: At this time call the hearing back to order and I will call Case 12,012, which is the Application of Ocean Energy, Inc., for special pool rules, Lea County, New Mexico.

Call for appearances in this case.

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe, representing the Applicant. I have three witnesses.

EXAMINER CATANACH: Call for additional appearances.

Okay, will the three witnesses please stand to be sworn in?

(Thereupon, the witnesses were sworn.)

MR. BRUCE: Mr. Examiner, the purpose of this case is to seek 80-acre spacing in the North Echol-Devonian Pool. Ocean Energy drilled a well in this pool in early 1998, in the northeast quarter of Section 28, 10 South, 37 East. Based on the results of that well, we believe 80-acre spacing is proper. We would also request that any wells be allowed to be no closer than 330 feet to a quarter quarter section.

This case is somewhat different because this is an old existing pool. There is currently, however, only one other well than the Ocean well producing in this pool.

It is operated by C.W. Trainer, and it is located in the scuthwest quarter, northwest quarter, of Section 27. Ycu'll see that on Mr. McRae's maps.

Mr. Trainer has requested of us that he be allowed to form a nonstandard 40-acre unit for that well if he so desires. We have no objection to that. That would preserve the existing equities as far as ownership goes in that well.

And Mr. Trainer has written a letter -- I don't krow if it has been received by the Division yet -- supporting the Application of Ocean Energy. It was dated July 20th, and it was signed by Mr. Trainer.

EXAMINER CATANACH: I haven't seen it, so maybe ycu could give us a copy of that if you have one.

MR. BRUCE: I neglected to make copies last night, so...

LAURA B. SMITH,

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

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Could you please state your name for the record?

A. My name is Laura Smith.

Q. And where do you reside?

A. Englewood, Colorado.

Q. Who do you work for and in what capacity?

A. I'm employed as a senior landman for Ocean Energy.

Q. Have you previously testified before the Division as a landman?

A. Yes, I have.

Q. And were your credentials as an expert petroleum landman accepted as a matter of record?

A. Yes, they were.

Q. And are you familiar with the land matters involved in this Application?

A. Yes, I am.

Q. Mr. Examiner, I tender Ms. Smith as an expert petroleum landman.

EXAMINER CATANACH: Ms. Smith is so qualified.

Q. (By Mr. Bruce) Would you please refer to Exhibit 1 and identify that for the Examiner?

A. Exhibit 1 is a landplat that was prepared under my direction. It summarizes the current lessees of record and the operators of record within both the North Echol-Devonian Pool and within the notice-obligation area. The nctice-obligation area is outlined in green, and the North Echol-Devonian Pool is outlined in red.

Q. Okay. Now, in notifying people outside of the pcol, did you notify operators or lessees?

A. Yes, that is correct.

Q. Okay. Now, within the area -- and here in Section -- I believe the northwest quarter of Section 27, which is the C.W. Trainer-operated acreage -- were all working interests, royalty interests and overriding royalty interest owners notified?

A. Yes, they were.

Q. The Ocean well is in the northeast quarter of Section 28, and again in that acreage were the royalty interests and overriding royalty interest owners notified of this hearing?

A. That is correct.

Q. Where the Ocean well is located in the northeast quarter of Section 28, is interest ownership uniform throughout that quarter section?

A. That is correct, uh-huh.

Q. Okay. Very briefly, let's move on to Exhibits 2 and 3. What do those represent?

A. Exhibits 2 and 3 are ownership reports that were put together under my direction by Blaine Hess. These reports were -- I had requested these reports, so we notified the proper parties about this Application, and so Exhibit 2 is an ownership report dated May 12th, 1998, Exhibit 3 is an additional ownership report covering other lands, and that is dated June 30th of 1998.

Q. And these were reports from which the notice was first made?

A. That is correct, uh-huh.

Q. And notice was sent to all of the pertinent interest owners, and is Exhibit 4 my affidavit of notice?

A. That is correct.

Q. And it contains the notice letter and the certified return receipts?

A. Right.

Q. Were Exhibits 1 through 4 prepared by you, under your direction or compiled from company business records?

A. That is correct.

Q. And in your opinion is the granting of this Application in the interest of conservation and the prevention of waste?

A. Yes, it is.

MR. BRUCE: Mr. Examiner, at this point I'd move the admission of Ocean Energy Exhibits 1 through 4.

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

EXAMINATION

BY EXAMINER CATANACH:

Q. Ms. Smith, I believe you testified on the Trainer acreage in the northwest of 27 --

A. Uh-huh.

Q. -- you notified all the various interests in that pcol, in that --

A. That is correct, uh-huh.

Q. And in the northeast of 28?

A. Yes, uh-huh.

Q. Okay. How about the remainder of the acreage within the pool boundaries? What did you do in terms of that acreage?

A. We notified the current lessees of record.

Q. Okay. To your knowledge, is there any unleased acreage in that area?

A. No, there is none, according to the ownership reports.

Q. Okay.

A. Most of the acreage within the pool is state lands, and so they were notified anyway, and then there is ore tract that's fee acreage in Section 21, and there we nctified the lessees of record.

Q. What parcels?

A. The light green acreage there up in the northwest quarter, and the northwest of the southwest.

Q. Okay, that is fee acreage?

A. Uh-huh.

Q. But that's leased to Marbob?

A. Uh-huh.

Q. And you also notified the lessees of the lands within a mile of the pool boundaries?

A. That is correct.

Q. Okay. To your knowledge, that's all leased?

A. Right, according to the ownership reports there's nc unleased mineral interest.

Q. Okay. The Trainer well is in the northwest of 27?

A. Uh-huh, it's located in the southwest of the ncrthwest quarter of 27.

Q. It's your understanding that Mr. Trainer desires orly to dedicate 40 acres to his well?

A. Right. If you'll look at the ownership report, the 40 acres where that well is located has a number of owners in it --

Q. Uh-huh.

A. -- yet the remainder of the northwest quarter is owned by Mr. Trainer himself, as the ownership plat here irdicates.

Q. So if he dedicated an additional 40, it would increase his percentage in the well?

A. It would.

Q. And reduce the others?

A. Exactly.

Q. Have you had any communication with any of these

operators regarding your proposal?

A. No, we have not received any calls, other than our correspondence with Mr. Trainer.

EXAMINER CATANACH: Okay. I have nothing further. This witness may be excused.

THE WITNESS: Thank you.

MR. BRUCE: Call Mr. McRae.

Mr. Examiner, here is a copy of the letter from Mr. Trainer. I've marked it Exhibit 1-A.

EXAMINER CATANACH: Mr. Bruce, do you know if Mr. Trainer is aware of the process for obtaining a nonstandard proration unit?

MR. BRUCE: I'm not sure, but if we get the order I will commit to writing to him to tell him about the procedure.

EXAMINER CATANACH: Okay.

JOHN R. McRAE,

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

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name and city of residence for the record?

A. I'm John R. McRae, Highlands Ranch, Colorado.

Q. What is your occupation and who is your employer?

A. Senior exploration geologist with Ocean Energy Resources, Inc., in Denver.

Q. Have you previously testified before the Division as a petroleum geologist?

A. Yes, I have.

Q. And have your credentials as an expert been accepted as a matter of record?

A. Yes.

Q. And are you familiar with the geology involved in this Application?

A. Yes.

MR. BRUCE: Mr. Examiner, I tender Mr. McRae as ar expert petroleum geologist.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Bruce) Mr. McRae, could you identify Ocean Energy's Exhibit 5 and discuss its contents for the Examiner?

A. Exhibit 5 is a structure map on top of the Siluro-Devonian in a portion of Township 10 South, 37 East.

On this map I have the contours in heavy lines. They're 100-foot contour interval. I've also show the faults that pertain to this particular fault -- fault block.

At approximately minus 7980 to 7990 is the original oil-water contact of the field. That was

determined by drill-stem tests, production tests, from the wells in the field. And approximately 7820 is the current oil-water contact.

I also show on this structure map a cross-section A-A'. Each of the wells on that cross-section are dcnated -- or the number on the cross-section is donated by a circle colored yellow, one through 7.

And in the south -- well, in the northeast quarter there, Well Number 2, that's the Ocean Energy Rainier State Number 1, and it's the highest well in the field at a minus 7736.

Q. And the Trainer well in the south, marked Number 3 on your cross-section, that is the only other producing well in this pool?

A. That's correct. At one time Well Number 4 and Well Number 6 were also productive from this reservoir. Well Number 4 at this point is now a water-disposal well that C.W. Trainer is using, and Well Number 6 is plugged.

Q. Okay. Let's move on to your Exhibit 6. Can you identify that for the Examiner, and discuss this Devonian pcol in a little more detail?

A. Exhibit 6 is a structural cross-section A-A'. A is on the left, A' is on the right. It's hung on a datum, sea level minus 7000 feet.

At the top of the cross-section, each well is

numbered 1 through 7. Those numbers correspond to the numbers -- well numbers on the cross-section on the structure map.

If you start at the left-hand side at Well Number 1, this well is in Section 21. It encountered the Devonian from a sample report below 12,100 feet. The logs didn't get deep enough to show the Woodford or the Devonian, so the exact Devonian top on that well is not known. However, it's very obvious that that well is downthrown and not part of the Echols North-Devonian reservoir.

Well Number 2 is the Ocean Energy Rainier State well. I've colored in pink the top of the Devonian, or basically the base of the Woodford shale. The solid green area is the current oil column. The dashed line with the green line is the original oil-water contact, and I've ncted that with a circle that information.

On the Rainier well, several things of importance.

We penetrated approximately 30 feet of the Devonian, ran a DST over the top 18 feet, recovered on that DST oil and water. Of significance is the shut-in pressure, 4245.

We completed that well January 9th of 1998 pumping 136 barrels of oil and 235 barrels of water.

To date we've made 32,000 barrels of oil and

46,000 barrels of water, so we have a fairly significant water cut.

Moving further to the right on the cross-section, Well Number 3, this was drilled in October of 1954, IP'd flowing 700-plus barrels of oil, plugged in 1974.

This is the well that C.W. Trainer has re-entered. He re-entered it in October of 1989 and IP'd it flowing 400 barrels of oil and 59 barrels of water.

Since he has re-entered that well, this particular zone has produced 89,000 barrels of oil and 320,000 barrels of water, a very significant water cut.

Well Number 4 was the original discovery well in the field. It was completed in May of 1954. The shut-in pressure, the original shut-in pressure of the reservoir was 4740. And this particular well was plugged in 1964.

Well Number 5 I'll come back to in just a minute. Let's proceed on to Well Number 6.

This was drilled and completed in March of 1955, and it was plugged in 1964.

Well Number 7 encountered the Devonian low, tested water, and that was drilled in 1955, drilled and plugged.

The cross-section snakes or zigzags across the structure map, but I wanted to put the wells in order of height on the structure. So each well is stairstepping

further down the structure.

To come back to Well Number 5 at this point, you'll notice that it was drilled in December of 1975. This is ten years after Well Number 6 and Well Number 4 were plugged. So that's ten years after the wells updip and downdip were plugged.

I've shown on this log the DST interval in the very upper portion of the Devonian, which is very clearly the same interval that was productive in Well Number 4, just to the left.

And the DST recovery for this particular well, Well Number 5, was 1800 feet of water blanket, 60 feet of mud, 7654 feet of salt water. And the shut-in pressure was 4364. So very good reservoir pressure even after the field had been produced and most of the wells had been plugged. Well, at this point all the wells had been plugged.

This well very clearly shows that as the upper wells or the structurally higher wells produced, it has effectively drained this reservoir to the point where there's no hydrocarbons even recovered on the DST in the upper portion of the Devonian.

Q. What is Exhibit 7, Mr. McRae?

A. Exhibit 7 is Form C-105, the well completion report for Well Number 5. I received a copy of this from the Hobbs OCD office. And on the back of that page it has

a summary of the DST. It shows clearly that there was no hydrocarbons, oil or gas recovered on that DST.

Q. Based on what you've shown here, does this show that this reservoir has an active water drive?

A. Yes, it's very obvious, looking at the cross-section and the production data. Each well made quite a bit of water.

The highest well on the structure before the Ocean Energy well is Well Number 3. It was plugged in 1974, and it produced 506,000 barrels of oil and 1.2 million barrels of water before it was plugged. Trainer has re-entered it and is essentially skimming oil from the very top of the Devonian.

Q. Is this confirmed by the pressure in the Ocean Energy well, the high pressure that you've encountered?

A. The pressure data indicates that we have a very active water drive, which keeps the reservoir pressure very high. Its original was 4740 pounds, and that was in 1954. Sc in 1998 it is 4245.

Q. Even though the reservoir has produced what? A million and a quarter barrels or so?

A. Well, actually we looked at the total production. If you add all the oil, which is 1.3 million barrels, and all the water, which is 2.4 million barrels, this reservoir has produced 3.8 million barrels of fluid, and the

reservoir pressure has dropped approximately 495 pounds.

Q. Pretty small?

A. Very indicative of a strong water drive.

The other thing that the DST information shows -- and our engineer Chad Johnson will talk about this in a minute -- is that this is a very high permeability reservoir.

Q. And again, the Ocean Energy well is at the highest spot on the structure; is that correct?

A. That's correct. We have a 3-D over this area. We picked the highest spot on the structure to drill this Rainier State Number 1.

Q. Based on -- from a geologic standpoint and what you've just testified about, will one well drain this reservoir?

A. Yes, it will.

Q. Mr. McRae, in your opinion is the granting of this Application in the interest of conservation and the prevention of waste?

A. Yes.

Q. And were Exhibits 5 through 7 prepared by you or under your direction?

A. Yes.

MR. BRUCE: Mr. Examiner, I'd move the admission of Exhibits 5 through 7.

EXAMINER CATANACH: Exhibits 5 through 7 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. McRae, do you know what the current production is on the Trainer well?

A. The current production, based on *Dwight's* -- I believe that was December of 1997, was the latest production that *Dwight's* has -- it's 19 barrels of oil per day and 176 barrels of water.

Q. You don't know, by any chance, where Mr. Trainer is disposing his water in the other well?

A. No, sir, I don't. I believe it's the San Andres, but I'm not sure of that.

Q. It's not a Devonian, as far as you know?

A. I have the scout tickets, I have that information.

Q. Okay.

A. Let's see here. All right, Mr. Trainer re-entered this well, which would be Well Number 4 on the cross-section, in October of 1990, and according to the scout ticket he found the 5-1/2-inch casing parted at 10,100 feet, had several casing leaks, squeezed the casing leaks. It looks like it was squeezed back to 5398.

And this particular scout ticket does not have

ary of the information as to where he is disposing the water. I don't have that information. I thought I might, but I don't.

Q. Okay.

A. So I would assume it's the San Andres, simply because he could not -- couldn't get below 10,100 feet.

Q. So basically we've had three other wells that have produced --

A. Yes, sir.

Q. -- from the pool?

A. That's correct.

Q. That includes the Trainer well that's currently being produced?

A. Right. All three wells were plugged after they had significant water cuts. Trainer re-entered his. It's producing from the very top of the Devonian, and then our well is the highest on the structure map.

EXAMINER CATANACH: Okay.

EXAMINATION

BY MR. ASHLEY:

Q. Mr. McRae, I had a question for you too. That Trainer well that you were just talking about, did they plug that well because of the casing problems?

A. The --

Q. The Number 4 well in the cross-section?

A. I don't know why it was plugged originally. I didn't research that information. Apparently, from what I read here, it sounded like Mr. Trainer was attempting to produce from the Devonian, and that well was unable to get down --

Q. I see.

A. -- and he's subsequently turned it into a water disposal well.

MR. ASHLEY: Okay, thank you.

FURTHER EXAMINATION

BY EXAMINER CATANACH:

Q. So this field has actually been developed on 40-acre spacing since it was discovered?

A. I believe that's the field rules. Is that correct?

MR. BRUCE: Yes

Q. (By Examiner Catanach) I believe you testified that your well has high permeability in the reservoir?

A. Yes, sir.

Q. Is that -- Would that hold true with the other wells that have been drilled in the reservoir?

A. The Devonian up in this part of Lea County historically has had fairly high permeability. When you have a reservoir such as this, because of the very high volumes of fluid produced from each of the wells and the IP

rates -- for example, Well Number 3 IP'd flowing 777 barrels of oil per day -- I would interpret that to be high permeability with a strong water drive.

Q. So it's conceivable that these wells actually drain more than 40 acres?

A. Yes, sir.

Q. Have you actually done any calculations to that effect or --

A. No, we've just simply --

Q. -- focused on your wells?

A. Right. Part of the problem is that most of these wells did not penetrate enough of the Devonian section to adequately come up with the reservoir numbers that you need to do those calculations. They just --

Q. Will your Rainier State drain the top of that structure?

A. Yes, sir, we're convinced of that.

Q. No other wells are planned?

A. No, sir. I think that Well Number 5 on the cross-section is very significant. It was drilled after the -- a well updip to it had watered -- essentially watered out, and their DST recovered no oil shows at all. So it shows that this water drive is effectively sweeping the reservoir, and the highest wells will produce, will drain the reservoir.

Q. Is your well going to affect Trainer's well?

A. Based on the history of this field, ultimately Trainer's well will water out.

Q. What are the actual permeability numbers, Mr. McRae?

A. Our engineer has all that information and will go over that in just a minute.

Q. Okay. Do you know what acreage Ocean plans to dedicate to this well if we go on 80-acre spacing?

A. I believe it's the north -- It's a laydown 80, the north half of the northeast quarter.

Q. North half of the northeast.

Do you know -- Do you have the well location for your Rainier State?

A. It's on the well header. 2310 from east line, 1300 from north line.

Q. I'm curious as to your proposal for 330-foot setbacks. If no more wells are going to be drilled, what's the significance of that request?

A. I'm not aware of why we --

MR. BRUCE: Mr. Examiner, I probably put that in, just in the event in other sections in this pool, wells are drilled.

EXAMINER CATANACH: Are you going to have any testimony to support that request, Mr. Bruce?

MR. BRUCE: Other than that, no.

EXAMINER CATANACH: Okay.

MR. BRUCE: Mr. Examiner, as with a number of these Strawn and Devonian pools, based on seismic, there seems to be a surplus of unorthodox locations, and that 330 setback gives a little more leeway than the normal 150 feet from the center of the quarter-quarter section that the Division usually imposes in these 80-acre spaced pools.

EXAMINER CATANACH: Okay, I think that's all we have of this witness. He may be excused.

CHAD JOHNSON,

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

DIRECT EXAMINATION

BY MR. BRUCE:

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

A. Yes, my name is Chad Johnson.

Q. And where do you reside?

A. Broomfield, Colorado.

Q. Who do you work for and in what capacity?

A. I'm a reservoir engineer with Ocean Energy, Incorporated.

Q. Have you previously testified before the Division?

A. Yes, I have.

Q. And at that hearing were your credentials as an expert engineer accepted as a matter of record?

A. Yes, they were.

Q. And are you familiar with the engineering matters related to this Application?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I'd tender Mr. Johnson as an expert reservoir engineer.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Bruce) Mr. Johnson, could you identify Exhibit 8 for the Examiner and go through the highlights of that exhibit?

A. Yes, Exhibit 8 is the drill stem test of the Devonian formation, taken in the Rainier State Number 1 well.

If you'll turn to the page that I have tabbed with a red marker, I've enclosed the entire DST chart of the Devonian reservoir.

If you'll turn to the next page, with the blue tab, I've highlighted two points which I believe are very significant on this test.

At the beginning shut-in and the end of the initial flow, pressure was 2324 pounds. Thirty seconds later, reservoir pressure was at 4256 pounds. This is indicative or similar to the other wells in the field,

ranging from 4200 to 4700 pounds, reservoir pressure, and indicative of a strong water drive.

If you'll turn to the page I have marked with the yellow tab, there are some comments I have highlighted at the bottom. Based on the results of this DST and the analysis done by the testing company, "the derivatives indicate a multiple porosity reservoir with high permeability and improving skin."

If you'll turn to the final page I have marked with the orange tab, calculated permeabilities based on this test is 353 millidarcies with a skin factor of a minus 5. So basically an undamaged reservoir with high permeability, again indicating strong active water drive.

Q. Mr. Johnson, the -- Mr. McRae testified that the initial producing rate on this well was 136 barrels of oil per day. What is it currently producing?

A. Currently the well produces approximately 160 barrels of oil per day and 520 barrels of water per day.

Q. It's on pump?

A. It's on pump, correct.

Q. Okay. Has it established yet a decline rate?

A. Yes, it has.

Q. What is Exhibit 9, Mr. --

A. Exhibit 9 is the decline curve on the Rainier State with a forecast, and also the production curves on

all the other producers in the field.

The Rainier State, as you can see -- it's a hyperbolic decline. Final decline I believe I estimated to be about 15 percent, once it finally goes on an exponential.

Q. What reserves do -- are estimated at this point for the well?

A. Reserves are estimated to be about 288,000 barrels, and that is based on our Ryder Scott third-party consultant estimates.

Q. From an engineering standpoint, based upon the water drive and the high permeability, do you believe that this particular reservoir will be drained by one well?

A. I do.

Q. In your opinion, is the granting of this Application in the interests of conservation and the prevention of waste?

A. Yes, it is.

Q. And were Exhibits 8 and 9 prepared by you or compiled from company business records?

A. Yes, they were.

MR. BRUCE: Mr. Examiner, I would move the admission of Ocean Energy Exhibits 8 and 9.

EXAMINER CATANACH: Exhibits 8 and 9 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Johnson, do you know how the reserves were calculated?

A. No, I do not. I know that they were -- there was a field study done based on performance of the other wells, and this is a best estimate based on, you know, what the other wells have done and what our consultants feel the well will recover.

And as Mr. McRae stated earlier, it's difficult to determine an accurate recovery because none of these wells have penetrated the full Devonian section, and our Rainier well only penetrated approximately the top 30 feet, I believe Mr. McRae stated.

So really, the reserves are based on other wells and then a best estimate by the consultant to -- what the well will recover.

Q. How long do you anticipate it would take to recover those reserves?

A. Currently we have about 20 years, based on the forecast I supplied to you in Exhibit 9. It might be shorter, it might be longer.

Q. What do you attribute that increase in production rate to?

A. On the decline curve?

Q. On the -- from the initial to the current.

A. On Exhibit 9, are you talking about?

Q. Well, I'm just talking about the numbers you gave me as far as the initial rates and current rates. You went from 136 to 160; is that right?

Q. Yes. Originally we had a rod pump on the well, and then in approximately March of 1998 we installed a submersible pump, which would basically allow us to produce higher volumes of fluid. And that is why you're seeing an increase in the rate.

Q. Now, you don't have the documents that show how the reserves were calculated?

A. No, I do not. I can obtain them from you -- or for you, from the consultants.

Q. Yeah, I would, I'd like to see that, if you could submit that.

A. Okay.

Q. According to your geology, it looks like about -- the size of this structure that's above the oil-water contact is about 80 acres or so; is that a fair --

A. That's a fair estimate.

Q. So that the 288,000 barrels is, in your opinion, contained within that area above the oil-water contact?

A. I believe it is, yes.

Q. Mr. Johnson, we normally promulgate pool rules on

a temporary basis. Do you see in the next year or two years that you would be able to gather some more data to support permanent adoption of the rules? This is kind of a special circumstance --

A. Yeah, yeah.

Q. -- I understand, but do you think that you could gather more data to actually justify it in the future?

A. Well, I guess what I was basing everything on was, when the first well was drilled in the field -- I believe Well Number 4 on the cross-section was the first well drilled, and pressure was 4740 pounds. That was 44 years ago. Reservoir pressure in our Rainier State is approximately 4300 pounds.

So really, we're not -- I'm not foreseeing any new data that would change my estimation that this is a strong water drive and pressures would decline, and so I -- I think that's what you're looking for, correct?

Q. Do you feel like we have sufficient data at this point to permanently adopt an 80-acre spacing unit?

A. I believe so. And as Mr. McRae stated before, Well Number 5 on the cross-section, that really tells what is going on in the reservoir. It was drilled ten years after the updip and downdip wells had been drilled, and it had already been swept by the water drive. And with us being at the highest structural position, we should sweep

all the remaining reserves.

Q. Are you able to predict in any method when the Trainer well might water out?

A. That is hard to estimate. It's really hard to say. It depends on what direction the water drive may be coming from, which we do not know.

EXAMINER CATANACH: I have nothing further, Mr. Bruce.

MR. BRUCE: Okay. Mr. Examiner, I'd just submit maybe one final exhibit, Exhibit 10, which gives information regarding the situation on the well that Mr. Johnson testified about. Move the admission of Exhibit 10.

EXAMINER CATANACH: Okay, Exhibit 10 will be admitted as evidence.

MR. JOHNSON: And that is a daily production plot, daily rate.

EXAMINER CATANACH: Okay. Anything further, Mr. Bruce?

MR. BRUCE: No, sir.

EXAMINER CATANACH: There being nothing further, Case 12,012 will be taken under advisement.

(Thereupon, these proceedings were concluded at 11:07 a.m.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 12012, heard by me on July 23 1997.

David 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 July 25th, 1998.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998