STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASES 10,763, 10,794

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corporation for a unit agreement, Lea County, New Mexico

Application of Yates Petroleum Corporation for approval of a waterflood project, Lea County, New Mexico

ORIGINAL

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

August 12, 1993

A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL
Attorney at Law
Legal Counsel to the Division
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

CAMPBELL, CARR, BERGE & SHERIDAN, P.A.
Attorneys at Law
By: WILLIAM F. CARR
Suite 1 - 110 N. Guadalupe
P.O. Box 2208
Santa Fe, New Mexico 87504-2208

* * *

I N D E X

* * *

E X H I B I T S

APPLICANT'S EXHIBITS:

* * *

WHEREUPON, the following proceedings were had at 10:16 a.m.:

EXAMINER CATANACH: Call the hearing back to order at this time, and we'll call Case 10,763, which is the Application of Yates Petroleum Corporation for a unit agreement, Lea County, New Mexico.

Are there appearances in this case?

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

I represent Yates Petroleum Corporation in this case.

Mr. Examiner, in this case Yates seeks approval of a voluntary unit agreement.

Case 10,794 on your docket is the Application of Yates for a waterflood project in the same area.

Accordingly, we would request that the two cases be consolidated for the purpose of hearing, Case 10,763 and 10,794.

EXAMINER CATANACH: Okay, at this time let me call Case 10,794, Application of Yates Petroleum Corporation for approval of a waterflood project, Lea County, New Mexico.

Are there additional appearances in either one of these cases?

MR. CARR: I have two witnesses to be sworn.

(Thereupon, the witnesses were sworn.)

JANET RICHARDSON,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. Janet Richardson.

Q. Where do you reside?

A. Artesia, New Mexico.

Q. By whom are you employed?

A. Yates Petroleum Corporation.

Q. And in what capacity?

A. As a landman.

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

A. Yes, I have.

Q. Are you familiar with the Application filed in each of these cases?

A. Yes.

Q. And are you familiar with the proposed Sanmal Queen Unit?

A. Yes.

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

EXAMINER CATANACH: They are.

Q. (By Mr. Carr) Ms. Richardson, would you briefly state what Yates seeks with this Application?

A. Yes, we'd like to seek approval of the Sanmal Queen Unit agreement. It's a voluntary secondary recovery unit which contains about 440 acres of State land in Lea County, New Mexico.

And we also seek approval of a waterflood project in this unit.

Q. Have you prepared exhibits for presentation here today?

A. Yes, I have.

Q. Would you identify and review for Mr. Catanach what has been marked Yates Number 1?

A. Yes, Exhibit Number 1 is the unit agreement for the development and operation of the Sanmal Queen Unit area.

This is a state form for voluntary unit.

The Queen horizon is being unitized within this unit agreement, and that is in the Sanmal Queen Pool.

All wells are drilled so it's not exploratory

exhibit or and exploratory unit.

Q. All right. Let's go to what has been marked Yates Exhibit 2. It's also Exhibit A to the unit agreement. Would you identify and review that for Mr. Catanach?

A. Yes, Exhibit A to the unit agreement is the plat showing the area which we propose to unitize. It contains three state leases, and you can tell by the different cross-hatching that they're three different leases.

Q. Let's move now to Yates Exhibit Number 3.

A. Exhibit Number 3 is a schedule of the ownership.

The first page shows the working interest owners and royalty owners, and the second page shows the same three tracts, only as to how it's been proportioned out due to the formula which is in the unit agreement.

Q. All tracts are leased to Yates Petroleum Corporation?

A. Yates Petroleum Corporation and its co-owners.

Q. Has all acreage been committed to the unit?

A. Yes, it has.

Q. Has the Commissioner of Public Lands given

his preliminary approval to the unit agreement at this time?

A. We have a verbal approval from the State Land Office.

They have requested additional information, which we are providing. We have submitted a preliminary approval letter, and as soon as we get it approved by the State, we will submit it to the OCD.

Q. Is Yates requesting to be designated operator of the unit?

A. Yes.

Q. Does the unit agreement provide for periodic filing of plans of development --

A. It --

Q. -- or plans of operation?

A. Yes, it provides for a plan of operation to be filed periodically.

Q. And at the time these plans are filed with the Land Office, will they also be filed with the Oil Conservation Division?

A. Yes, they will.

Q. Will Yates also call an engineering witness to review the portion of the Queen Formation involved in this case and also explain the waterflood portion of the case?

A. Yes.

Q. Were Exhibits 1 through 3 either prepared by you or compiled under your direction?

A. Yes.

MR. CARR: At this time, Mr. Catanach, we move the admission of Yates Petroleum Corporation Exhibit 1 through 3.

EXAMINER CATANACH: Exhibits 1 through 3 will be admitted as evidence.

MR. CARR: And that concludes my direct examination of Ms. Richardson.

EXAMINATION

BY EXAMINER CATANACH:

Q. Ms. Richardson, does the unit agreement state that it's only the Queen formation being unitized?

A. Yes, it does.

On the first page, after the -- On the first page down, it's Section 2, paragraph (d), and it describes the unitized formation.

Q. Okay. Have all of the working interest owners executed a copy of -- executed the working interest -- I mean, the unit agreement?

A. The copy that I have submitted is executed by all except John A. Yates and S.P. Yates, and I believe that they have that executed now. It wasn't when I

came up yesterday, but they were getting the original signed.

Q. John A.?

A. Yes, Yates.

Q. And S.P.?

A. S.P. Yates.

Q. Will you be submitting that as an additional exhibit whenever you get that?

A. Yes.

Q. Who have you talked to with the State Land Office?

A. I believe they've been talking with Pete Martinez.

Q. Okay. You mentioned that you had a verbal. Is that verbal from Mr. Martinez?

A. Yes, with the conditions that we would submit the extra information they wanted.

Q. Do you anticipate the State Land Office will approve the unit?

A. Yes.

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

MR. CARR: That concludes my examination of this witness.

At this time we would call Carolyn Yates.

CAROLYN BULOVAS YATES,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. Carolyn Bulovas Yates.

Q. How do you spell your middle name?

A. B-u-l-o-v-a-s.

Q. By whom are you employed?

A. By Yates Petroleum.

Q. And in what capacity?

A. As a petroleum engineer.

Q. Have you previously testified before this Division?

A. No, I have not.

Q. Could you summarize your educational background for Mr. Catanach?

A. Yes, I received a BS in chemical engineering from Texas A&M University in August of 1982.

Q. Following that, could you summarize for the Examiner your work experience?

A. Immediately after graduation, I started work for Shell Oil Company in Houston, Texas, and that would

be in August of 1982. I worked for them until December of 1987.

While I was there, I was in two capacities as -- one being a chemical engineer, which was followed by doing petroleum engineering work, about half and half, two and a half years or so in each capacity.

And then I started work for Yates Petroleum in May of 1988, as a petroleum engineer.

Q. Does the geographic area of your responsibility for Yates include the portion of southeast New Mexico that's involved in this case?

A. Yes, it does.

Q. Are you familiar with the Applications filed in each of these consolidated cases?

A. Yes, I am.

Q. And are you familiar with the proposed Sanmal Queen Unit and the waterflood project that is proposed for that unit?

A. Yes, I am.

Q. Have you made an engineering study of the area involved in this case?

A. Yes, I have.

MR. CARR: At this time, Mr. Catanach, we tender Mrs. Yates as an expert witness in petroleum engineering.

EXAMINER CATANACH: Ms. Yates is so qualified.

Q. (By Mr. Carr) Could you refer to what has been marked as Yates Exhibit 2, which was previously referred to by Mrs. Richardson, and using this exhibit, review generally what Yates is proposing as a waterflood project for the unit area.

A. We're proposing to unitize the area that's in the darker hatched area, and there are ten wells in that area. We propose to use three of the wells as injectors and seven as producers.

Currently, the wells in this area, in this proposed unitized area, produce 1020 barrels of oil per month.

The three wells we propose to use for injectors are on the southeast portion of this proposed unit.

The reason we're doing that is because we have a water leg to the southeast, and we plan on injecting water so that we would flood the oil to the other portions of the field where the producers are, in a downdip water injection.

And the trapping mechanism is basically stratigraphic on the other three sides with the water leg being on the southeast side.

Q. Now, the pool that we're talking about is actually larger than the project area, is it not?

A. The field itself is. We are only encompassing the ten wells which you see.

There are six additional wells, three of which are operated by Mack Energy and three by Yates Petroleum, which are not in the area of the unit.

Q. And Mack Energy was given an opportunity to voluntarily participate in this effort, were they not?

A. Yes, in 1991 we made an effort to unitize the larger -- the complete field. At that point they did not care to enter into a unit.

We offered to buy their interest. They were not interested in doing that.

So we're trying to proceed with developing the reserves in this area by forming this unit.

Q. And Mack Energy is aware of Yates' plans to waterflood in this pool?

A. Yes, they have been alerted.

Q. Now, this Application addresses two injection wells. There are three indicated on Exhibit 2. Could you explain why there is that discrepancy?

A. Yes, the well that's in the northeast of the southeast of Section 1 is an existing disposal well. It's been approved for injection by SWD-402.

Q. And the way you will operate that well as part of the project is consistent with the approval previously obtained by SWD-402; is that correct?

A. That is correct.

Q. Could you identify what has been marked as Yates Petroleum Corporation Exhibit Number 4?

A. Yes, it's the completed C-108 form with all its attachments.

Q. Exhibit Number 4?

A. I'm sorry, Exhibit Number 5.

Oh, 4, excuse me. That is the actual administrative order, SWD-402.

Q. And that approved the one well that is not covered by the C-108?

A. That is correct.

Q. And the C-108 is what is marked Exhibit Number 5?

A. That's correct.

Q. All right. Let's go to that now, and I would ask you first of all to just identify for Mr. Catanach the formation into which you propose to inject, and I'm talking here about the actual injection interval.

A. The actual injection interval is from about 3762 to 3782.

Q. Okay, let's go to what is numbered pages 9

and 10 in Yates Exhibit Number 5, and I'd ask you to identify what is shown on those pages and then review the information for the Examiner.

A. The information is -- it shows -- It's a leased ownership, and it shows -- The larger circle shows the two-mile radius surrounding each injection well.

The smaller circle would be a half-mile radius around each proposed injection well, which would be considered the area of review for both proposed injection wells.

Q. Does this exhibit identify all the wells within the area of review which have in fact penetrated the injection zone?

A. Yes, it does.

Q. And where is that located in Exhibit 5?

A. The area of review?

Q. The wells that are within the area of review.

A. It's in the smaller circle.

Q. And are pages 11 through 13 a tabular presentation of information on each of the wells within either of the areas of review indicated in this exhibit?

A. Yes.

Q. And this contains all the information

required by OCD Form C-108 for each of these wells?

A. Yes, it does.

Q. Are there plugged and abandoned wells within either of the areas of review?

A. Yes, there are three plugged and abandoned wells.

Q. And are there summaries and schematics on these wells contained in Exhibit Number 5?

A. Yes.

Q. Are the schematics set forth on pages 14 through 16 of this exhibit?

A. Yes, they are.

Q. Have you also included tabular information on these wells in the tables that are included on pages 11 through 13?

A. Yes.

Q. Have you reviewed this plugging data on these wells, and can you confirm that they are adequately plugged so that they will not become a cause of migration out of the injection interval?

A. Yes, they all appear to be adequately plugged.

Each schematic -- You can look at the LC Harris State Number 1. It had -- Its TD is to 11,733, but it's perforated at 11,654 to 11,653. Those

perforations have cement across them.

There are, in addition, three open-hole cement plugs, 25 sacks each, and then there were perforations in the 5-1/2-inch liner, and those perforations also have cement across them, and then ten sacks at the surface on that well. So it appears adequately plugged to prevent migration of waters into that well.

And on the Tex Gulf "AEN" State Number 1, that well has a TD of 5270. It's got an open-hole plug at 1520 to 1420. Then it's got a plug across the casing, 13-3/8-inch casing, which should adequately shut off any potential flow there, and then 25 sacks at the surface. And I feel like that's enough to protect that well from any flow.

And on the HL -- Well, the State B Number 2, that well has a TD of 11,120. It has four open-hole plugs of 30 sacks each at different vertical depths, and it also has a cement retainer at 4655.

And then on this well, some of the 8-5/8-inch casing was removed upon plugging, so a cement plug was put on top of the existing 8 5/8, and then a plug also where the 11 3/4 was set, and then an additional plug at the surface.

Q. And each of these schematics sets out not

only the number of sacks but also the calculated cement tops in different wellbores?

A. Yes, it does.

Q. Let's go to pages 6 and 8 of Exhibit Number 5, and I'd ask you to identify and review those, please.

A. Six and 8 are the schematics of the proposed injection wells.

The Billy "AES" State Number 2. The sketch you see there is of the proposed injection well.

The only difference, what we propose to do with this injection well and what is existing, is, we plan on adding additional perfs to open up the rest of the Queen, and those perfs would be from 3773 to 3782. We plan on running internally plastic coated 2 7/8 inch and set the packer in the tubing at about 3716. Currently this well is shut in.

And on the Hoover "ADR" State Number 2, this is an existing producer. What we would do, once again, is take and open the additional Queen that we -- Right now it only has two sand jet holes at 3762. We would open the additional Queen and we would once again run 2-7/8-inch internally plastic-coated tubing and set a packer here at about 3712.

Q. What is the source of the water Yates

proposes to inject in the subject wells?

A. We plan on using the produced water from the wells in the Queen Formation and also to use additional make-up water from the Ogallala Aquifer.

Q. And that is fresh water?

A. That is fresh water.

Q. Has the New Mexico State Land Office approved the use of fresh water as makeup water for this project?

A. Yes, it has.

Q. And is the approval for that use --

A. Well, the approvals -- the water rights, WR-29 and the water-development easement, WD-29.

Q. All right. What volumes are you proposing to inject?

A. We anticipate injecting an average of 500 barrels a day per injection well, and there will be three injection wells.

Q. And what would be the maximum daily injection rate?

A. We propose a maximum per well of 1000 barrels of water per day.

Q. These volumes are consistent with the previous approval for the one well that isn't covered by this C-108; is that correct?

A. That is correct.

Q. Is this going to be a closed system?

A. Yes, it will.

Q. Will you be injecting under pressure?

A. Yes, we will.

Q. What is the injection pressure that you propose to use?

A. We propose to use an average injection pressure of 750 p.s.i. and a maximum of 950 p.s.i. at this point.

Q. Do these proposed pressure limitations exceed .2 pound per foot of depth to the top of the injection interval?

A. The 750 p.s.i. does not exceed it, the 950 does.

Q. Does Yates agree to run step-rate tests witnessed by the Oil Conservation Division on each injection well if a maximum pressure of more than .2 pound per foot of depth is needed, thereby assuring that the formation parting pressure is not exceeded?

A. Yes.

Q. Now, let's go to pages 17 and 18 of Exhibit Number 5. Would you identify those for the Examiner and then review them?

A. All right. Pages 17 and 18 are a produced

water sample from an existing producer in the proposed unit. It's the Sweet Thing "AEB" State Number 1.

The reason for this is to indicate that the produced water has no scaling tendencies by itself or calcium carbonate or calcium sulfate, and that's indicated by page 18, which shows the stability index and the solubilities.

Q. And this is water that you will be injecting?

A. This is indicated with the produced water we would be injecting.

Q. Let's go to page 19 of Exhibit 5. What is this?

A. Nineteen is an analysis of the fresh water that we would be using from the Williams windmill.

It indicates that the fresh water itself has only -- has little to no scaling tendencies for calcium carbonate and none for calcium sulfate scale buildup.

Q. And does this water analysis report also continue on page 20 of this exhibit?

A. Yes, page 20 is, once again -- It's where you calculate the actual scaling tendencies for the water.

Q. Do you anticipate there will be any compatibility problems with the waters you plan to inject in the reservoir?

A. No, we don't. We did several analyses

combining different amounts of fresh and the produced, one of which is on page 21 and 22, which is a 50-50 sample, and that also indicates we should have no problems with scale, with our water.

Q. Are there freshwater zones in the area?

A. Yes, there are.

Q. And what formation does the fresh water come from?

A. The Ogallala and about at 450 feet.

Q. Are there freshwater wells within a mile of either of the proposed injection wells?

A. Yes, there are. There's the Williams windmill, and we consider it the nearest freshwater well, and it's in the northwest quarter of the southeast quarter of Section 12.

Q. Could you identify what is marked -- or what is page 23 of Exhibit Number 5?

A. Yes, that is a fresh water sample from the well.

Q. And that's from the Williams windmill?

A. Yes.

Q. Are logs of wells that are involved in this project on file with the Oil Conservation Division?

A. Yes, they are.

Q. Does Yates request that the order which

results from this hearing contain an administrative procedure whereby additional wells can be converted to inject without the necessity of further hearings?

A. Yes, we do.

Q. Have you examined the available geologic and engineering data on this area?

A. Yes.

Q. And as a result of that examination, have you found any evidence of open faults or any other hydrologic connections between the injection interval and any underground source of drinking water?

A. No.

Q. Now, Ms. Yates, this Application also seeks qualification of this project under the New Mexico Enhanced Oil Recovery Act.

Could you refer in that regard to what has been marked as Yates Exhibit Number 6 and identify and review that for Mr. Catanach?

A. Yates's Exhibit 6 is an economic summary of our proposed project.

We show an investment of approximately $317,000. We anticipate additional oil reserves from this project of 204,000 barrels. This would be a cost to develop of $1.55 per barrel.

Our profitability -- At 15-percent discount

rate, the present value would be $509,000.

Our rate of return is anticipated to be 46 percent, with an income-over-investment ratio of 4.6.

Q. What are the total project costs?

A. $317,000.

Q. And what is the estimated value of the additional production that will be recovered as a result of this project?

A. We anticipate 204,000 barrels of oil over seven years.

Q. And the value of that production, is that set forth anywhere on these exhibits?

A. Well, as part of the economics to determine your profitability of your projects, how much you will receive from your oil, minus your investment, your operating costs, et cetera.

So all that is reflected in the economics itself.

Q. Okay. An actual dollar amount for the value for the oil could be obtained by just multiplying the barrels times an estimated oil price?

A. To get the up-front value of the oil, yes.

Of course, with economics, the oil price can change from time to time. We anticipate a value of $19 per barrel oil in our economics.

Q. Should approval of this Application and waterflooding in this particular unit -- should this result in an increase in the amount of crude oil ultimately recovered from the project?

A. Yes.

Q. In your opinion, has the project area been so depleted that it is now prudent to implement a waterflood project to maximize the ultimate recovery of oil from the project area?

A. Yes.

Q. In your opinion, is this project both economically and technically feasible?

A. Yes, it is.

Q. In your opinion, has this Application been filed prematurely?

A. No.

Q. Could you identify what has been marked as Yates Petroleum Corporation Exhibit Number 7?

A. This is the cumulative primary production on the ten wells we have proposed to be included in the unit. And it basically just shows the production to date.

Q. And in addition to carrying these trends out, if the project is implemented you are anticipating additional recovery of 204,000 barrels of oil?

A. That's what we're anticipating.

Q. In your opinion, will granting this project be in the best interests of conservation?

A. Yes.

Q. Will it otherwise prevent waste and protective correlative rights?

A. Exactly.

Q. What is the anticipated date for commencement of waterflood operations?

A. January 1st, 1994.

Q. Has a copy of this Application been mailed to all leasehold operators within a half mile of the injection well --

A. Yes.

Q. -- and to the owners of the surface of the land on which the well is located?

A. Yes, we've sent out the C-108 to all those people.

Q. And is Exhibit Number 8 an affidavit confirming that notice of today's hearing has been provided by certified mail as required by Division Rule 1207?

A. Yes, it is.

Q. Were Exhibits 4 through 8 either prepared by you or compiled under your direction and supervision?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we move the admission of Yates Petroleum Exhibits 4 through 8.

EXAMINER CATANACH: Exhibits 4 through 8 will be admitted as evidence.

MR. CARR: And that concludes my direct examination of this witness.

EXAMINATION

BY EXAMINER CATANACH:

Q. Ms. Yates, can you tell me where the Mack Energy wells are located?

A. Yes, if you look in Section 11, the three wells, sort of a triangle shape closest to the bottom of the unit, those three wells are the Mack energy wells.

Yates Petroleum operates the two wells directly to the west of those three and the one well you see in Section 2 just to the west of the unit boundary.

Q. You have talked to Mack Energy and they don't want to participate in a waterflood project; is that correct?

A. This water- -- This has been going on since 1991. An engineering study was presented to them and a

geological study. All the working interest owners got together and tried to work out an agreement.

The working interest owners that were not interested in actually entering into it, we bought out. And actually Mack Energy is the only one left, and they just -- They weren't interested in entering into the unit. And we did try to buy their interest out, and they did not want to do that. We actually attempted a co-op with them, and things just never were worked out.

So in the event of proceeding with getting the oil and gas out of this area, we drew up a slightly different unit and proposed this unit.

And we told them when we first started, this is what we were going to do, and if they had any opposition to please let us know, and they've given us no indication at all that it's against their wishes.

Q. What effect, if any, do you think your injection is going to have on their producing well?

A. I don't think it will have much of any effect. If anything, possible beneficial, because we have a producer between our injector in Section 12, so if anything -- They won't lose any oil, I don't anticipate. Minimal if any effects from injection, probably little. I really don't think it will have any effect. That's why I don't anticipate that they have

any problem with this.

Q. They're the only other operator in the pool at this point in time --

A. In --

Q. -- in the Sanmal Queen?

A. Yes, yes.

Q. Okay. Do you anticipate additional drilling within the proposed unit?

A. Not at this time. And -- None that we're planning.

Q. The ten producing wells within the unit you said were averaging -- the production per month was --

A. 1040 or so. They're all less than ten barrels of oil per day. In April it was like 1040 barrels of oil per month for those ten wells, one of which is the disposal well, so that's not really fair.

Q. You mentioned something about the State having approved your proposed injection of fresh water. Did that approval come from the State Land Office?

A. We have copies of -- Yes, we have copies of such, if you would like them.

Q. I know that it was an issue with the State Land Office --

A. Right.

Q. -- earlier on, and I don't know if it's still

an issue with them.

MR. CARR: May it please the Examiner, I have copies of both the approval of water rights and also the water disposal approval, and I'll be happy to provide you with copies.

They specifically reference this particular unit, but they were executed by the State Land Office in October of 1992.

EXAMINER CATANACH: Okay, I guess it would do me good to have copies of those, Mr. Carr.

Q. (By Examiner Catanach) Ms. Yates, I notice in one of your injection wells, the Queen and the -- I mean the Grayburg and San Andres had been perforated. Is that also productive in this area?

A. No. That's what -- I guess you might say it was a drilled -- it was drilled to see if it was, and it wasn't, and that's when we went uphole.

I guess they anticipated at that time they might find something. But to my knowledge, no.

Q. In the Billy "AES" State Number 2 well, would you anticipate that -- Well, you don't have it shown, but you don't plan on squeezing those perforations in the Grayburg and the San Andres?

A. No, we felt like the bridge plug was sufficient.

Q. Ms. Yates, as far as qualifying the waterflood project as a certified EOR project, you would seek to include all of the acreage and all of the wells within the project area?

A. That's correct.

Q. In your opinion, the way the operation is proposed at this point, each of the producing wells will have a benefit -- will be benefitted from injection?

A. Yes, I do.

Q. On your Exhibit Number 7, your decline curve for the producing wells, it looks like the decline on these wells was somewhat arrested during 1992. Do you know what happened during that time?

A. I was wondering that myself. Not exactly. I think in general we had some mechanical problems, and we more or less made the pumping units a little more efficient, is what happened, is what I can come up with.

Q. How long would you anticipate response to the waterflood to be?

A. To peak response or just initial response?

Q. Just initial response.

A. Initial response, six months.

Q. Six months. And so far as the Hoover

injection well, you're just asking for that to be reclassified as an injection well?

A. Exactly.

EXAMINER CATANACH: I believe that's all I have of the witness.

MR. CARR: We have nothing further of this witness, nor in these consolidated cases.

EXAMINER CATANACH: Okay. There being nothing further, these cases, Case 10,763 and 10,794, will be taken under advisement.

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

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10763, 10794 heard by me on August 12 1993.

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 September 8th, 1993.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1994