STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 10,960
APPLICATION OF MEWBOURNE OIL COMPANY	)	

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

BEFORE: WILLIAM J. LEMAY, CHAIRMAN
WILLIAM WEISS, COMMISSIONER
JAMI BAILEY, COMMISSIONER

- 2 1994

August 11, 1994

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission on Thursday, August 11, 1994, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

August 11, 1994
Commission Hearing
CASE NO. 10,960

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E X H I B I T S

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A P P E A R A N C E S

FOR THE APPLICANT:

HINKLE, COX, EATON, COFFIELD & HENSLEY
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P.O. Box 2068
Santa Fe, New Mexico 87504-2068
By: JAMES G. BRUCE

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

CHAIRMAN LEMAY: Good morning. This is the Oil Conservation Commission and my name is Bill LeMay, and with me is Commissioner Jami Bailey, representing the Commissioner of Public Lands, and Commissioner Bill Weiss.

We shall call Case Number 10,960, which is the Application of Mewbourne Oil Company for approval of a waterflood project and qualification for the recovered oil tax rate, Lea County, New Mexico.

Appearances in this case?

MR. BRUCE: Mr. Chairman, Jim Bruce from the Hinkle law firm in Santa Fe, representing the Applicant.

I have one witness to be sworn.

CHAIRMAN LEMAY: Thank you, Mr. Bruce.

If the witness will please stand and raise his right hand.

(Thereupon, the witness was sworn.)

CHAIRMAN LEMAY: You may continue -- Or you may start, Mr. Bruce.

MR. BRUCE: Mr. Chairman, members of the Commission, in a companion case at the Division level, 10,959, Mewbourne Oil Company statutorily unitized approximately 1400 or 1500 acres of land for a Queen formation waterflood.

In Case 10,960 -- and I've given each of you a copy of the Order, R Number 10,151, issued in that case -- Mewbourne sought approval of its waterflood project for the unit and also application for the recovered oil tax rate.

The order in front of you generally granted Mewbourne's request, but it did deny three of Mewbourne's specific requests.

Number one, Mewbourne had requested unlined tubing. That was denied.

Item number two, Mewbourne had requested injection pressures, initial injection pressures, in excess of the standard .2 p.s.i. per foot, which the Division normally imposes on injection wells.

And thirdly, Mewbourne had sought to limit remedial work on certain wells in the area of review of the injection wells.

Mewbourne no longer requests relief regarding the injection pressures; it will abide by the Order. And it has also agreed to do certain remedial work on the wells in the area of review. So those two are no longer at issue.

Today we are only here seeking for approval for unlined tubing for the injection program. And with your permission I would only have Mr. Mayes, our witness, testify as to the need for unlined tubing and limit testimony to that issue.

Of course, if you have any other questions on the waterflood itself, we'd be glad to have Mr. Mayes testify on those issues.

CHAIRMAN LEMAY: Fine. It's my understanding and that of the Commission that all aspects of the Order were acceptable except for that one issue --

MR. BRUCE: One issue.

CHAIRMAN LEMAY: -- that we're here to re-hear, which is the one requesting you to plastic-line the tubing on injection well.

MR. BRUCE: That's correct.

CHAIRMAN LEMAY: Okay, please proceed.

KEVIN MAYES,

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

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Mr. Mayes, would you please state your name and city of residence for the record?

A. Yes, my name is Kevin Mayes, and I reside in Tyler, Texas.

Q. And have you previously testified before the Oil Conservation Division or the Commission as an expert petroleum engineer?

A. Yes, I have.

Q. Are you the person who is in charge of engineering matters related to the proposed waterflood operation?

A. Yes, I am.

Q. And are you familiar with all matters related to the issue today, the unlined tubing?

A. Yes, I am.

Q. And what is your position at Mewbourne Oil Company?

A. I'm project manager for the Querecho Plains waterflood installation.

Q. And do you also perform similar functions with respect to other waterfloods for which Mewbourne is the operator?

A. Yes, I do.

MR. BRUCE: Mr. Chairman, is the witness considered acceptable?

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. (By Mr. Bruce) Mr. Mayes, would you first identify Mewbourne's Exhibit 1 and discuss the corrosion rates observed over the past nine months at the Querecho Plains injection facility?

And to preface this, underlying the proposed Queen waterflood there is a Bone Spring waterflood operated

by Mewbourne Oil Company. Approval for that waterflood was granted about a year ago, and basically the same facilities will be used for both waterfloods, and therefore Mewbourne does have some experience, that nine months of experience of injection already.

Go ahead, Mr. Mayes.

A. Does the Commission understand that these two reservoirs underlie the same geographic area and the Queen is a shallower area and the Bone Springs a deeper formation?

CHAIRMAN LEMAY: (Nods)

THE WITNESS: But we have a waterflood that has been in operation in the Bone Spring for nine months, and we are about ready to start this Queen waterflood. The injection facilities on the surface are going to supply both of these waterfloods. Okay? All right.

Okay. Exhibit Number 1 is a letter with attachments that I sent to Hearing Examiner Morrow on July 27th, 1994. Mr. Morrow was the Examiner of record for Order Number 10,151. This letter was sent to document three things:

One, that the subject water system will supply both the ongoing Querecho Plains-Bone Spring waterflood and the upcoming Queen waterflood, which is the topic of today's hearing.

Number two, the system already contains a large percentage of produced water that is supplying the Bone Spring flood.

And three, the corrosion rates associated with this system have been exceptionally low over the past nine months.

Q. (By Mr. Bruce) Mr. Mayes, let me interrupt.

Now, the Bone Spring, the underlying Bone Spring waterflood, that does have approval for unlined tubing; is that correct?

A. That's correct.

Q. Go ahead.

A. We've numbered the pages of this exhibit so that we might quickly go through them page by page.

Pages 1 and 2 are simply the text of the letter, and I'll leave that to your reading enjoyment.

Pages 3 through 13 contain a copy of Order Number R-10,151, and I'd like to refer the Commission to page 6, if I could. Finding 13 on that page is the finding associated with the --

Q. That's page -- ?

A. Is it page 6, Jim?

Q. It's page 4 of the Order itself.

A. Okay, page 6 of the letter with its attachment, page 6 of the exhibit.

Finding Number 13, I believe, is at the bottom of that page, and that's the finding that deals with whether to coat the tubing or not to coat the tubing.

And the second sentence of that finding states or infers that the produced water is going to be more corrosive than the fresh water that is being supplied to our flood by the City of Carlsbad.

As we go on through the attachments of this letter, the last two attachments are going to be plots of corrosion rate versus time, and we're going to see one point on those plots that's significantly higher than the other points. And what we hypothesize caused that higher corrosion rate was actually dissolved oxygen in the fresh water being supplied from the City of Carlsbad.

So I just bring this to the Commission's attention because to make the statement that our produced water was going to be more corrosive than our fresh water is a little misleading, and it may be a little inaccurate.

Anyway, to continue, pages 14 through 16 of the exhibit are excerpts from the transcript from our first hearing in this case, which occurred on April 28th, 1994, which discusses the merits of not coating the tubing and was supplied for Mr. Morrow's convenience.

Now, to get on to more of the meat of the matter, pages 17 through 22 of the exhibit are monthly injection

reports for the existing Querecho Plains-Bone Spring waterflood. Again, this same water is going to supply the Queen waterflood whenever it started up.

At the bottom of these reports are the sources of the waters coming into the system. The Double Eagle water is the source of fresh water supplied by the City of Carlsbad, and the, quote, QPBSSU, is the Bone Spring-produced water that's being recycled through the system. All other waters are Delaware-produced waters that are coming in from various other operations in the area.

As can be seen on page 17, during the month of June, only 34 percent of the water going through the system was fresh, and the corrosion rate associated with this period was less than .5 mils per year, as will be shown in the upcoming attachments.

Let me repeat that. That's a half of one mil per year corrosion rate. That's exceptionally low.

If we can go on, page 23 is an analysis from January, 1993, on the Government K Number 2 Well, showing a corrosion rate of 1.68 mils per year. This was taken when we were testing the injectivity of the Bone Spring. We hadn't even unitized the Bone Spring yet. We were just testing that reservoir for injectivity, and we were using 100-percent produced water to run that injectivity test with.

Q. From what formation?

A. It's Delaware formation water, produced water. And that's where we -- and that was -- The bulk of our testimony at the Bone Spring hearing to obtain permission for unlined tubing was obtained from this 1.6 mils per year.

So the Division allowed us uncoated tubing based on corrosion rates of 1.6 mils per year, and now we have corrosion rates of .5 mils per year, and the Division is requesting us to coat our tubing.

To move on to the final two attachments, pages 24 and 25 are the plots we've discussed of corrosion rates versus time at two locations on the system. Again, note that in June of 1994 we had less than .5 mils per year corrosion rate.

And as stated in the text of the letter, if the average corrosion rate from all these corrosion analyses is extrapolated over the life of our Queen waterflood, the tubing wall thickness is going to stay within API specifications.

And I've brought along a little show-and-tell for you guys to kind of let you visualize what you're talking about here. Now, I might want to pass these around to you guys, but I have some feeler gauges, and what I want to show you is, this group of feeler gauges as a group

represents the tubing wall thickness of 2-3/8-inch tubing as it's supposed to come out of the factory.

Q. How thick is it, approximately?

A. It is .20 inches.

And then the next exhibit that we have, Exhibit 1A, is a copy of the page from the API specification booklet, and approximately two-thirds of the way down the left-hand side, at the bottom of that column of text, is a statement that the API will allow manufacturers to ship tubing, even if the pipe wall thickness is missing 12.5 percent. Okay?

So this is the tubing wall thickness on 2-3/8-inch tubing, and this is the accuracy that API will allow them when they ship new pipe. And again, we probably want to pass these around so you can get a better look at them. Okay.

Now, if we extrapolate our corrosion rates over the life of the Queen flood, we're talking about eight mils of metal lost to the tubing, and that's this feeler gauge. So here's what the API will allow manufacturers, and here's the amount of corrosion we're expecting over the life of our Queen waterflood.

Q. So it would still qualify as API new tubing?

A. New tubing, yes, sir, it would.

If you gentlemen want a closer look at these,

I'll be more than happy to pass them around to you, or if not we can move on to the next set of exhibits.

MR. BRUCE: Okay --

CHAIRMAN LEMAY: They're going to be included in the record, are we?

THE WITNESS: Well, we weren't going to --

MR. BRUCE: We can, but they're hard to mark, Mr. LeMay.

THE WITNESS: If you would like, we certainly can.

Q. (By Mr. Bruce) Mr. Mayes, why don't you move on to Exhibit 2 and discuss the corrosion inhibition program which you are using out there right now and which you intend to continue to use.

A. All right. Exhibit Number 2 is an outline of the corrosion inhibition company that Mewbourne Oil Company as the operator of the subject facilities has in place.

The outline states Mewbourne is treating and has been treating the water with from one to two gallons of chemical per thousand barrels of water during the past nine months. It is Mewbourne Oil Company's intention to continue treating the water with concentrations of chemical it deems necessary to keep corrosion rates at their current low levels. The chemical being used is a water-soluble, film-building amine-based product. This product actually

builds a film on the pipe wall that inhibits corrosion.

Q. Would you then move on to Exhibit 3 and discuss the life of your proposed Queen waterflood?

A. Exhibit 3 is a plat of the Querecho Plains area. The bold dashed line represents the unit boundary for the Queen unit. And in order to keep the confusion at a minimum concerning the short life of this flood, the numbered arrows represent three locations where injection has already occurred into the unitized formation.

The number 1 location is where a casing leak caused dump-flooding of fluids into the Queen from September of 1987 to July of 1990, i.e., three years of injection.

Location number 2 was an inverted five-spot lease flood where injection occurred only 330 feet south of the unit boundary from November of 1976 to March of 1986, i.e., ten years of injection.

Location number 3, an existing pressure maintenance project with injection occurring in the southeast quarter, southeast quarter if Section 21 from December of 1991 to the present, i.e., three and a half years of injection.

As a result, our Querecho Plains-Queen waterflood is designed merely to augment the injection which has already occurred. And as noted before, our waterflood is

estimated to have a life of five and a half years.

Q. Fairly short life?

A. That's correct.

Q. Would you then move on to Exhibit 4 and discuss the tubing failure rates in offsetting or surrounding Queen injection projects?

A. Exhibit 4 is, again, a plat of the Querecho Plains unit and the surrounding area. Numbers 1 through 5 are locations where injection has occurred.

Number 1 is the Pearsall-Queen waterflood, installed by Anadarko and operated by Larue and Muncy since 1984. In talking to C.E. Larue, said waterflood has never been plastic-coated, and they do not have excessive tubing failure rates, and they do not treat with an excessive amount of chemicals. And reviewing the NMOCD files since 1981 when records were kept, the Pearsall waterflood has had injectors fail mechanical integrity tests seven times.

Location number 2 is the Young-Queen waterflood, operated by Yates Petroleum since 1984. And per Yates Petroleum, Newmont Oil, the initial operator, did plastic-coat all the injectors. Yates does not experience excessive failures and does not use excessive amount of chemical. However, in reviewing the NMOCD files since 1981 again, their injectors have shown failure of mechanical integrity tests on five occasions.

Location Number 3 is the Anadarko federal lease flood, which was installed by and operated by Lewis Burleson. And per conversation with Lewis Burleson representatives, they injected through uncoated pipe for ten years before they had a tubing leak. This is verified in the NMOCD records again. And of note, the injection was discontinued at that location at that time.

Location Number 4 is an abandoned Cinco de Mayo lease flood, installed and operated again by Lewis Burleson. Well, actually it's now operated by BTA, even though the injector is plugged. This injector was plastic-coated, and there were no failures of mechanical integrity tests in the records.

Location Number 5 is the French 9004 JV-P Number 3 Well, operated by BTA as a water disposal well. This well actually disposes of Wolfcamp-produced water. And I have no conformation on this, but BTA suggests to me that this water is more corrosive than Queen or Bone Spring or Delaware waters. But it's interesting in that it was installed in July of 1992, it was ceramic- -- the tubing was ceramic-coated and the packer was nickel-coated, and that well just had to be pulled recently, after two years of operations, due to a tubing collar leak.

Q. So based on what you've seen, there's really no correlation between failure rates and whether the tubing is

unlined or lined?

A. That's correct.

Q. Would you summarize Mewbourne's request?

A. Yes, in summary, Mewbourne requests that the Commission reverse the portions of Order R-10,151, requiring plastic-coated tubing, based on:

One, the waters used in the source system are already composed of a significant amount of produced water.

Two, the corrosion rates associated with that system over the last nine months are minimal, and the tubing should stay within API specifications throughout the life of the Queen waterflood.

Three, Mewbourne has and will continue to treat the water with corrosion inhibitors.

And four, the offset operations suggest that lining your tubing or not lining your tubing has a minimal effect on tubing failures.

Q. Were Exhibits 1 through 4 prepared by you or under your direction?

A. Yes, they were.

Q. And in your opinion, is the granting of Mewbourne's request in the interests of conservation and the prevention of waste?

A. Yes, it is.

MR. BRUCE: Mr. Chairman, I move the admission of

Exhibits 1 through 4.

CHAIRMAN LEMAY: Without objection, Exhibits through 4 will be admitted into the record.

MR. BRUCE: And I have nothing further of Mr. Mays at this time.

CHAIRMAN LEMAY: Questions? Commissioner Bailey?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. One of your key points is that the Queen waterflood has such low corrosion rates. Do you expect -- Has that injection volume stabilized, or was that still during fill-up?

A. Okay, the Queen -- We have not injected anything into the Queen yet. All the injection has occurred into the Bone Springs.

Q. Okay, in the Bone Springs.

A. Yes. Yes, those rates, they started out at about 10,000 barrels per day, and have declined down to 2500 barrels per day at this point.

Q. So when these charts were done, were they in the 2500-barrel-per-day or were they still in the 10,000?

A. Well, they vary. As far as the dates on the plot of corrosion rates versus time? Is that your question?

Q. My question is, is this a valid comparison between what the Queen injection rates would be, as opposed

to the Bone Spring injection rates?

A. Yeah, the Queen injection is going to be lower than the Bone Spring injection. In other words, the Bone Spring, through 13 injection wells, started out at 10,000 barrels per day; and the Queen, through 10 injection wells, is estimated to start out at 4000 barrels per day.

Q. Okay. The Bone Spring started out at 10,000. During the period from May of 1994 to July of 1994, what rate of injection was going on?

A. The May to June [*sic*], 1994, period I would estimate we were injecting from 3000 to 3500 barrels of water per day into the Bone Spring.

Q. And for the Queen you would expect it to go -- What did you say?

A. It should initiate at 4000 barrels per day and decline down to 2000 barrels per day, probably in the first year.

Q. So there is a significant difference.

The amine chemical that's used as the corrosion inhibitor forms a film. Does this film plug up the perfs, that you would have to go back in to clean out that film, or --

A. No. No, it does not. What it does, it will coat the sand grains to some degree after it gets through the perfs and out into the reservoir, but it's not enough to

degrade injectivity.

COMMISSIONER BAILEY: I have no further questions.

CHAIRMAN LEMAY: Thank you, Commissioner Bailey.

Commissioner Weiss?

EXAMINATION

BY COMMISSIONER WEISS:

Q. Yeah, I would just offer a comment here. I have a couple questions too.

But on your -- The corrosion rates, they're based on an average over an area; is that correct?

A. Well, they're based on corrosion coupons.

Q. And it's the weight loss over the entire area? I guess you could have a hole right in the middle of it, of a corrosion coupon, and skill have a very low rate?

That's the famous story of the statistician, drowned in the three-inch river.

A. I'm not a corrosion coupon expert, but I'll say this: The way that is calculated, the mils per year is based on the density of the material the corrosion coupon is made out of and the weight loss of the coupon.

Q. Right, but it's over the entire coupon?

A. It's over the entire coupon.

Now, I've called up the contractor that handles our corrosion coupons for us, and I've asked him, you know,

what does the physical appearance of the coupon look like after you pull it out?

And he says that you can barely notice a difference from the original coupon when you put it in.

So that's the statement I would offer.

Q. Okay. It wasn't clear to me: Is the fresh water mixed with the salt water?

A. Yes, it is.

Q. And -- Okay. And then you had on Exhibit -- the last one, Exhibit -- this one.

A. Uh-huh, 4.

Q. -- 4, yeah, you have these different casing leaks. Was that -- What were the casing leaks due to? Was that exterior to the casing or interior, or what causes the casing to fail?

A. I don't believe I testified that they were casing leaks.

Q. Oh, I thought I understood that.

A. No, what I --

Q. The dump flood business.

A. Oh, okay, I'm sorry, I apologize. That's Exhibit 3. That's location number 1 of Exhibit 3.

Q. Okay.

A. We do not operate that well, so I don't know exactly the circumstances behind that casing leak. It

occurred at 760 feet, which is across from known salt deposition.

Q. There's salt at 760 feet?

A. Yes, there is.

Q. Is it the same at the others, roughly?

A. Yes.

Q. Locations 1 and 2?

A. Yeah, you cut salt out at the Querecho Plains location -- Oh, goodness, I'm not for sure. But you cut a large amount of salt from 750 feet down to -- oh, I'll throw out 1000 feet as a number. I'm not sure about that number, but --

Q. But the dump floods that occurred at locations 1, 2 and 3 on Exhibit 3 were due to this salt corrosion or something?

A. Okay, now the casing leak and the dump flooding only occurred at location 1. Locations 2 and 3 were actual injection operations.

Q. Ah. Was the casing leak repaired in number 1?

A. Yes, it was, in July of 1990.

Q. Is there any evidence of that casing leak resulting in harm to the fresh water in the area?

Or, more importantly, is there any fresh water?

A. There is strata that is -- I believe it's classified as containing possible potable water down to 700

feet.

However, in my testimony the first time around on this case, there were four wells drilled to try to complete a freshwater well from those strata, and they were all dry.

So to answer your question, no, we don't feel like there's fresh water in there.

Q. And then this casing leak --

A. This casing leak, the situation behind that was, there was an intermediate string or a surface string of casing that was set across the fresh water and had cement completely circulated to surface, so this casing leak should not have contaminated -- even possibly contaminated the fresh water.

Q. And these four wells that were drilled for fresh water were in the area of the casing leak?

A. That's correct.

Q. And they found no water?

A. That's correct.

COMMISSIONER WEISS: No more questions. Thank you.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. A couple here, Mr. Mayes. Are you familiar that our division rules historically have required plastic lining of tubing on injection wells?

We looked at some other floods, Caprock, Queen. We've had lots of waterfloods in New Mexico.

A. Yes, sir.

Q. Do you know of any cases where we've not authorized plastic-coated tubing?

A. Certainly, the Querecho Plains-Bone Spring.

Q. I said Queen floods.

A. Oh, Queen floods. Yes, sir, the -- Well, I have the Division orders on the Pearsall flood, which we talked about today. It was on -- It's Exhibit 4, location 1, and there's -- Now, of course, these Division orders are vintage 1965, and of course no mention is made of having plastic-coated tubing at that time.

And like I say, they did not plastic-coat out there, and there was, you know, similar failure rates to Queen waterfloods that did plastic-coat.

Q. Have you looked at any other besides the Pearsall Queen floods that have been authorized? Caprock Queen, Mesa, Platform Queen, BK Queen? There's a whole bunch of them that have been authorized.

A. Right. No, these are the only four that I really -- or four or five that I really pursued, being that they were in the immediate area.

One comment I would make is, is the Burleson Anadarko federal Queen lease flood, which is on Exhibit 4

-- it's location 3, I believe, down south of our Queen unit -- that was a single injection lease flood, single injector.

And the way the Division order is phrased on that injection is that as long as fresh water was being injected, you would not require plastic coating. But whenever produced Queen water was recirculated and injected, at that time you would be required to plastic-coat.

Q. Your source of water indicates it would be the same source, I assume, as the Bone Spring flood?

A. That's correct.

Q. But what happens when you recirculate the Queen water? Won't that change the composition so that you're introducing Queen water into the injection composition?

A. Yes, we will. It is our belief, however, that -- The maximum amount of produced water we anticipate out of our Queen flood is 500 barrels per day, and we feel like it will be so diluted by the Bone Spring and Delaware produced waters that the corrosion rates -- we will be able to keep the corrosion rates low through chemical treating, even if the Queen does prove to be corrosive, which, going back to the Anadarko federal lease, they injected with uncoated tubing for ten years before they had their first tubing failure, and that was strictly -- you know, started out

with fresh water and then cycled Queen water over ten years before they have a tubing failure.

So that would lead one to believe that this Queen water is not that corrosive.

Q. You indicated your life of the flood was something like five and a half years?

A. Five and a half years, yes, sir.

Q. That's not typical of all the Queen floods. That's about a third the life of most floods I'm familiar with.

A. That's correct, and that's why I wanted to pursue Exhibit 3 with you where I talked about -- You know, we've had so much energy pumped into this reservoir from the three locations we talked about, where injection has already occurred into the unitized formation.

The shortest period of injection was that dump flood of water which occurred over three years. One could almost extrapolate that onto the end of our five and a half years and say we're talking about an eight-and-a-half-year flood at least, if not more than that, due to the energy that's already been pumped into the reservoir.

Q. How much would it cost you to plastic-coat tubing? Buck and a half a foot?

A. A buck and a half a foot is a good estimate, yes, sir.

Q. So it's a sizeable savings if you're --

A. Yes, sir. We're looking at ten injectors at 4000 feet, approximately, per injector. So yes, sir, it is a sizeable savings.

Q. The Querecho Plains order, did the order authorize you relief from plastic-coated tubing, or did it leave that with the discretion of the district supervisor?

A. It released us from requiring plastic coating.

Q. In the event that you -- Is Mewbourne prepared to shut her down after five and a half years because of corrosion in the event you're still making pretty good oil out there, or what? What happens in five and a half years?

A. I don't think I --

Q. Will you plastic-coat the tubing if you want to go longer?

A. I think if the economics dictate that plastic coating is the prudent thing to do at that point, we would plastic coat, yes, sir.

Q. Economics or potential contamination? Economics is a kind of a broad category. You might only get 10 percent on your money instead of 25 percent.

A. I guess I see those subjects as being pretty well closely hand in hand. If we're going to get shut down for potential contamination, then that's justification to plastic-coat.

Q. What kind of safeguards could you offer the Commission if we granted you relief from plastic coating? What kind of testing or monitoring could you perform so we could detect any leaks if and when they occur?

A. Well, that's -- And of course, that's also stipulated in the Order. We will follow state rules, all the 700 state rules, which require us to circulate an inert fluid into the tubing casing annulus and inject under a packer, to monitor that fluid that's in the tubing annulus, and make sure it doesn't escape from that annulus, i.e., we will monitor the pressure on the Bradenhead of that annulus.

I'm trying to remember some of the other rules.

Basically, if -- And of course, we've got to go and out and run mechanical integrity tests where we tie into that tubing casing annulus at the Bradenhead and apply -- I believe it's 500 p.s.i. of pressure to that annulus and make sure the tubing casing and packer are not failing.

At any time if we see pressure on that Bradenhead, due to a packer leak, tubing leak, casing leak, we must immediately shut down injection, report to the Hobbs Division Office and repair that leak before we continue to inject.

Q. Do you really think you'll be out of there in five and a half years?

A. We hope to be, I'll put it that way, yes, sir.

CHAIRMAN LEMAY: Additional questions of the witness?

COMMISSIONER WEISS: Yeah, I have one.

Commissioner Weiss?

FURTHER EXAMINATION

BY COMMISSIONER WEISS:

Q. How often do you run the integrity test?

A. You run one when you first put the injection well on, and then according to the regulations you run one every five years after that.

COMMISSIONER WEISS: Okay. You'll be out of there before you run your second test.

COMMISSIONER BAILEY: One more.

CHAIRMAN LEMAY: Commissioner Bailey?

FURTHER EXAMINATION

BY COMMISSIONER BAILEY:

Q. Have you located freshwater wells in the vicinity of this unit so that we would know how far away any freshwater wells are?

A. We were obligated to search the area two miles around our unit boundary at our initial hearing, and we did not find any freshwater wells in that two-mile area around the unit boundary.

Q. Including windmills?

A. Yes, ma'am. Basically, I call the State Engineer's Office and he gives me a report of every freshwater well that has been attempted within that two-mile area, and I go pull those records and review them. And all of them have been dry and plugged and abandoned.

MR. BRUCE: Commissioner Bailey, the underlying Bone Spring unit is a larger unit than the Queen unit, so actually a larger area was searched even for that application last year. So, you know, of greater areal extent.

CHAIRMAN LEMAY: Commissioner Weiss?

FURTHER EXAMINATION

BY COMMISSIONER WEISS:

Q. Speaking of the Bone Springs unit, you put some water in it for how long? Nine months now?

A. Nine months.

Q. Have you had an oil response?

A. No, actually we had a water breakthrough response, which we're wrestling to reconcile at this point. Apparently we have a small feed zone in the reservoir.

But no, we have not seen any oil response.

COMMISSIONER WEISS: No other questions. Thank you.

CHAIRMAN LEMAY: Additional questions? If not, the witness may be excused.

Thank you very much, Mr. Mayes, for your testimony.

And thank you, Counsel, for a short, concise hearing, short of even a coffee break here.

(Thereupon, these proceedings were concluded at 9:40 a.m.)

* * *

CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Commission 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 August 15, 1994.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1994

NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 11, 1994 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Maurice Trimmer	R.W. Byram	SF
James Bruce	Hatch Cow Basin	"
Kevin Mayes	Mewbourne Oil	Tyler, TX