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NHAT Mgr.
PO Box 3109
Midland, TX 79702

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STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF PLAINS PETROLEUM OPERATING COMPANY FOR EXPANSION OF A PREVIOUSLY APPROVED PRESSURE MAINTENANCE PROJECT AND TO QUALIFY SAID EXPANSION FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE ENHANCED OIL RECOVERY ACT, LEA COUNTY, NEW MEXICO

CASE NO. 11,368

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

April 2nd, 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, April 2nd, 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.

* * *

I N D E X

April 2nd, 1998
Examiner Hearing
CASE NO. 11,368

* * *

E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	7	26
Exhibit 2	14	26
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* * *

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL
Attorney at Law
Legal Counsel to the Division
2040 South Pacheco
Santa Fe, New Mexico 87505

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
117 N. Guadalupe
P.O. Box 2265
Santa Fe, New Mexico 87504-2265
By: W. THOMAS KELLAHIN

* * *

WHEREUPON, the following proceedings were had at 9:18 a.m.:

EXAMINER CATANACH: All right, at this time we'll call Case 11,368.

MR. CARROLL: Application of Plains Petroleum Operating Company for expansion of a previously approved pressure maintenance project and to qualify said expansion for the recovered oil tax rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico.

EXAMINER CATANACH: Call for appearances in this case.

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

EXAMINER CATANACH: Any additional appearances?

Please swear in the witness, Mr. Carroll.

(Thereupon, the witness was sworn.)

MR. KELLAHIN: Mr. Examiner, I have handed you a set of exhibits, and I've also given you a copy of the 1995 order that was previously issued by the Division, approving the original pressure maintenance project.

This is a leasehold cooperative pressure maintenance project. It's portions of two federal leases.

The current project is shown on Exhibit Number 1. It consists of the southwest quarter of 35 and the southeast quarter of 34.

You can see from the map that Plains has labeled the current two approved injection wells, and they show the producing wells. This is a McKee sands pressure maintenance project.

What Plains seeks to do this morning is to obtain Division approval to add the northwest quarter of 35 and the northeast quarter of 34. So it's an area expansion. It continues to be part of the same two federal leases.

The BLM allows this to be conducted as a cooperative leasehold project, without the requirement for unit agreements.

You can see also our request for the approval of two additional injection wells. Mr. Sutherland, the engineering expert for the Applicant, will testify about the two injection wells.

We will commence by showing you the current status of the project in terms of its response, its ability to recover additional oil, and then we will go through the necessary components to satisfy you that this project should qualify for the enhanced oil recovery tax credit, and it should be approved with these two additional injection wells.

JAMES R. SUTHERLAND,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A. My names is James R. Sutherland. I'm a district manager for Plains Petroleum, southern district.

Q. And where do you reside, sir?

A. Midland, Texas.

Q. Mr. Sutherland, the microphone will not amplify your voice, and there's a hum from this fan overhead, so you'll have to speak up for us.

A. Okay.

Q. On prior occasions have you testified before the Division?

A. I have.

Q. Pursuant to your current employment, are you responsible for this project?

A. I am.

Q. Are you familiar with the current status of this project?

A. I am.

Q. Did you prepare the Division Form C-108 that has been submitted as an attachment to this Application?

A. I did, yes, sir.

MR. KELLAHIN: We tender Mr. Sutherland as an expert witness.

EXAMINER CATANACH: Mr. Sutherland is so qualified.

Q. (By Mr. Kellahin) Let me direct your attention, sir, to Exhibit 1. We have information that is displayed on top of a geologic map, and this is a structure map, is it not?

A. Yes.

Q. Take a moment and summarize for us what you were attempting to do with the original project.

A. The original project was initially the development of exploitation of unrecovered reserve in the downthrown fault block, beginning in 1993.

Subsequent to development and identifying the structure with the aid of 3-D seismic and subsurface control, we elected to -- after doing core analysis and reservoir fluid analysis -- to optimize recovery to start injection at or above the bubble point.

This followed through the course of hearing in 1995, injection commenced in December of 1995, and early in 1996 the decline of the production performance from the producing wells in the two southeast and southwest quarters were -- the decline was arrested and we saw a response, commencing in April of 1996, to injection.

Subsequent to that response and performance improvement, we continued in our reservoir studies from the data that was available through public information, where Carter Foundation had originally developed the McKee in the northeast and northwest quarters of the two sections, 35 and 34, and it was our feelings that there was McKee oil banked on the upthrown side of the fault. This is not a sealing fault; there's not enough throw to seal. But there could be a bank of oil.

So in late 1996 we drilled an orthodox location, known as the Baylus Cade Number 7, which is shown in the northwest northwest of Section 35, and we, through an order, were allowed to directionally drill that well across the fault to test production or the accumulation of any oil in the McKee sand.

We were successful in establishing production. We also noted in the testing of this well that it had bottomhole pressures that were above bubble-point pressure. The pressure in that well at time of completion was also essentially equivalent to the nearest offset, the Carter E.C. Hill 5 M, which we now call the "B" Federal 6, which is the diagonal north of that that we now propose to recomplete as an injection well.

Then in late 1997 we offset the Cade 7 with the E.C. Hill "B" 24, which is in the northeast northeast of the southeast of Section 34, and we established production there on the north side of the fault, south of the last well drilled, or the most southerly well drilled by Carter Foundation.

Q. Can you give us a general characterization of the vertical limits of the particular formation or reservoir being subject to pressure maintenance?

A. It's -- More or less. It's roughly 150 feet of McKee sand thickness, broken up into three components. Some call it A, B and C from top to bottom. I think we prefer just to refer to it as upper, middle and lower McKee.

The lower McKee sand is the most productive, has the highest permeability, probably has, by our studies -- responsible for the most reserves.

But the throw of the fault -- and this has been confirmed, initially, was by seismic, and has been confirmed by subsequent drilling -- is roughly 100 feet. So if you had -- visualize two blocks -- these are normal faults -- that you would still have on the upthrown side the more permeable lower McKee sand in contact with the upper McKee sand on the south downthrown side of the fault.

And pressure studies would also indicate that there is communication across the fault.

Q. Do your current approvals by the Division allow you the opportunity to inject water into each of these portions of the McKee sand?

A. Yes, the original order, yes.

Q. And currently the source of the water being injected into the McKee sand is what, sir?

A. The source of the water -- We produce from about three different horizons in this particular lease or leases, and the source of the water comes from -- primarily from the Blinebry. We've done extensive core analysis, the throughput injections, to determine that the quality of the water is not a problem, nor does it cause any problem in displacement of oil.

So the water is a water that's present through production of other upper intervals in this area, and we do not supplement with any freshwater makeup.

Q. Is your plan to continue that source for your injection water in the two additional injection wells?

A. That is correct.

Q. Let's talk about the location of those injection wells in relation to the producing wells. It appears on the structure map that the injection wells are higher on the feature than the producing wells?

A. If we'd probably first address the D 1, which is the H location in Section 34, it has, by this structure map, would show it to be the highest well on this upthrown part of the structure.

And this well also, by performance data, was known to be the most productive well that was developed by Carter.

Q. What's the current status of this wellbore?

A. That wellbore is idle and TA'd.

Q. As well as the other proposed injection well, it is temporarily abandoned?

A. Correct.

Q. Why at this point in the structure?

A. At this point in the structure, this well was successfully waterflooded -- the D 1, I'm still -- by an order that was granted by the Commission back in 1965, where they were permitted to inject in two wells in the north -- I think the A location in Section 34 and the F location -- G location in Section 34.

And they successfully stimulated production. There was a secondary response to injection. And at the time the D 1, which at that time was known as the 1 M, was abandoned. It was noted in the public data that water breakthrough or watering-out of the well had occurred.

So to take the advantage of that fill-up of reservoir is what we're attempting to do. Even though it's in a higher structural position, we would take advantage of the fill-up, knowing that there's producible oil to the south of it and merely try to move that bank to the south.

Q. Does that conclusion also represent your opinion concerning the other injection well?

A. Not exactly. The 5 M well never really showed an indication through performance that it watered out. It merely depleted. There wasn't a nearby injector. The nearest injector to it would have been in the A location of Section 34. For it to have affected that on the east side, we're understanding that there is a deterioration or loss of permeability as you move east on the flank.

So there doesn't appear to have been any real response or effect by injection in the A location of 34 to the location that we plan to make a producer. It merely depleted.

And I think that's further exemplified by comparing the pressure at the time of completion in 1953 on the 5 M versus the bottomhole pressure in our Baylus Cade Federal in 1997.

Q. Why then do you propose to use the 5 M as an injection well?

A. It's the nearest injector, it's on a downflank, and it can -- It's the only well existing that could move and bank and support to the south, to an -- almost an equal structural position.

Q. Do you have an opinion as to whether this is a logical expansion of this pressure-maintenance project?

A. It is a logical expansion.

Q. Do you anticipate that you're going to recover additional oil with the expansion area that you would not otherwise recover?

A. Yes.

Q. Have you made a forecast of an anticipated volume of additional oil to be recovered?

A. We're assuming a worst-case scenario, a worst-case scenario will be -- would -- we would -- do know better than what Carter Foundation did in their flood in the north half of the north half, which was a roughly one-half secondary barrel per primary barrel of oil.

Applying that to this expansion, and we would evaluate that to be 145,000 barrels of secondary oil to be gained from expanding this area.

Q. Do you have an opinion or an estimate of the additional capital costs required for the expansion?

A. Just the injection facilities alone is about $250,000. That's to bring each of these two existing wells that are temporarily abandoned currently to a casing integrity testing standpoint and lay the injection lines and refurbish and build up our plant situation.

And our plant essentially is in place. All we have to do is activate an idle injection pump and lay injection lines to the two wells.

Q. When you take into consideration all the anticipated costs and expenses of the expansion and balance that to the potential additional oil recovery, do you have an opinion as to whether you can expand this project and do so at a profit?

A. Yes, we will expand it at a profit.

Q. Let's turn to some of the specific details of the production. I'd like you to look at Exhibit Number 2. My copy is in black and white. The Examiner has a color-coded copy of this display, Mr. Sutherland. I believe you have a color-coded copy.

If you'll take a moment, show us how the display is organized, then let's talk about some of the conclusions you've reached from the display.

A. Okay. This illustrates the history since Plains Petroleum has established production from the McKee in October of 1993.

Q. You are tabulating what types of production?

A. This is the oil production, gas production and water production from the wells that have been drilled and completed by Plains Petroleum, and they're arranged in such a way that they represent a chronological order, in a cumulative sense, of production since we began production in October of 1993.

Q. Let's follow the chronology, then, and if you'll find the first point in time that's significant to you, let's start there.

A. Well, if we start approximately in, let's say, the beginning of 1994 where we peaked production from the initial producing well that we drilled in 1993, then backing that up, in studying the reservoir and all the data available, McKee does have an identifiable decline, exponential decline. It really has a signature.

But if you'll see how Number -- this initial well started declining after it reached its maximum rate of production, it continued to decline down through early 1994.

We successfully offset that well with two additional wells, and you'll see the response to those wells coming on. Obviously, they weren't as good as the Hill "B" 10. Until such point as about mid-year of 1995, and that's when we began our -- We had concluded all our reservoir studies, we'd done all our samplings, core analysis, and we made application to the Commission to ask for pressure maintenance.

Q. Let's find the point in time where you actually commenced water injection into the original project to see what happens.

A. Water injection commenced in December of 1995, and it would be shown, I think, on the color copy as a bright pink. We started injecting, and at the beginning of the injection period we were experimenting a little bit with rates and doing step-rate tests, trying to learn more about the injection wells.

But as we got the injection wells up to rate, which was in January-February of 1996, there was an immediate response to the production from those three existing producers. And it began by about a two- to three-month arresting of the decline, the same signature decline as identified back in the early life of 1993-94 or any history that you might look at the McKee.

But the arresting of the decline, followed by a response or an incline in production rate from these same existing wells.

Q. Can you identify on this display the incremental oil that's being recovered from the original project in direct response to the injection?

A. Well, the incremental oil would be -- If you were to extend the decline without injection on that exponential rate and continued to decline that, by the end of 1996, had we not increased production, we would have been down to a production rate on a monthly basis of roughly 2000 barrels per month, whereas with increased -- with the injection and the response, we were up to a production of roughly 5000 barrels.

And it continues to increase. It's masked, if you look further into 1997, by the addition of two new wells.

Q. Let me direct your attention now to Exhibit Number 3. Would you identify that display for us?

A. Yes, Number 3 is merely a cumulative production plot of all the data, with the cumulative, with time, production of oil, production of casinghead gas, the production of water and also the cumulative injected amount of water.

Q. Are there any points of significance on this display?

A. I think only significant up to 1996. At that point, we were roughly in a balance situation of injection versus withdrawal. At the addition of the Cade 7 new well in early 1997 and subsequent to the end of 1997, the Hill "B" 24, we now are withdrawing more than we're injecting and not able to affect any support by the location of the two approved injectors down in the south half of 34 and 35.

Q. Let me direct your attention now to Exhibit 4, and let's look at the data in a tabular form. If you'll turn to Exhibit 4 and identify and describe that display.

A. Exhibit Number 4 is a tabulation of production on a per-well basis for all wells producing from the McKee. It's by month.

It gives you the yields in a chronological order of completion, the oil, water and gas and water produced from each of those wells, and then it's cumulated in a monthly total, in a monthly cumulative, and from this tabulation the two previous exhibits were plotted.

Q. Let's turn to Exhibit 5 and look at the tabulation of the injection water. Identify that for us.

A. This is a history of injection into the two approved water injection wells, the Baylus Cade Federal Number 5 over on the east side of the south half of these two half-sections, and the E.C. Hill "B" Federal Number 13 over on the west side of the south half of these two quarter sections.

And it just gives the amount of water injected into each well on a monthly basis and in a cumulative monthly amount of injection.

Q. Let's turn to a different topic now. Let me direct your attention to the Division Form C-108, which is marked as Exhibit 6, and let's go through the essential components of your compliance with that rule and with this form.

First of all, have you identified all the wellbores within a half-mile radius of each injection well?

A. Yes, we have.

Q. If you'll turn to Exhibit 7, let's talk about that in our discussion about Exhibit 6. Exhibit 7 represents what?

A. Exhibit 7 is the tabulation of all wellbores that have penetrated the McKee sand.

Q. All right. These are the area-of-review investigated wells that you researched?

A. Yes.

Q. When we look at Exhibit 7, what's the significance of the wells that are shaded?

A. The two shaded wells are illustration of the two wells that we propose to recomplete as water injection wells in the expanded area if approved.

Q. Within the area of review for these two injection wells, give us a sense of where the McKee injection interval is in relation to other zones that are being produced or have produced in the area.

A. The injection interval in Hill "D" Federal Number 1 is perforated interval 9114 to 9264, and then the E.C. Hill "B" Federal Number 20, or Number 6, the interval is 9158 to 9332.

There was at one time production from the Ellenburger. All Ellenburger has been plugged and abandoned in this field some -- many years ago.

The nearest producing interval vertically upward from the McKee sand, currently, is the lower Blinebry at a depth of roughly 5400 feet. Prior to, there was production from the Devonian at about 7500 feet, but there are no Devonian wells currently active or producing at this time.

So there is roughly 3500 to 4000 feet of vertical distance between the proposed injection interval to the upper -- nearest upper producing zone, and there are no zones producing below the McKee.

Q. After you inventoried the wellbore integrity of those wells in the area of review, what conclusion did you reach about that integrity?

A. Well, these wells offer -- one, they're there. But they offer opportunity here, because the original developer had foresight to run large casing, 7-inch casing. They served the wells well, for 40 years, and, upon abandonment of the deeper producing horizons, were successfully recompleted up the hole into other intervals. They have always complied and have been in compliance with pressure integrity testing of casing. They still are.

And what we propose to do is squeeze off the producing intervals that are either below cast iron plugs or retainers at this time, establish casing integrity and get the wells cleaned out, back to the -- into the McKee and run protected injection tubing and packers to isolate and inject.

Q. When we look at the tabulation and find the column that's got "top of cement" --

A. Yes.

Q. -- on the tabulation, if it doesn't say "calculated", how did you determine top of cement?

A. Top of cements were provided in the history of the wells by the former operator. If they're -- If we don't say "calculated", they're either by actual temperature survey or cement bond log top determinations.

Q. The Melba Goins well appears as the only one I can find that shows you made a calculation of cement?

A. That's correct, because we didn't have the information in our files, we had to use public data. So there was -- We didn't have the benefit of a chronological drilling and completion of that well. So that was not provided. So we had to calculate that based on public information --

Q. And that well --

A. -- top of cement.

Q. That well is in Section 27, in Unit Letter P?

A. Right.

Q. It would be on the northern edge of the area of review?

A. Right.

Q. Okay. Are you satisfied that that well, by your calculation, has adequate cement across the injection interval?

A. I am.

Q. Did you find any other -- Did you find any evidence that any of these wells were what we would characterize problem ones, where you have to go in and take remedial action before you commenced injection into either of these wells?

A. No, but that's always a possibility, and we are prepared to do that by -- As we drill out plugs and test, we will test the casing above each plug in our squeezed interval, to be witnessed by the OCD and the BLM.

But it's in our best interests, as well as the State of New Mexico, that we ensure that those intervals are complied.

Q. Let's talk about the surface pressure limitation --

A. Uh-huh.

Q. -- in your injection wells. The Division allows .2 p.s.i. per foot of depth to the top perforation, and then you can increase that by submitting step-rate tests, et cetera.

For the current injection wells, are you able to inject without having to increase the surface pressure limitation?

A. Yes, we're below .2 on our current injection well. And we do not see, at least this time, that there would be any requirement that would lead us to think that we would have to exceed that on the two proposed injection wells.

Q. So if the Division order, as it customarily does, limits your surface pressure to the .2 p.s.i. per foot of depth and provides an administrative means to increase that with the submittal of appropriate step-rate tests, that would be acceptable to you?

A. Yes, it would.

Q. Let's turn quickly and have you identify and then summarize briefly these schematics. They're page 3 of Exhibit Number 6, starting with the Hill "B" Federal 6.

A. Okay, the Hill "B" Federal Number 6, which was formerly the Carter 5M, is located in Unit Letter E in Section 35. It shows that they had the surface casing, 13 3/8, set at 320 feet and cement was circulated to surface.

The 9 5/8 intermediate string was set at a depth of 2906 and cemented with 1600 sacks, and cement was circulated to surface.

They drilled to a total depth of 9351 with --

drilling an 8-3/4-inch hole. They ran 7-inch casing to TD and cemented with 400 sacks.

And initially, upon initial completion, the top of cement was determined to be at 5900 feet -- I'm sorry, the initial top of cement was 6350, by temperature survey. That top has been altered with subsequent recompletions.

In other words, the well has been -- after abandonment of the McKee, was tested and produced from the Blinebry, and to isolate the Blinebry, it required recementing the 7-inch to accomplish isolation, and also it's -- in 1964, while Carter was still the operator, they had a casing leak reported which they set and cemented, with the top being, of that leak -- It's 4976. So at this point in time, we assume that the top of cement is above 4976 feet.

We will establish that in the course of our work. In fact, when we squeeze the Blinebry, our efforts will be to try to bring cement back up inside, overlapping into the 9 5/8 casing.

Q. All right, let's turn your attention to the other injection well.

A. On the "D" Federal 1?

A. Yes, sir, it's the "D" Federal 1. It's in Unit Letter H of 34.

A. Okay, it was drilled in a similar fashion, setting surface casing, 13 3/8, at 331 foot and cemented with 300 sacks, circulated cement to surface.

They set 9 5/8 at a depth of 2919, cemented with 1400 sacks, and they circulated cement within 70 feet of surface. That was determined by a temperature survey. They had adequate cement to have gotten it to surface, so when it didn't reach surface they ran a temperature survey and found it within 70 feet.

They drilled this well to a total depth, with an 8 3/4 hole, of 9290. They elected, after logging, though, to set their 7-inch to only the top of the McKee. So the 7-inch was set at a depth of 190 feet off bottom, so at about 9100 feet.

And in the 8 3/4 hole, after they drilled out the plug from the 7-inch, they elected then to run a 5-inch liner, and they cemented it in the 8 3/4 hole and completed the well in the McKee through the 5-inch liner.

This well, after it was -- its McKee production was abandoned, they subsequently moved up the hole and perforated and tested and produced the Devonian and the two different intervals in the Abo. Those were abandoned by setting cast-iron plugs or cement retainers.

Q. As part of your compliance with the requirements set forth on the Division Form C-108, did you provide me the names and addresses of the operators within a half-mile radius of the injection wells, plus the owner of the surface for each injection well?

A. Yes, we did.

MR. KELLAHIN: Mr. Examiner, Exhibit 8 represents my certificate that we have sent notice of this hearing to the parties that Mr. Sutherland has identified for me as being those for whom notice was to be sent.

Q. (By Mr. Kellahin) In summary, Mr. Sutherland, do you have an opinion as to whether the approval of this Application will afford the opportunity to recover hydrocarbons that might not otherwise be recovered?

A. Yes, in our opinion that's correct.

MR. KELLAHIN: Mr. Examiner, that concludes my examination of Mr. Sutherland. We move the introduction of Plains Petroleum Operating Company's Exhibits 1 through 8.

EXAMINER CATANACH: Exhibits 1 through 8 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Sutherland, can you identify the extent of these two federal leases for me on the map?

A. Yeah, in fact, I -- we had -- I think, in the previous hearing we submitted those. I can tell you that the New Mexico Lease LCO-34711 and New Mexico LCO-64118 is the east half of Section 34 and the southwest quarter, southwest quarter of -- southwest quarter, southwest quarter is New Mexico LCO-64118, and northwest quarter and southwest quarter and east half of the southwest is NLCO-3471.

Q. So we're only talking about two different leases here?

A. Actually, there's three leases, there's three leases, not two --

Q. Can I --

A. -- there's three leases.

Q. -- get you to, after the hearing, submit a map that shows --

A. Sure.

Q. -- the extent of these three --

A. You bet.

Q. -- leases for me? Okay.

Can you tell me about the ownership of these leases? Is this all Plains Petroleum?

A. A hundred percent Plains Petroleum.

Q. A hundred percent working interest?

A. Yes, sir.

Q. Okay. And the only royalty interest would be the federal government?

A. That's correct.

Q. Okay. Have you discussed your new proposal with the BLM?

A. Yes, Armando Lopez, who was aware of our initial efforts and subsequently was contacted and verbally gave us, on March the 4th, his opinion that the BLM would not require a unit agreement for expansion of the project.

Q. Okay. If I understood your testimony, the most prolific of the sands is the lower --

A. The lower sand, yes.

Q. -- the lowermost sand?

A. Yes, sir.

Q. That sand is in communication with the upper sand in the southern portion of the --

A. That's correct, across the fault, yes, sir. The upper sand happens to be the lowest permeability of all of the three sands.

Q. Okay. The other two sands are not in communication? The middle sand is not in communication?

A. No, that's correct.

Q. Okay. Are you, in fact, injecting water into all three zones?

A. We are.

Q. And you propose to do the same in the wells to the north?

A. Yes.

Q. Okay. I notice that in the previous hearing, back in 1995, we did qualify this for the EOR tax rate. Have we, in fact -- Have you, in fact, applied for a response to that yet?

A. No, we have not.

Q. But you -- It's your opinion that you have had a production response?

A. We have, yes, sir.

Q. Are you going to do that soon or --

A. Well, I would ask my accounting department if they -- They should do that, yes.

Q. Probably entitled to some tax breaks that you're not getting --

A. Yes.

Q. -- at this point. Okay.

Both the injection zones are currently temporarily abandoned, both of the proposed injection --

Q. Yeah, they're not active at this time, they are temporarily abandoned. And they have passed, in the last year, casing integrity tests.

Q. They have passed?

A. They have.

Q. I thought it was your testimony that you would be -- you would have to squeeze the Blinebry in that zone?

A. Yeah, but we set a cast iron above that.

Q. Oh, you did, and tested the --

A. Yeah --
Q. -- casing --
A. -- yeah.
Q. -- above that? Okay.
Is that the only zone you're going to have to squeeze in the Number 6 well?
A. In the Number 6, that's right. We've got two open zones in the D 1.
Q. Being the Devonian; is that correct?
A. The Abo and the Devonian.
Q. Abo and the Devonian.
Okay. Can you tell me which wells will be utilized as producing wells in that northern -- the northern portion?
A. Only the two new wells that were drilled by Plains, and that would be the E.C. Hill "B" Number 24, which is in the I location in Section 34, and the Baylus Cade Federal Number 7, which is in the L location of Section 35.
Q. There are additional wells that are currently nonactive in this area, are there not?
A. Not from the McKee. They've -- Either by Carter or an owner subsequent to Carter, Arch Petroleum, those wells -- if they weren't abandoned, they were recompleted into shallower horizons.

Q. So there are no other --

A. There are no other deeper zones open or available for production.

Q. Okay. I see, okay.

Do you plan any further drilling in this area?

A. No, sir. I might say, not for the McKee. There may be other drilling, but it will be for shallower horizons.

Q. Okay. And you've estimated that additional recovery as a result of pressure-maintenance operations in the northern portion of the field would be 145,000 barrels?

A. Yeah, and that's just applicable to the two producing wells I just identified.

Q. And that's -- Is that above what would be produced primary out of those two wells?

A. Yes, sir.

Q. Okay. And the 250,000, that's a pretty good estimate of the total cost that you'll be incurring?

A. Yes, we're allocating $100,000 to do all the testing and bringing the well into compliance on the Hill "B" 6, $150,000 for the Hill "B" 1.

Q. Do you anticipate any -- You don't anticipate any problems with the casing; you've already tested --

A. Well, I don't anticipate any, but I -- Go back to what I said earlier as to having 7-inch casing does afford us an opportunity there to actually run collared casing inside the 7-inch of 4 1/2 dimension and still run, you know, tools that will allow us -- you know, of convention size to isolate and perform injection with tubing of 2 3/8, which is what we propose anyway on injection.

So there is a bail-out feature by having the 7-inch.

Q. That's going to add more cost to the --

A. It would add more cost, that's right.

EXAMINER CATANACH: Okay. Do we have a copy of the published notice?

MR. KELLAHIN: There is one available, Mr. Examiner. However, the published notice is not required when we set these for hearings before you.

EXAMINER CATANACH: I notice that you did, however, publish it.

MR. KELLAHIN: Yes, sir, it was done -- In fact, I think Mr. Sutherland originally submitted this for administrative approval, and as part of that submittal it included the published notice in the newspaper. Thereafter the Division required him to present this at a hearing.

EXAMINER CATANACH: We may have that in the file, then.

MR. KELLAHIN: If you don't, I certainly can give you another copy.

Q. (By Examiner Catanach) Okay. As far as defining a project area for the EOR tax credit, you're not really affecting all of the acreage that you're adding?

A. That's correct.

Q. So we may --

A. Actually, we're talking about the south half of the northeast and northwest quarters would effectively accomplish that, because we don't feel there's any remaining recoverable with waterflood, water displacement, in the north half of the northeast quarter and northwest quarter, respectively.

EXAMINER CATANACH: Okay. I have no further questions, Mr. Kellahin. The witness may be excused.

Do you have anything further in this case?

MR. KELLAHIN: Here's a copy of the newspaper --

EXAMINER CATANACH: Okay.

MR. KELLAHIN: That concludes our presentation.

EXAMINER CATANACH: Okay, there being nothing further in this case, Case 11,368 will be taken under advisement.

(Thereupon, these proceedings were concluded at 10:05 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11368, heard by me on April 2 1998.

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 April 5th, 1998.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998