STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 9915

EXAMINER HEARING

IN THE MATTER OF:

Application of Marathon Oil Company for an Unorthodox Gas Well Location, Eddy County, New Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: MICHAEL E. STOGNER, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

April 18, 1990

ORIGINAL

A P P E A R A N C E S

FOR THE APPLICANT:

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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 11:22 a.m.:

EXAMINER STOGNER: Call the next case, Number 9915, which is the Application of Marathon Oil Company for an unorthodox gas well location, Eddy County, New Mexico.

I'll call for appearances.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin and Aubrey. I'm appearing in an association with Mr. Larry Garcia who is an attorney for Marathon and a member of the Texas and New Mexico Bars. We're appearing on behalf of the Applicant, Marathon Oil Company.

EXAMINER STOGNER: Are there any other appearances?

Will the witnesses please stand to be sworn?

(Thereupon, the witnesses were sworn.)

EXAMINER STOGNER: You may be seated.

Mr. Kellahin?

CRAIG KENT,

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

EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Kent, for the record would you please

state your name and occupation?

A. My name is Craig Kent. I'm a petroleum engineer with Marathon Oil Company.

Q. Mr. Kent, on prior occasions have you testified before this Division as a petroleum engineer?

A. Yes, I have.

Q. And pursuant to your employment by your company, have you made a study of this Application?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Kent as an expert petroleum engineer.

EXAMINER STOGNER: Mr. Kent is so qualified.

Q. (By Mr. Kellahin) Mr. Kent, I have shared with the Examiner what is marked as Exhibits 1 and Exhibit 2 to this Application. You might unfold those before so that we can begin to talk about them.

Let's start with Exhibit Number 1, and would you identify and describe that display for us?

Exhibit Number 1 is a USGS 7-1/2 Minute Series Topographic Map of the Martha Creek Quadrangle, Eddy County, New Mexico.

EXAMINER STOGNER: I'm sorry, the what quadrangle?

THE WITNESS: Martha Creek.

EXAMINER STOGNER: Martha Creek, okay.

THE WITNESS: And what you see here is basically the central portion of what is called the Indian Basin Field.

In particular to this case is Section 23 of Township 21 South, 23 East, which is located in the upper center of the map.

In Section 23 there is a red dot which -- Next to it are the words, "proposed location," which is the proposed location for our Indian Basin Gas Com Number 2, which we propose at a location of 732 feet from the south line, 1173 feet from the west line.

Also in that section is a red box which is the window of legal well locations in that section.

On the western half of the section there is a symbol marked "Gas Well," which is the location of the Indian Basin Gas Com Well Number 1, which we're seeking to replace.

Q. (By Mr. Kellahin) Let's turn now to Exhibit Number 2. Will you identify and describe that display?

A. Exhibit Number 2 is a blown-up portion of the Martha Creek Quadrangle, and in specific it is only of Section 23.

On this map you can again see our proposed location, which is shown with an orange dot. Again you can see the window of legal locations which is shown by

the dotted line, and the gas well symbol in the west part -- portion of the section -- is the original Indian Basin Gas Com Well Number 1.

The blue-shaded area on the map is the Rocky Arroyo floodplain.

Q. Describe for us what Marathon was seeking to accomplish when it first filed this request for this well administratively.

A. What we were hoping to do was to get administrative approval for a well location due to the topography in the southwest quarter of this section.

As you can see, a legal location of 1650 from the south and west falls within the floodplain of the Rocky Arroyo.

When we staked this location, we had a BLM representative present, and at that time he said that the proposed legal location was not acceptable. And so we moved our location to a location that was acceptable to the BLM.

Q. And that's the requested location today before this Examiner?

A. That's correct.

Q. Let's talk about how to appropriately develop the hydrocarbon reserves in this section for the Indian Basin Pool.

A. The Indian Basin Upper Penn Pool is a moderate gas drive mechanism gas pool.

And so to best develop these reserves, your best bet is to move upstructure from existing wells or upstructure from the gas-water contact.

Q. Describe what has happened with the first well in Section 23, the well that's shown in the southwest of the northwest quarter of the section, that you now need to have another well.

A. As that well has aged -- It was first produced in 1966 -- the water has encroached from the north and from the east to a point where we no longer have enough net pay to sustain an economic rate from that well.

Q. What's happened to that first well in the section to tell you as an engineer that it's being watered out as opposed to simply being depleted by natural production of the hydrocarbons?

A. We still see shut-in pressures of around 13-- surface shut-in pressures of around 1300 pounds. And when we compare that to offsetting sections, bottom-hole shut-in pressures, we're within 100 to 200 pounds of reservoir pressure from productive wells.

Q. In examining possible locations so that you have a second -- or replacement well, if you will, in

Section 23, somewhere out of the southwest quarter --

A. Yes, sir.

Q. -- have you studied to determine whether or not, Mr. Kent, you can use an approvable surface location that satisfies the BLM's concerns about this floodplain and directionally drill that well so that you then encounter the reservoir at a standard bottom-hole location?

A. Yes, I have.

Q. What have you concluded?

A. I've concluded that directionally drilling would increase our dry-hole costs by approximately 50 percent.

Q. Let me show you what is marked as Exhibit Number 3. Identify for us what Exhibit Number 3 is.

A. Exhibit Number 3 is an AFE cost detail of the dry-hole costs we estimate for drilling the Indian Basin Gas Com Number 2 at the proposed location as a straight hole.

Q. When you compare that as a straight hole to directionally drilling a well and have concluded it would be significantly more expensive to directionally drill, can you give us any point of reference in terms of actual expenditures for a directionally drilled well in this area?

A. Yes, I can, and that is seen on Exhibit Number 4.

Q. Where is the well for which the information on Exhibit Number 4 is prepared?

A. It's from Section 20 of Township 21 South, 24 East, which is approximately three miles to the east of our proposed location, the Indian Hills Unit Number 6.

Q. Is the Quadrangle map, Exhibit Number 1, large enough to include that section?

A. No -- Yes, it is.

Q. Are the section lines shown on that Exhibit Number 1?

A. Yes, they are.

Q. And we're in what section, now?

A. We're in Section 20 of Township 21 South, Range 24 East. It's in the furthest to the right -- Next to the furthest to the right row of sections.

Q. Okay, and what was the resulting actual cost for the directional drilling of that well to penetrate this same reservoir?

A. The dry-hole costs were $744,000, although these included some costs for coring and mud-logging that are not included in our estimate for a straight-hole wellbore.

Q. Based upon your portion of the study of the

technical information for this Application, do you have an opinion as an engineer as to whether or not the Division should approve this unorthodox location without a penalty?

A. Yes, I do.

Q. And what is that?

A. I feel that the Division should grant our location without penalty.

Q. And why? What are the bases for saying that?

A. Basically, it is that we feel there should be very little impairment of correlative rights due to the water encroachment, which may push gas from Section 23 to the sections to the south and west.

Q. Those sections to the south and the west are a part of the same unit that Marathon Oil Company operates?

A. Yes, they are.

Q. And this is described as the Indian Basin Unit, is it not?

A. Yes, it is.

Q. Are you satisfied that there are reserves left remaining in Section 23 that can be produced by a well at the proposed unorthodox location?

A. Yes, I am.

Q. And will it benefit the working-interest

owners of the unit to be allowed to produce those reserves at this location without the additional expense of directionally drilling this well to a standard bottom-hole location?

A. Yes, it will.

MR. KELLAHIN: That concludes my examination of Mr. Kent, Mr. Stogner.

We would move the introduction of Exhibits 1 through 4.

EXAMINER STOGNER: Exhibits 1 through 4 will be admitted into evidence.

Okay, let's go off the record.

(Off the record)

EXAMINER STOGNER: Okay, let's go back on the record and do this case.

EXAMINATION

BY MR. STOGNER:

Q. Mr. Kent, let's refer back to the Indian Basin Well Number -- Is that the Well Number 1, I believe it is?

A. Yes, sir.

Q. That's 1980 from the north, 660 from the west?

A. Yes, sir.

Q. Do you know about that well? Could you give

me a little brief history on that particular well?

A. That well was drilled by Ralph Lowe in 1962 and was the discovery well for what was called at that time the Indian Basin Upper Penn and Morrow Pools.

It has produced approximately 9.1 BCF of gas to date.

Q. And is it presently producing?

A. It produces maybe two to three days a month. But after being shut in for a week or two weeks, we'll get production for a day of maybe 100 to 200 MCF, and then it drops off rapidly after that.

Q. Okay. And what zone is that production today coming from?

A. That's coming from the Upper Penn Zone only.

Q. Okay. How about the Morrow, history of the Morrow production?

A. The Morrow was abandoned in 1971. And as far as cumulative production, I believe it was in the neighborhood of 200 million cubic feet.

Q. So when you talk about watering problems, you're referring to the Upper Penn production; is that correct?

A. Upper Penn only, that's correct.

Q. Upper Penn only. And the Morrow in the Number 1 Well, it's just essentially depleted?

A. That's correct, it became uneconomic to produce it.

Q. So this particular well -- I mean if you're going to go down to the Upper Penn, you might as well drill to the Morrow; is that correct?

A. That's correct, that's our current philosophy.

Q. And that's probably shared with everybody else in the area?

A. That's correct.

Q. But as far as the geology, today we're only going to talk about the water encroachment just for the Upper Penn?

A. That's correct.

MR. KELLAHIN: I have a geologist, Mr. Examiner, who will show his maps on both --

EXAMINER STOGNER: Okay.

MR. KELLAHIN: -- so that he can have both the Morrow and the Upper Penn subject to your review as to the location, because we would be unorthodox in the unlikely event there's more production, and he wants to make that presentation too.

Q. (By Examiner Stogner) Okay, just for the record, I'm going to refer to Exhibit Number 2. You wanted to initially drill this well 1650 from the south

and west line; is that correct?

A. Yes, sir.

Q. And this being on federal acreage, it was subject to the surface conditions and recommendations of the BLM; is that correct?

A. Yes, sir.

Q. All right. And the most optimal positioning -- repositioning of this well -- would be to go to the south and east, geologically, but that wasn't to say that there was other locations available within the orthodox window: You just didn't want to drill there or do the geology; is that correct?

A. That's correct, and I believe that's why we didn't -- weren't able to get administrative approval for this.

EXAMINER STOGNER: Okay. I'll tell you what, I have no further questions at this time of Mr. Kent, but I'm sure he'll still be in the room.

Mr. Kellahin?

MR. KELLAHIN: I'd like to call Eric Carlson now. He's Marathon's geologist, Mr. Examiner.

(Off the record)

ERIC D. CARLSON,

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

EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Eric D. Carlson, and I am a petroleum geologist.

Q. Mr. Carlson, on prior occasions you have testified on behalf of your company as a petroleum geologist?

A. Yes, sir.

Q. And pursuant to your employment, have you made a study of the geology surrounding this particular Application?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Carlson as an expert petroleum geologist, Mr. Examiner.

EXAMINER STOGNER: Mr. Carlson is so qualified.

Q. (By Mr. Kellahin) Mr. Carlson, let me refer you, sir, to what is marked as Exhibit Number 5 and have you identify and describe that display for us.

A. Exhibit Number 5 is a structure map on the top of the Upper Penn. You see that it includes the nine-section area which is Section 23, Township 21 South, Range 23 East, and the eight adjacent sections.

As you can see, there's a contour interval of 100 feet on this structure map, and the scale is as given: One mile is approximately 4-1/2, 5 inches.

And also we will show you the legend. We have a proposed location which is indicated in Section 23 with the orange dot, and we have shown penetrations through the Upper Penn on this map. The current status of each of those penetrations within the Upper Penn Reservoir is shown as keyed: The gas well, the abandoned gas well, the dry hole in the Upper Penn and the shut-in gas well.

Q. Describe for us what you have done to satisfy yourself about the original gas-water contact located on this map.

A. I would like to direct you to Section 13 in the northeast corner of this map, which shows the original gas-water contact. And the current gas-water contact is shown in Section 15, trending north-south. It crosses across Section 23 and exits the map approximately Section 25.

Now, we have seen some production data to indicate this contact has moved. And fortunately for us last year, to help us in understanding this reservoir further, a well was drilled in Section 14 by Bill Penn in the northwest quarter.

This well, drilled to the Upper Penn last year, was completed in the Upper Penn and was potentialed for 229,000 cubic feet a day, which is a subeconomic well. It also made over 100 barrels of water per day on potential.

So we feel that the well in Section 14 drilled last year has established that water encroachment is occurring in this reservoir.

Q. What do you have that causes you to conclude the location of the current gas/water contact is as you projected it through this section?

A. We have in addition to the Section 14 well drilled last year as evidence, evidence in several other sections, particularly Section 23 where we start to see water encroachment in our well that is now drilled. Also to the north, off the map, there are also wells. And in Section 36 to the south of this map, Section 36, Township 21 South, Range 23 East, we have another subeconomic test drilled below that current gas-water contact.

I would like to state for the record that updip is to the southwest on this map. So in fact, the original gas-water contact has moved updip from approximately 3550 feet to its present location approximately 3540 feet subsea, so --

Q. Help me understand. When I look at the dark-shaded contour --

A. Yes, sir.

Q. -- just to the south in Section 26 it's identified at minus 3500 feet?

A. Yes, sir.

Q. When I move to the southwest corner of Section 26 and see the next contour line, what is that?

A. That is a negative 3400 feet, or 3400 feet subsea. Updip is to the southwest.

Q. So you're using hundred-foot contour lines on your display?

A. Yes, sir.

Q. Okay. What, in your geological opinion, Mr. Carlson, is the optimum location to drill this replacement well in Section 23 to penetrate and hope to recover the remaining gas reserves from the Upper Penn?

A. It is important to drill the well in Section 23 updip of the current producer which is watering out. And so, the thing to do is to drill in the southwest corner of Section 23, the southwest quarter.

Q. There are existing producing wells in the Marathon Indian Basin Unit in Both Sections 26 and 27?

A. Yes, sir.

Q. And geologically, are both those wells at

favorable positions concerning the well -- relationship of those two wells to the well in 23?

A. Yes, sir.

Q. Now, when we go down further and look at the Morrow -- and refer to Exhibit Number 6 -- what does that tell us?

A. Exhibit 6 is a structure map of the Morrow, and it's actually on top of what's often called the Morrow Pay or the Morrow -- Middle Morrow, Morrow B Interval. And once again, it shows us the same area as Exhibit 5, the nine-section area including Section 23. And the penetration shown on this map, the symbols are indicative of performance of these wells in the Morrow, current status of these wells in the Morrow.

So we can take a look at the structure map again and see that updip is to the southwest, that the contour interval is 100 feet.

Q. Are there any currently producing gas wells shown on your display that produce gas from the Morrow?

A. No, sir, there are not. And I would like to speak a bit of production in the Morrow. All of the producing wells that you see are now abandoned on this map, and in Section -- Excuse me, in Township 21 South by 23 East, all the Morrow producers are from individual Morrow zones. There are not two wells in

that township that produce from the same zone. They're all from separate zones.

Q. In summary, then, Mr. Carlson, is approval of the proposed Application to penetrate both the Morrow and the Upper Penn Reservoir at this location one, in your opinion, that satisfies the conditions of the Commission to prevent waste and protect correlative rights?

A. Yes, sir, absolutely. Particularly in the Upper Penn horizon.

MR. KELLAHIN: That concludes my examination of Mr. Carlson.

We move the introduction of his Exhibits 5 and 6.

EXAMINER STOGNER: Exhibits 5 and 6 will be admitted into evidence at this time.

EXAMINATION

BY EXAMINER STOGNER:

Q. Have you calculated what the rate of this encroachment of the gas/water-contact line is?

A. Marathon has calculated that it has moved approximately two miles in approximately 25 years. So that would give you a rate of about one mile every twelve years.

However, perhaps a better way to look at that

might be structurally. It's moved 200 feet higher, or shallower, in 25 years. So that would be a rate of approximately 100 feet every 12 or so years.

Q. At that kind of rate, what do you give the Number 1 Well before it is completely watered-out? Of course, you're reaching economic water-out about this time, aren't you?

A. That is correct.

Q. Maybe I'll need to ask the engineer. I'll go ahead and ask you, and if you can't answer it I'll ask the engineer.

How much more productive life do you visualize for the Number 1?

A. I would give that to Mr. Kent to answer.

EXAMINER STOGNER: Okay. I have some other questions of Mr. Kent, so I'll ask him to hold that question.

Okay, as far as any further questions of this witness, I do not have any.

Are there any other questions of Mr. Carlson?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: You may be excused.

Mr. Kellahin?

MR. KELLAHIN: Mr. Examiner, I'd like to call Curtis Smith. Mr. Smith is a petroleum landman with

Marathon Oil Company.

CURTIS SMITH,

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

EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Curtis Smith. I'm a landman for Marathon Oil Company.

Q. Have you on prior occasions testified before the Oil Conservation Division as a petroleum landman?

A. Yes, sir.

Q. And have you made yourself knowledgeable about the ownership and land matters with regards to this section and the Indian Basin Unit operated by Marathon Oil Company?

A. Yes, I have.

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

EXAMINER STOGNER: Mr. Smith is so qualified.

Q. (By Mr. Kellahin) Mr. Smith, I have handed you a package of exhibits, and let me have you go through them with me.

A. Okay.

Q. When we look first at Exhibit Number 7 to this case, what are we seeing?

A. Okay, this is the ownership plat of our Indian Basin Unit. The Indian Basin Unit is the hachured outline, and that is a working-interest unit by virtue of a joint operating agreement dated May 15th, 1962, in which Marathon is the operator.

It also shows the offset operators, offsetting Section 23, and I have -- and the copy that I submitted as an exhibit and to the Commission with my Application, I highlighted the names of the operators in these sections.

Q. When we look at Section 23 and we find the black dot, does that represent an approximation of the proposed location for this well?

A. Yes, it does.

Q. And we look to the adjoining sections towards which this well is moving, Sections 22, 27 and 26, and all those sections in their entirety are part of this Marathon-operated Indian Basin Unit?

A. That is correct.

Q. Okay. Have you notified those various interest owners of this Application?

A. Yes, sir, I have. I've notified -- The working-interest partners in the Indian Basin Unit are

Amoco and Kerr-McGee, and they have signed waivers being offset operators, or offset working-interest partners, in Sections 22, 27 and 26. There are also working-interest partners in Section 23 with us.

Q. When I look at Exhibit Number 8, there's a list of operators shown. Did you prepare this list?

A. Yes, I did.

Q. What are we looking at here?

A. This is a list of the offset operators to the Indian Basin Gas Com Well Number 2.

Hondo Oil and Gas Company is the operator, or the record title owner, for the north half of Section 24. Bill Fenn, Incorporated, is the operator or record title holder of all of Sections 13, 14 and 25, Township 21 South, 23 East. Marathon Oil Company is the operator of Sections 26, 27, 22 and 15 of 21 South, 23 East.

Q. You were simply notifying all operators all the way around the section?

A. That is correct.

Q. Now, this case was originally filed administratively for approval, and when that Application was denied and returned to you did you subsequently then send appropriate notices to the offsetting operators of this case?

A. Yes, I did.

Q. How did you accomplish that?

A. I did it with Exhibit Number 9, letters dated March 27th, 1990, notifying offset operators. There are copies of my green cards that are signed showing the certified receipt. And also along with that exhibit is a March 27th, 1990, letter dated -- or, I mean, sorry, to the State of New Mexico OCD, applying for a hearing on the unorthodox location.

I also have a list of the offset operators in which I inadvertently did not include Marathon, which is -- Marathon is included in Exhibit Number 8. I have an ownership plat attached to this also, showing the location of the well. There is an orange dot on the copy I sent to Mr. Stogner, once again, with the offset operators highlighted. There is a C-102 attached and an application for a permit to drill.

Q. Thereafter marked as Exhibit 10-A, have you received any waivers of objection?

A. Yes. Kerr-McGee has signed a letter dated March 29th, 1990, Exhibit 10-A, as an offset working-interest partner, stating that they have no objection to the unorthodox location and recommend the location be approved without penalty.

Q. Now, where would their property interest

arise from?

A. Well, they have a working interest, of course, in the Indian Basin Unit. They have a working interest in Sections 15, 22, 27 and 26.

Q. Okay. When I look at the three sections towards whom the well is moving, are those all sections in the unit that are leased to Amoco?

A. Yes, Amoco, and then it was -- Marathon has the contractual rights by virtue of the operating agreement.

Q. But the lessee, if you will, for those sections is Amoco?

A. I believe so, I believe --

Q. And did you --

A. -- that is correct.

Q. Did you obtain approval from and a waiver from Amoco?

A. Yes, we did. A letter dated April 16th, 1990, Exhibit 10-B. Amoco also waives any objection to the unorthodox location and recommends the location be approved without penalty.

Q. And then finally what is Exhibit Number 11?

A. Exhibit 11 is a letter from the BLM, Carlsbad Resource Area Headquarters Office, signed by Richard Manus, Area Manager. He states that Mr. Barry Hunt of

the BLM, along with John West, surveyor, Jim Sciscenti, archeologist, and Marathon representatives did an on-site inspection of the standard location 1650 from the north and west lines.

After the on-site inspection they discovered that the standard location is falling in the floodplain of a major drainage, the Rocky Arroyo, and they recommended that we move the location, and --

Q. All right, when -- They have rejected the first location that was standard. Have they thereby in this letter also given you approval of the proposed unorthodox location that's before this Examiner?

A. Yes.

MR. KELLAHIN: Okay, that concludes my examination of Mr. Smith. We move the introduction of Exhibits 7 through 11.

EXAMINER STOGNER: Exhibits 7 through 11 will be admitted into evidence.

EXAMINATION

BY EXAMINER STOGNER:

Q. I want to ask you this question. There again, we may have to go back to Mr. Kent. And I'm referring to Exhibit Number 11 and Exhibit Number 2.

The floodplain that is shown on Exhibit Number 2, did that come from the BLM or information

from the BLM, or is this an accurate description of that floodplain by the BLM?

A. As far as I know. I'm not familiar with Exhibit Number 2.

EXAMINER STOGNER: I'll tell you what, let me -- I'm going to refer that question to Mr. Kent when I get him back up here.

As far as that goes, Mr. Smith, I have no questions --

THE WITNESS: Okay.

EXAMINER STOGNER: -- of you. You may be excused.

Let's recall Mr. Kent.

CRAIG KENT,

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

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Kent, how did the Rocky Arroyo floodplain -- This is the blue-shaded area in Exhibit Number 2 -- How was that prepared?

A. Basically, what we did -- It's prepared from two sources. First of all, it's prepared from the topographic map, and what I did was place the edge of the drainage at the breakback points on the contour

lines.

As you can see, the plus 3820 where it breaks back to the west, the plus 3800 where it breaks back to the west, I've placed the contour lines.

I was also on site when the inspection was done with the BLM, and this is -- as far as my recollection goes, is very close to what is actually out there.

Q. Now, when I look at your proposed location, there's a square box around it. Is that the well pad?

A. Yes, sir, that's the 400-by-400-foot well pad.

Q. Has this particular site been also surveyed in, and that letter in Exhibit Number 11, does that give approval from the BLM for that location?

A. Yes, sir, it does. And again, the BLM was on site when we staked this location.

Q. In your testimony previously, you mentioned something, and you gave some testimony about directional drilling. When you were speaking of that testimony, were you referring to drilling a surface location here and directional drill back to the 1650?

A. What I was referring to was actual costs incurred with the Indian Hills Unit Number 6, and as

far as the actual departure, it is fairly similar to what we would probably see with our proposed location.

Up at the top of Exhibit 4 I give a location for the Indian Hills 6 of 560 feet from the south line, 1550 feet from the west line. So it's fairly similar. We may have to drill a little farther from our proposed location than what we had on the Indian Hills 6.

Q. Now, this Indian Hills 6, that was a new well, was it?

A. That was a new well, yes, sir.

Q. Okay, how much more productive life do you give the Number 1 Well?

A. Economically, it has very little productive life, as far as being a useful well in this field. We would -- I would say it would have possibly one to two years before it would completely cease to produce at all, at which point we would lose our lease.

Q. Did you study, or could you utilize this particular wellbore and directionally drill off of it into a standard 1650-1650, or do you know?

A. Using the existing wellbore?

Q. Yes.

A. I assume you're meaning to sidetrack the existing wellbore?

Q. Come back uphole and sidetrack, yes.

A. Offhand, I don't remember what the casing size is on that well, and -- I could tell you what the casing size would be. If it was seven-inch, it would be possible. Again, you're looking at a fairly long distance to get to the proposed location -- or, not proposed location, but a 1650-1650.

Q. Any way you go about it, it would be an expensive process?

A. Very expensive, sir.

Q. Okay. That is, assuming if you could even do it.

And the Number 1 well was drilled when?

A. It was drilled in 1962, late 1962.

Q. Were the completion techniques different then than they are now?

A. Not substantially. Generally, when a well is completed in this field, you set casing through the upper Penn or, in this case they drilled through to the Devonian. So casing was present, it was perforated and acidized.

Due to the water encroachment problems, generally we do not fracture-stimulate these wells, and we generally do not do a very aggressive acid job due to the fact that we don't want to create any fractures that would increase the conductivity of the water to

the wellbore.

Q. The Upper Penn Pool is a prorated gas pool; is that correct?

A. Yes, sir, it is.

Q. And it's -- Foreseeably and probably, both wells will be producing if this well is approved. At the same time the allowable will be assigned a proration unit; is that correct?

A. Yes, sir, but what we would envision would be as soon as the new well is hooked up to the gas plant out there in the field, the original well would be shut in.

Q. Why?

A. It's possible we could utilize that wellbore for saltwater disposal.

EXAMINER STOGNER: Okay. I have no other questions of Mr. Kent at this time. Are there any other questions of this witness?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: If not, he may be excused. Mr. Kellahin, do you have anything further?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: And does anybody else have anything further in Case Number 9915?

If not, this case will be taken under

advisement.

(Thereupon, these proceedings were concluded at 12:00 noon.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9915, heard by me on 18 April 1990.

Michael E. Stogner, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Shorthand 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 April 25, 1990.

STEVEN T. BRENNER
CSR No. 106

My commission expires: October 14, 1990