

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505
CASE NOS. 13,227

APPLICATION OF YATES PETROLEUM)
CORPORATION FOR STATUTORY UNITIZATION)
OF THE NORTH DAGGER DRAW-UPPER)
PENNSYLVANIAN UNIT AREA, EDDY COUNTY,)
NEW MEXICO)

APPLICATION OF YATES PETROLEUM)
CORPORATION FOR APPROVAL OF A WATERFLOOD)
PROJECT AND QUALIFICATION OF THE PROJECT)
AREA FOR THE RECOVERED OIL TAX RATE)
PURSUANT TO THE ENHANCED OIL RECOVERY)
ACT, EDDY COUNTY, NEW MEXICO)

and 13,228

(Consolidated)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

March 4th, 2004

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, March 4th, 2004, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

March 4th, 2004
 Examiner Hearing
 CASE NOS. 13,227 and 13,228 (Consolidated)

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A P P E A R A N C E S

FOR THE APPLICANT:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR
 110 N. Guadalupe, Suite 1
 P.O. Box 2208
 Santa Fe, New Mexico 87504-2208
 By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 9:01 a.m.:

3 EXAMINER STOGNER: At this time I'll call Case
4 Number 13,227. This is the Application of Yates Petroleum
5 Corporation for statutory unitization of the North Dagger
6 Draw-Upper Pennsylvanian Unit Area, Eddy County, New
7 Mexico.

8 Call for appearances.

9 MR. CARR: May it please the Examiner, my name is
10 William F. Carr with the Santa Fe office of Holland and
11 Hart, L.L.P. We represent Yates Petroleum Corporation in
12 this matter, and I have three witnesses.

13 Mr. Stogner, I would ask that you also call Case
14 13,288, which is Yates' Application for a waterflood
15 project and qualification of the project area for the
16 recovered tax rate. They cover the same area. The
17 testimony overlaps. It will facilitate presentation. I
18 would request that separate orders be entered in these
19 cases.

20 EXAMINER STOGNER: At this time I'm going to call
21 for consolidation for hearing purposes Case 13,228. This
22 is the Application of Yates Petroleum Corporation for
23 approval of a waterflood project and qualification of the
24 project area for the recovered oil tax rate pursuant to the
25 Enhanced Oil Recovery Act of New Mexico, Eddy County, New

1 Mexico in this instance.

2 Any additional appearances besides Yates in this
3 matter? Okay.

4 And how many witnesses do you have, Mr. Carr?

5 MR. CARR: I have three.

6 EXAMINER STOGNER: You have three. Are any of
7 your witnesses -- have they been previously in the other
8 case?

9 MR. CARR: Mr. Humphrey has previously been
10 sworn, and his qualifications as our geologist accepted and
11 made a matter of record. The others have not.

12 EXAMINER STOGNER: Okay, I would like for the
13 other two witnesses to please stand to be sworn at this
14 time. Mr. Humphrey, I'll remind you that you're still
15 under oath.

16 (Thereupon, the witnesses were sworn.)

17 EXAMINER STOGNER: Mr. Carr?

18 SUSAN P. VIERRA,
19 the witness herein, after having been first duly sworn upon
20 her oath, was examined and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. CARR:

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

25 A. Susan Patricia Vierra.

1 Q. Spell your last name.

2 A. V-i-e-r-r-a.

3 Q. Where do you reside?

4 A. In Artesia, New Mexico.

5 Q. And by whom are you employed?

6 A. Yates Petroleum Corporation.

7 Q. What is your position with Yates Petroleum
8 Corporation?

9 A. I'm an associate landman.

10 Q. Ms. Vierra, have you previously testified before
11 the New Mexico Oil Conservation Division?

12 A. No, sir, I have not.

13 Q. Would you summarize your educational background
14 for Mr. Stogner?

15 A. I received a degree in business administration/
16 marketing in 1980 and have continued to take oil and gas
17 related classes through our local university.

18 Q. Could you review your work experience for the
19 Examiner?

20 A. I was self-employed in the dairy and agriculture
21 industry for 20 years, and in 2001 I was employed by Yates
22 Petroleum Corporation as a mapping technician and then as a
23 landman.

24 Q. Are you the land person who is responsible in
25 Yates for the unitization efforts of the North Dagger Draw-

1 Upper Pennsylvanian Unit Area?

2 A. Yes, I am.

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

5 A. Yes.

6 Q. Have you been involved with the negotiations, not
7 only with other interest owners but with the Bureau of Land
8 Management and the State Land Office?

9 A. Yes, I have.

10 Q. Are you familiar with the status of the lands and
11 the status of ratifications of these agreements?

12 A. Yes.

13 MR. CARR: We tender Ms. Vierra as an expert in
14 petroleum land matters.

15 EXAMINER STOGNER: Ms. Vierra, again, you joined
16 Yates in 2001?

17 THE WITNESS: Yes.

18 EXAMINER STOGNER: And prior to that you were
19 doing land work?

20 THE WITNESS: No, self-employed in the dairy
21 industry.

22 EXAMINER STOGNER: When did -- After being a
23 mapping technician, when did you start doing land work,
24 land duties?

25 THE WITNESS: I was hired in May of 2001 as a

1 mapping tech. Three months later I was trained as a
2 landman.

3 EXAMINER STOGNER: Is this one of your first
4 assignments?

5 THE WITNESS: Yes, it is.

6 EXAMINER STOGNER: So when you learned to swim,
7 did somebody throw you in the deep end?

8 (Laughter)

9 EXAMINER STOGNER: So qualified.

10 MR. CARR: She has been swimming hard in the deep
11 end.

12 Q. (By Mr. Carr) Ms. Vierra, would you briefly
13 state what Yates seeks in this case?

14 A. Yates is seeking statutory unitization of the
15 proposed North Dagger Draw-Upper Pennsylvania Unit Area,
16 consisting of 5612.95 acres. We are seeking approval of a
17 waterflood project in this unit area, and we are asking to
18 qualify this project for the incentive tax rate authorized
19 by the New Mexico Enhanced Oil Recovery Act.

20 Q. We've just reached an agreement with Marbob, Mr.
21 Stogner, I want you to know.

22 All right, would you identify what has been
23 marked for identification as Yates Petroleum Corporation
24 Exhibit Number 1 and explain to the Examiner what it is and
25 what it shows?

1 A. Exhibit Number 1 is an orientation map showing
2 the location of the entire Dagger Draw field in Eddy
3 County, New Mexico. The red outlined nine-section area is
4 the area that is undertaken by the North Dagger Draw-Upper
5 Pennsylvanian Unit.

6 The second page to that exhibit is a blow-up of
7 the Dagger Draw field. The magenta outline at the top of
8 that diagram depicts the North Dagger Draw-Upper
9 Pennsylvanian Pool, the blue outlined section in the middle
10 outlines the South Dagger Draw-Upper Pennsylvanian Pool,
11 and the red at the bottom identifies the Indian Basin-Upper
12 Pennsylvanian Pool.

13 Back to the top of the map, the white block
14 outlined in orange is the proposed North Dagger Draw-Upper
15 Pennsylvanian Unit.

16 Q. Are you aware of any other secondary recovery
17 units in this area?

18 A. There are none at this time.

19 Q. Let's go to what has been marked Yates Exhibit
20 Number 2. Would you identify that?

21 A. Yes, Exhibit Number 2, also labeled as Yates
22 Petroleum Exhibit A, is a plat map of the entire proposed
23 North Dagger Draw-Upper Pennsylvanian Unit. The solid
24 shaded tracts identify the federal lands, the diagonally
25 slashed tracts identify the state lands, and the white

1 blocked are the fee lands.

2 On page 2 of that exhibit the individual tracts
3 are identified, the acreage is given per tract, and also
4 whether it's a federal state or fee land.

5 In summary, the federal lands are comprised of
6 1805.17 acres for 32.16 percent of this unit, state lands
7 total 1040 acres for 18.53 percent of this unit, and the
8 fee lands are comprised of 2767.78 acres for 49.31 percent
9 of this unit.

10 Q. And the plat which is the first page of this
11 exhibit is actually the same as Exhibit A to the unit
12 agreement; is that correct?

13 A. Yes, it is.

14 Q. Let's go to the unit agreement, Yates Exhibit
15 Number 3. Would you identify and review that briefly?

16 A. Yes, Exhibit 3 is the Unit Agreement for the
17 Development and Operation of the North Dagger Draw-Upper
18 Pennsylvanian Unit. This unit agreement is a standard
19 form, State Land Office, with amendments. This unit shows
20 the character of the lands, it provides for the
21 waterflooding, sets out the basis for participation of each
22 of the owners of unitized substances and provides for
23 filing periodic plans of development, which will be filed
24 with the Oil Conservation Division when it's filed with the
25 State Land Office and the BLM.

1 Q. When we talk about the changes to this agreement,
2 there really is one principal change. What is that?

3 A. Yates Petroleum Corporation has added language
4 that provides that 80 percent of the working interest
5 owners -- 80-percent approval is required before there can
6 be any expansion to this unit under the Statutory
7 Unitization Act.

8 Q. That's actually Section 32 of the agreement; is
9 that correct?

10 A. Yes, it is, on page 10.

11 Q. And basically what it provides, that before you
12 can even propose to the State a statutory unitization
13 effort you have to have 80-percent working interest owner
14 support?

15 A. Yes, that's correct.

16 Q. And this would mean that Yates as a large owner
17 has to acquire the support of the extra interest owners
18 before any effort could be undertaken to expand the unit
19 area?

20 A. Yes, that's correct.

21 Q. What is Exhibit Number 4?

22 A. Exhibit Number 4 is the participation factor by
23 tract, listing all tracts in the unit and their unit
24 participation factor.

25 Q. Is the basis for these participation factors set

1 out in the unit agreement?

2 A. Yes, it is.

3 Q. And that is a 70-percent acreage factor and a 30-
4 percent remaining primary oil reserve factor?

5 A. Yes, that's true.

6 EXAMINER STOGNER: I'm sorry, would you repeat
7 that question?

8 MR. CARR: Yes, 70-percent land, 30-percent
9 remaining primary oil reserve.

10 EXAMINER STOGNER: That wasn't in the form of a
11 question, Mr. Carr.

12 MR. CARR: Well, I'm testifying, I guess, Mr.
13 Stogner, I don't know.

14 Q. (By Mr. Carr) Ms. Vierra, is that the formula
15 that is set forth in this agreement?

16 A. Yes, sir, it is.

17 Q. And will the engineering witness review that
18 formula for Mr. Stogner?

19 A. Yes, he will.

20 Q. Without the aid of his counsel?

21 A. Yes.

22 Q. Would you go to the unit agreement, which is
23 marked as Exhibit Number 4? Does that differ from the
24 agreement that is actually attached to the Application?

25 A. Okay, unit agreement is Exhibit --

1 Q. Exhibit Number --

2 A. -- 3?

3 Q. Yes, unit exhibit is Exhibit Number 3. And does
4 that agreement differ from what was originally filed?

5 A. Yes, it does. If you will refer to page 5, tract
6 participation, Section 13, the wording has been changed for
7 the A equivalent in the tract participation ratio.

8 Q. Actually, we recently discovered just an error in
9 the language in the agreement; is that not correct?

10 A. Yes, that's correct. Previously that sentence
11 read that the area ratio based on the ratio of an owner's
12 net acreage divided by the total acreage within the unit.

13 Q. So what we're talking about is tract
14 participation, 70 percent A and 30 percent B, and in the
15 first paragraph we simply had an error in the language. We
16 had the words, "an owner's net acreage", instead of having
17 total acreage within the tract; isn't that correct?

18 A. That's correct.

19 Q. It doesn't make any sense when you try and use
20 that as it was written; is that fair to say?

21 A. Yes, that's correct, as previously stated.

22 Q. Ms. Vierra, does this change, the change that we
23 have made, affect or reduce the interest of any interest
24 owner in the unit area?

25 A. No, sir, it does not.

1 Q. No working interest owner's interest has changed?

2 A. No, sir.

3 Q. No non-cost-bearing interest owner has changed?

4 A. No, sir.

5 Q. Has the unit been reviewed with all interest

6 owners and all calculations made using an acreage

7 determination as set out in the agreement that is before

8 the Examiner?

9 A. Yes, sir.

10 MR. CARR: Mr. Examiner, what happened here is,
11 last week we were doing a final check, and somehow in the
12 drafting we have picked up these extra words, words from
13 another form unit agreement. And although we had all
14 assumed that it said that the area was the total acreage
15 within the tract divided by the total acreage within the
16 unit, we had put in owners' net acreage, and you can't make
17 it work because it doesn't even make any sense, because
18 you're valuing the tracts here, not at owner's interest.
19 The way you do it is, you get the tract there and then
20 apply the owner's interest. But it doesn't make any sense.
21 And this is -- We have, from the beginning, explained this
22 as the straight acreage calculation, and nothing here was
23 changed by this amendment.

24 If you look at page 12 of the agreement, the
25 agreement provides -- and it's page 12, Section 24.(3) --

1 and the agreement provides that "This Agreement...or the
2 Unit Operating Agreement shall be amended in any and all
3 respects necessary to conform to the Division's order
4 approving statutory unitization."

5 And it goes on to say that the amendment "shall
6 be deemed to be hereby approved in writing by the
7 parties...without any necessity for further approval -- "
8 that is, ratification, except ratification is required if
9 it reduces, in paragraph (a), any royalty interest owner's
10 participation, in paragraph (b), reduces any working
11 interest owner's participation.

12 Here we have what I believe is akin to a *nunc pro*
13 *tunc*. We're trying to make the language, if anybody ever
14 sits down and reads it, work with what we've proposed and
15 what this unit agreement does, and how all the schedules
16 have been prepared.

17 And so we would request that the order that is
18 entered in this case note the correct wording for subpart A
19 on page 5. That will take care of it, and it will avoid
20 confusion at a later date. It changes no interest. And I
21 would be happy to provide a finding that takes care of
22 that. It's just a -- really an error in drafting that's
23 been bumping along for some time. But we think it would
24 misleading to leave it in there, because someday someone's
25 going to try and make it work, and the language simply

1 doesn't work. It doesn't make sense.

2 EXAMINER STOGNER: We'll definitely accept your
3 assistance.

4 MR. CARR: And I will --

5 EXAMINER STOGNER: Now let's go back to Section
6 13.A, and what it reads now is, A equals "the Area Ratio
7 based on the ratio of the total acreage within the Tract
8 divided by the total acreage within the Unit Area."

9 MR. CARR: Yes, sir.

10 EXAMINER STOGNER: So what should that amendment
11 say?

12 MR. CARR: That is what it should say.

13 EXAMINER STOGNER: This is -- What is written
14 here is what it should say?

15 MR. CARR: Instead of saying "the total acreage
16 within the Tract divided by the total acreage in the Unit",
17 it said the ratio of the owner's net acreage, which you
18 can't figure out what that is, divided by -- it's just an
19 error. It was drafting that we were looking at other
20 formulas, and we just picked up the wrong words when we
21 were drafting that.

22 EXAMINER STOGNER: So your exhibit today --

23 MR. CARR: -- is correct.

24 EXAMINER STOGNER: -- is correct?

25 MR. CARR: Yes, sir.

1 EXAMINER STOGNER: Okay. Please continue, Mr.
2 Carr.

3 Q. (By Mr. Carr) Ms. Vierra, let's go to Exhibit
4 Number 5, the unit operating agreement. Would you
5 basically just review what this is?

6 A. Yes, Exhibit 5 is Yates Petroleum Corporation,
7 the unit operating agreement for North Dagger Draw-Upper
8 Pennsylvanian Unit, including Exhibits A through H. The
9 operating agreement outlines the supervision and management
10 of the unit, it defines the rights and duties of all
11 parties, it shows how investments and costs are shared, it
12 establishes the voting procedures for decisions to be made
13 by the working interest owners, sets out the accounting
14 procedures, shows how costs will be allocated and paid, and
15 also contains many other standard provisions.

16 Q. There are some unique provisions in this
17 agreement as well, are there not?

18 A. Yes, there are.

19 Q. Would you turn to Exhibit C in the unit Operating
20 agreement, and that is entitled "Schedule Showing Unit
21 Participation of Each Working Interest Owner"?

22 A. Yes, it is.

23 Q. How is this different from what will be set out
24 in this agreement?

25 A. This is simply an added exhibit to help simplify

1 the working -- the understanding for each owner to look at
2 this to see what their total unit participation is, rather
3 than to have to individually identify their interest in
4 Exhibit B, to come up with that summation.

5 Q. So instead of having to go tract by tract and
6 then do another calculation to figure out what their total
7 unit share is, this is an additional exhibit that just sets
8 out the percentage interest in the unit of each owner; is
9 that right?

10 A. Yes, that's correct.

11 Q. Are there other unusual or unique provisions in
12 this agreement?

13 A. Yes, if you'll refer to page 17, Section 17.1,
14 Withdrawal, this is a provision that was actually initiated
15 by one of our working interest owners. This provision
16 provides for a one-time election at the end of Phase A-1 --
17 1-A, excuse me -- for the working interest to withdraw from
18 the agreement and the unit by transferring their oil and
19 gas rights, exclusive of royalty interest, together with
20 its interest in all unit equipment and all wells used in
21 unit operations.

22 Q. And the details of how this works are set out in
23 the agreement?

24 A. Yes, they are.

25 Q. And this was requested by Nearburg Exploration?

1 A. Nearburg, yes it was.

2 Q. And Nearburg Exploration, after this withdrawal
3 provision was included, has in fact ratified the unit
4 agreement --

5 A. Yes, they have.

6 Q. -- is that correct?

7 Are you ready to go to Exhibit Number 6?

8 A. Yes.

9 Q. Would you do this and would you, using this
10 exhibit, briefly summarize for Mr. Stogner your efforts to
11 obtain voluntary participation in the unit and the proposed
12 waterflood project?

13 A. Yes, I will. Exhibit 6 is my outline time frame
14 of the events that have taken place throughout the
15 initiation of this project.

16 Back in May of 2003 we met with the Bureau of
17 Land Management just as a preliminary introduction to this
18 project, what we were looking at, the scope of this
19 project, and other defining characters.

20 On May 22nd, we held a meeting here in Santa Fe
21 at the State Land Office reviewing the same project, a
22 question-and-answer period just to lay it on the table to
23 inform them of what we were looking at.

24 On May 28th, an informal meeting was held with
25 Nearburg to go over again the facts and figures of what we

1 were proposing to put together in this secondary recovery
2 unit.

3 On August 5th, all interest owners were mailed a
4 preliminary package to the North Dagger Draw-Upper
5 Pennsylvanian Unit, were sent a short questionnaire asking
6 for input, criticism, support of the project, also inviting
7 them to attend an informational meeting to be held at Yates
8 Petroleum on August 28th, 2003.

9 And then on August 28th, 2003, this meeting was
10 held at Yates Petroleum Corporation.

11 On October 30th, 2003, the original proposal
12 package was certified mail to all interest owners within
13 the unit.

14 On February 10th, updates were mailed to all
15 interest owners within the unit, again by certified mail.

16 In addition to all of the written correspondence
17 and meetings, we have fielded and responded to several
18 phone conversations and personal contact.

19 Q. And it has fallen to you to secure the approval
20 of the BLM, the State Land Office, and obtain ratifications
21 of the documents, as submitted in February --

22 A. Yes.

23 Q. -- is that right?

24 A. Yes, that's correct.

25 Q. What is Exhibit Number 7?

1 A. Exhibit Number 7 is a letter from the Bureau of
2 Land Management approving the unit as an area logically
3 suited for development under a unit plan.

4 Q. And Exhibit Number 8?

5 A. Exhibit Number 8 is a letter from the
6 Commissioner of Public Lands, again for approval of this
7 unit.

8 Q. And this is their preliminary approval with the
9 letter?

10 A. Yes.

11 Q. When did you last meet with the Commissioner of
12 Public Lands?

13 A. I met with them yesterday.

14 Q. And yesterday you reviewed the schedules and were
15 able to respond to many of the questions that are contained
16 in the approval --

17 A. Yes.

18 Q. -- permit approval; is that right?

19 A. Yes, that's correct.

20 Q. Let's go to Exhibit Number 9. What is Exhibit 9?

21 A. Exhibit Number 9 is the working interest owner
22 spreadsheet that I have built. It contains a list of all
23 working interest owners within the unit, their percentage
24 of the unit participation. We have kept record of all
25 mailings going out, and we've designated those that we

1 have, in fact, received notification of certified delivery
2 for both the original package and for the updates mailed in
3 February.

4 This spreadsheet also shows those who have
5 ratified the unit with their approval percentage.

6 Q. Those shaded in yellow have actually ratified; is
7 that right?

8 A. Yes, those represent all the ratified working
9 interest owners.

10 Q. What percentage of the working interest ownership
11 is presently committed to the unit plan?

12 A. If you will refer to the bottom of page 2, in the
13 blue highlighted box we currently have 93.416226 percent
14 approval.

15 Q. And you are continuing to pursue negotiations
16 with those interest owners who are not shaded; is that
17 right?

18 A. That's correct.

19 Q. Let's go to the next exhibit, Exhibit Number 10.
20 Would you identify and review this, please?

21 A. Yes, Exhibit Number 10 is very similar to Exhibit
22 Number 9. However, this identifies the royalty and
23 overriding royalty owners within the unit, set up in the
24 same manner. The yellow-highlighted have all ratified and
25 approved the unit, tracked all the certified mailings.

1 Q. When we look at this list, what percentage is
2 ratified if you do not include the lands of the federal
3 government and the State of New Mexico?

4 A. Okay, if you'll refer to page 5 of this exhibit,
5 in the blue-highlighted box at the bottom we currently have
6 47.4312 percent of the royalty interest approval and
7 48.4588 percent of the overriding approval.

8 Q. If you -- When you add state and federal lands,
9 what percentage do you have of the royalty interest or the
10 non-cost-bearing interest ratifying the proposed unit plan?

11 A. 88.7539 percent.

12 Q. Do you believe you've done all that you
13 reasonably can at this point to obtain voluntary commitment
14 to this unit plan?

15 A. Yes, sir, I have.

16 Q. Have you made a good-faith effort to contact each
17 of those interest owners who has not ratified and obtain
18 their participation?

19 A. Yes, sir.

20 Q. And you will continue those negotiations?

21 A. That's correct.

22 Q. What are Yates Exhibits 11 and 12?

23 A. Exhibit 11 is an affidavit prepared by William
24 Carr in the Application of Yates Petroleum Corporation for
25 statutory unitization of the North Dagger Draw-Upper

1 Pennsylvanian Unit Area.

2 Q. Does this confirm that notice of today's hearing
3 and the Application was mailed to each of the individuals
4 identified in the affidavit?

5 A. Yes, it does.

6 Q. And is Exhibit Number 12 a similar affidavit for
7 the waterflood portion of the case?

8 A. Yes, it is.

9 Q. Who was notified of the statutory unitization
10 hearing?

11 A. All working interest owners and non-cost-bearing
12 interest owners within the unit.

13 Q. And what about the notification on the waterflood
14 project? Who was notified?

15 A. All leasehold operators within one-half mile of
16 each of the five proposed injection wells, and the owners
17 of the surface for each injection well.

18 Q. Ms. Vierra, were Exhibits 1 through 12 prepared
19 by you or compiled under your direction and supervision?

20 A. Yes, they were.

21 Q. Can you testify as to their accuracy?

22 A. Yes, sir.

23 MR. CARR: Mr. Stogner, at this time we move the
24 admission into evidence of Yates Exhibits 1 through 12.

25 EXAMINER STOGNER: Exhibits 1 through 12 will be

1 admitted into evidence at this time.

2 MR. CARR: Mr. Stogner, I have copies of the
3 return receipts on our certified mailings if you want them
4 for the file. The affidavit does identify each of those
5 parties. It's whatever you prefer, whether you --

6 EXAMINER STOGNER: Do you have those with you
7 today?

8 MR. CARR: Yes, I do.

9 EXAMINER STOGNER: Why don't we go ahead and I
10 will take those from you and make that a part of the
11 record? I'll just make it a part of the record. I don't
12 think it will be necessary to make it an exhibit.

13 MR. CARR: The first pages contain the green
14 cards. There are two envelopes that were returned because
15 they were undeliverable.

16 And that concludes our direct testimony of Ms.
17 Vierra.

18 EXAMINATION

19 BY EXAMINER STOGNER:

20 Q. Ms. Vierra, I'm going to go back -- and you
21 talked about this earlier. This was Section 32 in which
22 Mr. Carr pointed out. This is some additional language for
23 expansions?

24 A. Yes.

25 Q. And again, this is what would be required of the

1 current interest in the unit, before any additional
2 expansion, additional acreage would be taken; is this
3 correct?

4 A. That is correct.

5 Q. Now when I look at Section 4 under "Expansion" on
6 page 3, that still shows 75 percent. What --

7 A. Yes. If you'll --

8 Q. Please explain, yeah --

9 A. If you'll refer, then, to page 10 under Section
10 22 [sic], "Nonjoinder and Subsequent Joinder", the bottom
11 paragraph on that page outlines where the 80-percent
12 approval comes in.

13 Q. Now, what does this language normally include or
14 have in it, in this Section 32 for "Nonjoinder and
15 Subsequent Joinder"? How does this differ?

16 A. Just a higher percentage.

17 Q. And what would it normally be? Seventy-five
18 percent?

19 A. I believe so, sir.

20 MR. CARR: And Mr. Stogner, the reason for that
21 was that the Yates Companies have a large interest, and
22 this was increased so that there would be a guarantee that
23 other interest owners would be interested in expanding the
24 unit area before additional lands were taken in. It's just
25 an extra check that. It was requested and included.

1 Q. (By Examiner Stogner) In referring to this Land
2 Commissioner's letter -- this is marked Exhibit Number 8 --
3 I understand you met with them yesterday?

4 A. Yes, I did.

5 Q. And you provided everything in which they had
6 asked for. I believe there was nine items; is that
7 correct?

8 A. To be honest with you, this is the first time
9 I've seen this document, as we just received it late last
10 night. But we did have conversation concerning all aspects
11 of their letter, yes, and some have already been resolved
12 at this time and corrections will be made, and others will
13 be -- such as the several com agreements that are already
14 in existence, those will be addressed.

15 Q. In referring to Exhibits 9 and 10 and the ones
16 that have not ratified to date -- and this is as of right
17 now, I'm assuming, or last night? --

18 A. The 1st, Monday.

19 Q. Monday. -- are you anticipating or have you
20 talked to other people that would indicate that something's
21 in the mail?

22 A. We have all documents, not with me here today.
23 Some of these have been undeliverable, some with no
24 forwarding addresses. We have in several cases attempted
25 delivery twice. Historically, some of the interest owners,

1 we have a very difficult time in getting a response of any
2 kind in any matter.

3 Q. Okay, in referring to Exhibit Number 10, halfway
4 down the Commissioner of Public Lands is shown as a non-
5 party. Do you see that down there between Clark Coll and
6 Tom Cone?

7 A. Yes, I do. At the time that this exhibit was put
8 together on Monday, we did not have that in hand.

9 EXAMINER STOGNER: Okay. A lot of information to
10 digest here, but at this time I have no other questions.
11 But before we -- You have two other witnesses?

12 MR. CARR: Two additional witnesses, yes, sir.

13 EXAMINER STOGNER: Let's take a 10-minute recess
14 at this time.

15 (Thereupon, a recess was taken at 9:36 a.m.)

16 (The following proceedings had at 9:55 a.m.)

17 EXAMINER STOGNER: This hearing will come to
18 order.

19 I have no other questions for Ms. Vierra. You
20 may be excused.

21 Mr. Carr?

22 MR. CARR: Mr. Stogner, at this time we call John
23 Humphrey, and we'd request the record reflect that Mr.
24 Humphrey was previously sworn, that his qualifications as
25 an expert in petroleum geology have been accepted and made

1 a matter of record.

2 EXAMINER STOGNER: So noted.

3 JOHN F. HUMPHREY,

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

6 DIRECT EXAMINATION

7 BY MR. CARR:

8 Q. Mr. Humphrey, are you familiar with the
9 Applications filed in each of these cases?

10 A. Yes, I am.

11 Q. Have you made a geological study of the portion
12 of the North Dagger Draw-Upper Pennsylvanian Pool which is
13 the subject of this case?

14 A. Yes, I have, and I've worked the Dagger Draw-
15 Indian Basin area since 1997.

16 Q. Are you prepared to review the results of your
17 work with Mr. Stogner?

18 A. Yes.

19 Q. Mr. Humphrey, let's go to what has been marked
20 for identification as Yates Petroleum Corporation Exhibit
21 13. Would you identify and review this for the Examiner?

22 A. Exhibit 13 is the type log that was used in the
23 proposed unit agreement. It's basically gamma-ray
24 porosity, I suppose the gamma-ray, dual lateral log in the
25 Yates Petroleum Corporation Vann "APD" Number 1 well. This

1 is located 660 feet from the north and 660 from the west of
2 Section 21, 19 South, 25 East, Eddy County, New Mexico.

3 The vertical limits of the unitized formation
4 included within the proposed unit area extends from an
5 upper limit described on the type log. It's the top of the
6 Canyon carbonate formation, at a depth on the type log of
7 7680 feet to a lower limit at the base of the upper Canyon
8 pay at a depth of 8076 feet, as shown on the type log.

9 Q. Now, Mr. Humphrey, this is the area that is
10 subject to this unit agreement, correct?

11 A. That's correct.

12 Q. There are several deeper wells in the area that
13 penetrate this interval that are completed currently in the
14 Morrow; is that right?

15 A. That's correct.

16 Q. We are not attempting to unitize the Morrow?

17 A. No, we're not.

18 Q. And those wells will be governed by their
19 respective joint operating agreements?

20 A. That's correct, Mr. Carr.

21 Q. Has the portion of the reservoir which you
22 propose to unitize been recently defined by development?

23 A. I believe it has.

24 Q. Could you generally describe for Mr. Stogner the
25 nature of the upper Pennsylvanian reservoir in this area?

1 A. Upper Pennsylvanian Canyon dolomite was deposited
2 on a shallow carbonate ramp. It's basically a carbonate
3 buildup. The porosity types we see in the upper Penn are
4 vuggy -- quite a bit of vuggy porosity, intercrystalline
5 porosity, with some minor diagenetic fracturing in it. And
6 due to the nature, which is pretty common to most upper
7 Pennsylvanian reservoirs in New Mexico and Texas too, it
8 should impact the sweep of the proposed waterflood project,
9 and most people have been quite successful in waterflooding
10 the upper Pennsylvanian reservoirs.

11 Q. Let's go to Exhibit Number 14, the structure map
12 on the top of the upper Penn dolomite. Would you review
13 this for Mr. Stogner?

14 A. Again, Yates Exhibit 14 is a structure map on the
15 top of the upper Penn dolomite. The basic things you can
16 glean from this is, structure plunges to the northeast in
17 this particular case. All wells within the unit are above
18 the established oil-water contact, which is at a subsea of
19 4380 subsea. And additionally on the structure map, Mr.
20 Examiner, there's a cross-section A-A' that cuts across the
21 proposed unit area, which we'll go over in the exhibit
22 after next.

23 Q. Okay. Let's go to the isopach map, Exhibit 15.

24 A. Exhibit 15 is a net-pay isopach of the upper
25 Pennsylvanian dolomite. The cutoff is a 4-percent porosity

1 cutoff above the oil-water contact. Again, the oil-water
2 contact has been established at approximately 4380 subsea.
3 As you can see, Mr. Examiner, all lands in the unit have
4 pay. The entire unitized area, I believe, should
5 contribute reserves to the unit, and I believe it's an area
6 suited for a secondary recovery project. Your pay
7 thickness varies from 40 to 50 feet to a little over 200
8 feet under the unitized lands.

9 Q. Again, we have the trace for the cross-section --

10 A. That's correct, A-A'.

11 Q. Let's go to that cross-section, which is Yates
12 Exhibit 16.

13 A. Yates Exhibit 16 is a structural cross-section
14 cutting across the North Dagger Draw proposed unit area.
15 The target zone for the waterflood, Mr. Examiner, again is
16 the upper Pennsylvanian or Canyon dolomite.

17 As you go -- Basically what I'm trying to show is
18 some of the limits and the logical -- basically the logic
19 behind the unit boundaries. As you go to the northwest you
20 lose the dolomite and you lose your reservoir. As you go
21 to the southeast, you go below the oil-water contact at
22 some point, and that's basically what I'm trying to
23 illustrate with the cross-section.

24 ~~Q.~~ Q. Mr. Humphrey, in your opinion can the portion of
25 the pool that's included in the proposed unit area be

1 efficiently and effectively operated under a unit plan of
2 development?

3 A. I believe it can, Mr. Carr.

4 Q. And will all of the acreage in the unit area, in
5 your opinion, contribute to the reserves that will be
6 obtained through this secondary recovery operation?

7 A. I believe it will.

8 Q. Were Exhibits 13 through 16 prepared by you?

9 A. Yes, they were.

10 MR. CARR: Mr. Stogner, at this time we move the
11 admission into evidence of Yates Petroleum Corporation
12 Exhibits 13 through 16.

13 EXAMINER STOGNER: Exhibits 13 through 16 will be
14 admitted into evidence.

15 MR. CARR: And that concludes my direct
16 examination of Mr. Humphrey.

17 EXAMINATION

18 BY EXAMINER STOGNER:

19 Q. Mr. Humphrey, again, I'm referring to Exhibit
20 Number 13 and Exhibit 16. What you're showing on Exhibit
21 13 is the proposed unitized interval --

22 A. Yes.

23 Q. -- in this well from 7680 to 8076?

24 A. Uh-huh.

25 Q. What portion is the actual injection to take

1 place? Is it going to be high in this interval or
2 throughout the interval or low?

3 A. I did not mark, unfortunately, the oil-water
4 contact on this particular well, but basically the entire
5 interval above the oil-water contact. And I could
6 calculate that and get that information to you. I don't
7 have an elevation for this particular well, so I can't
8 calculate where it would fall on this log, but basically
9 we're going to be injecting. The secondary recovery
10 project is basically above the oil-water contact within the
11 dolomite. And I'm guessing from the perforations it's
12 probably a little bit below that.

13 Q. You had mentioned -- again, the target zone, you
14 said, was the upper Penn dolomite. But what did you say
15 was the -- above or below the base of the Canyon dolomite,
16 is the injection interval?

17 A. It can be both, just depending on where the oil-
18 water contact falls, Mr. Examiner.

19 Q. So the base of the Canyon really didn't matter in
20 this instance?

21 A. It just matters to pin it down stratigraphically
22 so you can define the interval, no matter where you're at
23 within the proposed unit.

24 Q. In referring to Exhibit Number 17, are these
25 perforations in which you're showing in the wells with the

1 black, heavy dark black line, in the wellbore portion?

2 A. Yes.

3 Q. Now, it looks to me like you're highlighting some
4 sort of lettering here, and what does that say? And when
5 I'm -- I'm looking at --

6 A. Oh, the -- Yeah, that's just a function of the
7 computer program. That's just telling you -- My glasses
8 aren't quite even that good. It says the top of the
9 Cisco/Canyon dolomite, is the text at the -- You see where
10 the top of the shading for the dolomite is? Is that where
11 you're reading?

12 Q. Yes, the --

13 A. Yeah, that says Cisco/Canyon dolomite.

14 Q. At the top of the pink area?

15 A. Yes, that's just a formation. It's just text.

16 Q. And then at the top of the blue-shaded area
17 there's another marking. It looks like Cisco/Canyon?

18 A. That's correct, that would be the actual top of
19 the carbonate.

20 Q. Okay.

21 A. Again, this is a structural cross-section.

22 Q. How have perforations in the newly drilled well
23 in this pool been determined after a well is drilled?

24 Where has Yates -- and what criteria has Yates utilized to
25 actually pick which interval within that upper

1 Pennsylvanian dolomite to be perforated?

2 A. Well, recently -- We haven't drilled a newer well
3 recently, but there have been a lot of drill stem testing
4 that went on during the development of the field, and the
5 oil-water contact was fairly -- you know, it was
6 established with a great -- you know, a fair deal of
7 certainty. So basically, you know, as time went on, at
8 least when I recommend perforations I basically want to
9 perforate everything above the contact. Unless you have a
10 highly porous zone that goes across the contact and you're
11 worried about pulling excessive water.

12 Q. Because when I look at Exhibit Number 16, I kind
13 of see the whole gamut --

14 A. Uh-huh.

15 Q. -- starting over there on the A side or the
16 northwestern side, it looks like Conoco perforated that
17 whole dolomite interval?

18 A. Yes, sir.

19 Q. And then the next well is the Yates well, and --
20 a good chunk of it, it looks like two-thirds of it. And
21 then I go to the third well over that's penetrating, or
22 that's perforated in this area --

23 A. Uh-huh.

24 Q. -- it looks like it was concentrated.

25 A. And that was probably due just to the porosity.

1 It's kind of hard to see on this scale, but in some cases
2 that's where your porosity is developed in this particular
3 case, and that's where the perforations were done.

4 EXAMINER STOGNER: Okay, I have no other
5 questions of Mr. Humphrey at this time. I may subsequent
6 to your final --

7 MR. CARR: Yes.

8 EXAMINER STOGNER: -- witness today.

9 MR. CARR: Okay, he will be available.

10 EXAMINER STOGNER: At this time you may be
11 excused.

12 THE WITNESS: Okay, thank you.

13 MR. CARR: Mr. Stogner, at this time we call
14 George Freeman. He's our petroleum engineer.

15 GEORGE H. FREEMAN,

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

18 DIRECT EXAMINATION

19 BY MR. CARR:

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

21 A. George Freeman.

22 Q. Mr. Freeman, where do you reside?

23 A. In Artesia, New Mexico.

24 Q. By whom are you employed?

25 A. Yates Petroleum Corporation.

1 Q. And what is your position with Yates Petroleum
2 Corporation?

3 A. I'm reservoir engineering supervisor.

4 Q. Have you previously testified before the Oil
5 Conservation Division?

6 A. Yes.

7 Q. At the time of that testimony were your
8 credentials as a reservoir engineer accepted and made a
9 matter of record?

10 A. Yes, they were.

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

13 A. Yes, sir.

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

16 A. Yes, and I've supervised the consultant study
17 also.

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

20 EXAMINER STOGNER: They are.

21 Q. (By Mr. Carr) Mr. Freeman, are you familiar with
22 the New Mexico Statutory Unitization Act?

23 A. Yes.

24 Q. Have you prepared exhibits for presentation here
25 today?

1 A. Yes, I have.

2 Q. Let's go to what has been marked Yates Exhibit
3 Number 17. Would you identify that and review that for Mr.
4 Stogner?

5 A. Yeah, this is a map of the proposed unit area
6 which shows the current status of all the wells in this
7 area, approximately 103 current producing wells and other
8 wells that are TA'd and plugged and abandoned.

9 It shows all of the proposed injection wells that
10 are marked as blue triangles. There are 21 proposed
11 injection wells in the unit area. Five of these wells
12 we're asking for authority to inject in today.

13 Q. And then additional wells you would add by filing
14 administrative applications pursuant to the Section 700
15 rules of the Division?

16 A. Yes, that's right.

17 Q. There are several -- maybe four producing wells
18 indicated with a green circle on this plat. Do you see
19 those?

20 A. Yes, those are wells that are currently producing
21 from the Morrow formation. These are wells that could
22 possibly be incorporated into the unit, however they will
23 not be until the Morrow reserves have been depleted, and
24 this is governed by other joint operating agreements.

25 Q. And these are wells, some of them, in which

1 Marbob has an interest; is that correct?

2 A. Yes, that's true.

3 Q. And they're not being considered at this time for
4 unitizing and won't be until the Morrow has been, in fact,
5 depleted?

6 A. That's right.

7 Q. Are you proposing to drill any additional wells
8 in the unit area at this time?

9 A. No, there is a possibility -- or we would want to
10 consider it in the future, possibly, but at this time we
11 are not planning to drill additional wells.

12 Q. Because the acreage really is fully developed at
13 this time; is that what you're saying?

14 A. Yes, that's correct.

15 Q. And what you've shown with all of the blue
16 triangles is where you ultimately will get with full-scale
17 waterflood operations?

18 A. Yes.

19 Q. What are the pipelines, it looks like, the
20 injection lines that are shown? Are those the --

21 A. Yeah, those are the plans for the injection lines
22 for the first group of wells, first group of injection
23 wells that we call Phase 1. There's a boundary shown in
24 the unit area in red that separates the Phase 1 area from
25 the Phase 2, and this is just an operational plan that we

1 would add the wells over time, starting out with five
2 injection wells in Phase 1A, increasing that number to 13
3 injection wells in Phase 1B, and adding the remaining eight
4 wells in Phase 2 later.

5 Q. You're going to start with Phase 1 at this time;
6 is that right?

7 A. That's correct.

8 Q. About how far behind the Phase 1 development do
9 you anticipate Phase 2 actually being committed to the
10 waterflood project?

11 A. In the neighborhood of 18 months.

12 Q. Let's go to Exhibit 18, the production data on
13 the unit area.

14 A. Yeah, this is a record of historical primary
15 production by month for the unit area, and again it also
16 shows our forecast for both primary production under the
17 current configuration and then the incremental production
18 and total production as a result of waterflooding.

19 Q. Let's talk about remaining primary recovery.
20 What is the anticipated gross oil volume you would
21 anticipate recovering?

22 A. As of January 1st of 2004, approximately 200,000
23 barrels.

24 Q. And have you been able to set a cash value on
25 that production?

1 A. We estimate \$6.7 million.

2 Q. If -- We also have the proposed case. What would
3 happen if waterflood operations are implemented throughout
4 the unit area? What volume of oil do you anticipate being
5 able to recover through waterflood operations?

6 A. Estimate about 2.5 million barrels incremental.

7 Q. And what's the cash value of that?

8 A. Approximately \$17 million.

9 Q. It shows the increase in the production that can
10 result through the implementation of the waterflood; is
11 that correct?

12 A. Yes.

13 Q. And it shows the additional value of that
14 production?

15 A. Well, that's not shown on this exhibit.

16 Q. That's right, but that is, when you apply
17 estimated prices to that volume, what you get?

18 A. That's correct.

19 Q. What is Exhibit 19?

20 A. 19 shows a production graph of the same data. It
21 shows the primary history since 1987 for the unit area and
22 shows the forecast starting at the beginning of 2004 of
23 what would happen under waterflood. And it shows that we
24 would increase -- currently, the rate is about 350 barrels
25 of oil per day, and that would increase to something like

1 1500 barrels per day.

2 Q. Without unitized management operation and further
3 development in the unit area, would this additional
4 recovery be wasted?

5 A. Yes, the field is declining fairly rapidly and
6 will approach the economic limit for primary operations
7 soon. And if waterflooding is not started, then we will be
8 plugging wells and reserves will be lost.

9 Q. What is the basis for the participation formula
10 in the unit agreement?

11 A. It is 70 percent, based on area, and 30 percent
12 on primary reserves.

13 Q. And what data are you using in that primary-
14 reserve figure?

15 A. As of January 1st, 2003.

16 Q. Why were these parameters selected?

17 A. Well, the 30 percent, based on remaining primary
18 reserves, is approximately the fraction of the value of the
19 project that's represented by the primary reserves, and it
20 reimburses owners who commit these primary reserves to the
21 unit. Seventy percent is the value of the waterflood that
22 is allocated based on acreage. We use acreage as a
23 parameter for that.

24 Because of the complex nature of the Dagger Draw
25 unit, which Mr. Humphrey referred to, it's very difficult

1 to correlate the future production of the waterflood with
2 other parameters that are often used, such as cumulative
3 oil recovery or net porosity thickness.

4 Q. And so because of the porosity, because of the
5 water drive, this parameter, the acreage parameter, seems
6 to be the best to accurately allocate back to the interest
7 owners their fair share?

8 A. Yes, this would be the most equitable way to
9 allocate the reserves.

10 Q. If this unit is approved and waterflood
11 operations commenced in the unit area, will this benefit
12 all working interest owners and royalty interest owners in
13 the area affected by this Application?

14 A. Yes, everybody would benefit from increased
15 recovery reserves and increased cash flow.

16 Q. Let's go to the Form C-108 that has been filed in
17 this case, your Application for Authorization to Inject.
18 It's been marked Exhibit 20.

19 A. Yeah, this is a completed C-108 for the first
20 five wells that we want to inject into, together with all
21 the required information.

22 Q. Is this an expansion of an existing project?

23 A. No.

24 Q. We're looking only at five wells?

25 A. Yes, at this time that we hope to -- I mean, we

1 will ask for authority to commit additional wells to
2 injection in the future.

3 Q. We've numbered the pages on this. There is a
4 plat or a Midland map company map that's page 20 in the
5 exhibit. Would you turn to that, please?

6 A. Yes.

7 Q. What does this show?

8 A. Okay, the first five proposed injection wells are
9 shown on this map highlighted in green. The leases and
10 wells within a two-mile radius of each of these wells are
11 shown on the map, identified there, and the area within a
12 one-half-mile radius of each of the wells, which represents
13 the study area -- the area of review for each of these
14 wells in the C-108 --

15 Q. Does this --

16 A. -- is outlined.

17 Q. Does this exhibit contain all the information
18 required by the Oil Conservation Division for each of the
19 wells in any of these five areas of review, wells that
20 penetrate the injection interval?

21 A. Yes.

22 Q. And is that information set out in tabular form
23 on pages 21 through 24 of this exhibit?

24 A. Yes, we have data on all of the wells within the
25 area of review of these proposed five injection wells, and

1 it shows the name and location of each well, the operator,
2 type of well generally, whether it's an oil producer or if
3 it's plugged or abandoned, the spud date, total depth and
4 producing zone, perforations and the completion
5 information, the casing record.

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

8 A. Yes, there are four, and there are wellbore
9 schematics for these four wells found on pages 25 through
10 28, which show that they have been properly plugged.

11 Q. Are they plugged so as to prevent the migration
12 of injection fluids from the injection interval?

13 A. Yes.

14 Q. Have you reviewed the data available on all the
15 wells within the areas of review for the five wells we're
16 discussing here today and satisfied yourself that there's
17 no remedial work on any of these wells that's necessary to
18 enable Yates to safely operate this project?

19 A. Yes, I have.

20 Q. What injection volumes do you propose?

21 A. We're proposing average injection volume of 2500
22 barrels of water per day per injection well, or 12,500
23 barrels per day for the five proposed wells.

24 Q. And what is the maximum rate?

25 A. And the maximum rate, up to 5000 barrels of water

1 per day per well.

2 Q. What is the source of the water you propose to
3 inject?

4 A. The water is produced water from the Canyon
5 formation from North and South Dagger Draw and Indian Basin
6 reservoirs.

7 Q. Will you be injecting any fresh water?

8 A. No, no fresh water.

9 Q. You are now disposing substantial volumes of
10 water in the area, are you not?

11 A. Yes, Yates Petroleum is disposing of
12 approximately 75,000 barrels per day in the Dagger Draw
13 area.

14 Q. And this will be the source of the water you use
15 for the waterflood project?

16 A. Yes, that's right.

17 Q. Will this be a closed system?

18 A. Yes, closed.

19 Q. What injection pressure does Yates propose to
20 use?

21 A. We propose a maximum injection pressure of 1520
22 p.s.i.g., but expect that we will have a vacuum at the
23 surface of these wells for quite some time, while we're
24 injecting into them.

25 Q. In any event, will Yates limit the injection

1 pressure to .2 pound per foot of depth to the top of the
2 injection interval, unless a higher pressure is authorized
3 following Division-witnessed step-rate tests?

4 A. Yes.

5 Q. What is the current status of each of the five
6 wells you're proposing to use for injection?

7 A. These five wells are either producing at marginal
8 rates or temporarily abandoned. They're currently making
9 approximately 200 barrels of oil per month and 1900 MCF per
10 month, all together.

11 Q. How will Yates monitor the injection wells to
12 ensure the integrity of the wellbore?

13 A. There will be pressure gauges on the wellhead,
14 and the annular space will be filled with an inert packer
15 fluid.

16 Q. In your opinion, will the proposed injection in
17 these wells pose any threat to underground source of
18 drinking water?

19 A. No.

20 Q. Are there freshwater zones in the area?

21 A. Yes, there's a quaternary alluvium formation that
22 produces water down to a depth of 390 feet.

23 Q. And the injection is substantially below that?

24 A. Yes. Right, no injection would be in those
25 formations.

1 Q. Are there freshwater wells within one mile of any
2 of the proposed injection wells?

3 A. Yes, there are, there are four freshwater wells.

4 Q. Are they identified --

5 A. Yes, on Exhibit 20 there's a map which
6 identifies --

7 Q. Is that on page 29?

8 A. Yes. Yes, page 29. And the four locations of
9 the freshwater wells are highlighted in green and numbered
10 1 through 4.

11 Q. Does the Exhibit also contain water analyses on
12 each of the wells?

13 A. Yes, on the eight pages following this plat there
14 are analyses on each of the water samples from these four
15 freshwater wells.

16 Q. Are the wells in the project area completed and
17 cased so as to prevent problems with any of the water
18 wells?

19 A. Yes.

20 Q. Have you examined all available geologic and
21 engineering data on this reservoir, and as a result of that
22 examination have you found any evidence of open faults or
23 hydrologic connections between the injection interval and
24 any underground source of drinking water?

25 A. Yes, I've examined the data, and no, I have not

1 found any evidence of faults or hydrologic connections.

2 Q. Let's go to Exhibit Number 21. What is this?

3 A. This is an application for the recovered oil tax
4 rate for the enhanced oil recovery project.

5 Q. Does this application contain all information
6 required by the Division and meet all the requirements of
7 their rules?

8 A. Yes, all the required data is attached.

9 Q. What are the estimated additional capital costs
10 to be incurred in this project?

11 A. Well, \$1.34 million for additional facilities,
12 and total cost -- a total investment of \$7.3 million.

13 Q. How much additional production do you expect to
14 obtain from the project area?

15 A. About 2.5 million barrels of oil and 4.4 BCF of
16 gas.

17 Q. And what is the total value of this production?

18 A. Approximately \$73 million, based on \$25 per
19 barrel for oil and \$4.16 per MCF.

20 Q. Does Yates Exhibit 21, the production graph
21 included, show the production history and the production
22 forecast for oil, gas and water from the project area?

23 A. Yes, this is the same production plot that we
24 looked at before, and it shows the history since 1987 and
25 forecast through the waterflood.

1 Q. Is unitized management and further operation of
2 the portion of the pool involved in this Application
3 necessary to effectively carry on the secondary recovery
4 operations?

5 A. Yes, it is.

6 Q. Will unitized operation prevent the waste of
7 hydrocarbons?

8 A. Yes, and it will...

9 Q. And will approval of the Application and the
10 implementation of this waterflood project be in the best
11 interest of conservation and the protection of correlative
12 rights?

13 A. Yes, it will.

14 Q. Were Exhibits 17 through 21 prepared by you or
15 compiled under your direction?

16 A. Yes, they were.

17 MR. CARR: Mr. Stogner, at this time we'd move
18 the admission into evidence of Yates Petroleum Corporation
19 Exhibits 17 through 21.

20 EXAMINER STOGNER: I do not seem to be able to
21 find my Exhibit 21.

22 Exhibits -- What did you say, 16 --

23 MR. CARR: 17 through 21.

24 EXAMINER STOGNER: Exhibits 17 through 21 will be
25 admitted into evidence at this time.

EXAMINATION

1
2 BY EXAMINER STOGNER:

3 Q. Okay, I'm referring now to Exhibit Number 19. Is
4 it my understanding that the -- the payout factor, 70
5 percent, is based on acreage, and the other 30 percent is
6 based on primary? And that's as of January 1st, 2003?

7 A. Yes.

8 Q. Okay. And then when I look at this map I see
9 that there's a heavy black line that looks like it
10 corresponds to that date; is that correct?

11 A. That's correct.

12 Q. Okay. Now, you've given me in Exhibits 18 and 19
13 primary production. How many wells does this represent?
14 Is it a floating number --

15 A. Approximately 115, and yes -- well, there's --
16 the number of active wells changes from time to time, but
17 it's approximately 115 historical wells in the area.

18 Q. And right now you say there's currently 103; is
19 that correct?

20 A. Yes.

21 Q. So anywhere between 115 and 103, at least in the
22 latter stages. Perhaps some of the early numbers might
23 represent a smaller number?

24 A. Yes.

25 Q. What is the average daily production for a well

1 out here in this pool --

2 A. Well --

3 Q. -- in your area?

4 A. -- that would be approximately 3 1/2 barrels a
5 day. We're making about 350 barrels a day out of all of
6 them right now.

7 Q. What's your better ones showing?

8 A. I haven't looked at that lately. I think the
9 better ones are probably down to approximately 50 barrels a
10 day.

11 Q. And would that be indicative of a new well, one
12 of these high --

13 A. Yes, there were a couple of wells drilled in
14 about 2000 that were new wells with horizontal sections,
15 and they started out producing pretty well and have
16 declined rapidly since then.

17 Q. Now, in Phase 1 and the first five injection
18 wells, that's all over on the west side. What is the
19 average well over here? Do you have any of these
20 horizontal wells, any of these good wells, these 50-
21 barrels? What's --

22 A. Those two wells were in Section 21 on the east
23 side.

24 Q. Oh, that's on the east side?

25 A. Yes.

1 Q. But your initial injection is going to be over on
2 that west side?

3 A. That's right. We felt like the waterflood might
4 respond best on the west side.

5 Q. Okay. Now, earlier on when the geologist was
6 talking, I did notice some -- what appears to be horizontal
7 wells, especially over on the east side. They were shown
8 on some of the maps as a red line that connect a red hollow
9 dot and a red solid dot --

10 A. Yes, I believe the hollow dot would be the
11 surface location of the well, and then the solid dot would
12 be the bottomhole location.

13 MR. HUMPHREY: That's correct.

14 Q. (By Examiner Stogner) So it looks like you have
15 about five or six horizontal wells in the unit area, over
16 on the west side? Is that your memory?

17 A. Two, four -- Six, I believe.

18 Q. About six.

19 MR. HUMPHREY: On the east side.

20 Q. (By Examiner Stogner) Now, in your Phase 2, are
21 any of these horizontal wells going to be injectors?

22 A. No, they will not.

23 Q. Okay. I'm sure this information shows up on your
24 data but I've got a lot of information here to look.

25 A. Yes.

1 Q. On the five injection wells, are there any new
2 perforations, or are you just going to go into the
3 existing?

4 A. No, we plan to go in and work them over and put
5 in new perforations, and we'll open up the whole section.

6 Q. And that is shown in your diagrams, I would
7 assume.

8 A. Yes, there's a schematic showing before and after
9 on the injection wells.

10 Q. Okay. Now, we were -- I was discussing with your
11 geologist earlier whenever I was looking at his cross-
12 section, he depicted the dolomite as that pink interval.
13 And these perforations, are they going to cover the whole
14 dolomite section, or are they going to be concentrated in
15 the middle or up toward the top?

16 A. No, they'll be concentrated above the oil-water
17 contact. And, you know, that number can vary, exactly
18 where the oil-water contact will be in a particular well.
19 So the perfs will concentrate on porous intervals above the
20 oil-water contact.

21 Q. And how were your five first wells picked for
22 your injection in your Phase 1?

23 A. Well, we picked the west side of the waterflood
24 to start with, because it felt like that would be where
25 we'd get the best response, and the five wells are actually

1 closest to the proposed water-injection plant.

2 And also in general, the west side of the area is
3 at a lower pressure, and so it felt like it needs the
4 waterflood.

5 Q. What is that reservoir pressure on that west side
6 now?

7 A. Well, it goes down as low as 300 p.s.i. It
8 varies from well to well.

9 Q. And how about on the east side? What's the
10 reservoir pressure?

11 A. It may be as high as 800 p.s.i. in some wells.

12 Q. Will there be any stimulation on the injection
13 wells' perfs after you re-perf?

14 A. Yes, I think we'll probably do some small acid
15 jobs.

16 Q. Again, this information, I'm sure, is covered in
17 your C-108, but the proposed injection water, that's --
18 even though they're from three different pools, is that all
19 the same, upper Pennsylvanian --

20 A. Yes.

21 Q. -- water?

22 A. Yeah, all the water is handled together and it's
23 very similar in the three pools. The pools are all in
24 pressure communication with each other. It's a -- one
25 large, continuous reservoir.

1 Q. Now, you had mentioned, I believe, early on in
2 the testimony about other upper Pennsylvanian injection
3 projects, waterflood projects. What are some of the closer
4 ones to this area?

5 A. Actually, that was Mr. Humphrey who mentioned
6 that --

7 Q. Okay.

8 A. -- and actually, I don't know of any myself. I
9 can't think of one --

10 MR. HUMPHREY: Most of them are --

11 EXAMINER STOGNER: Mr. Humphrey, yeah, do you --

12 MR. HUMPHREY: Most of them are in Texas, the
13 eastern shelf of the Midland Basin. Almost every major
14 upper Pennsylvanian field is under either secondary or
15 tertiary recovery, and that includes SACROC, Jameson and
16 some of those large fields east of Midland.

17 EXAMINER STOGNER: Those would be east of Midland

18 MR. HUMPHREY: Yeah.

19 EXAMINER STOGNER: In a similar environment?

20 MR. HUMPHREY: Correct, same -- they're lime- --
21 The only difference is, they're limestones to dolomite, but
22 the pore types are very similar. You get vuggy and
23 intercrystalline porosity with some minor fracturing. The
24 reservoir looks very similar.

25 Q. (By Examiner Stogner) This field was discovered

1 in -- What are some of the older wells in this area?

2 A. There was some production from this area in 1976.
3 I guess that's the earliest production here, so in the area
4 before that, and that was -- that would be up there in
5 Section 18 and also in Section 30, are the oldest wells.

6 Q. We haven't covered this, but help me remember. I
7 don't have my booklet here. What are the spacing rules in
8 this pool?

9 A. We have 160-acre spacing with up to four wells.

10 Q. And let's see, what's the well-location
11 requirements? Is that 660 from the outer boundary?

12 A. I believe that's right, yes.

13 EXAMINER STOGNER: Now if I remember right, Mr.
14 Carr, our secondary recovery rules and regulations go back
15 and they discuss normally the 40-acre spacing toward the
16 outer boundary of the unitized area. But you're not asking
17 for any special privileges on that aspect?

18 MR. CARR: No, we're not.

19 EXAMINER STOGNER: It will change internally,
20 perhaps, but not around the unitized area; is that --

21 MR. CARR: No, we're not.

22 Q. (By Examiner Stogner) Okay, I'm referring again
23 to Exhibit Number 19. This is the historical production
24 data.

25 A. Yes.

1 Q. And it looks like, as you're showing here, about
2 the middle of 1995 was the peak year.

3 A. Yes.

4 Q. What happened about the middle of 1998, first
5 part of 1999? I see your neat little lines crumble.

6 A. Yeah, there was low oil prices then. I guess we
7 reduced production.

8 Q. There wasn't a plant or a gas plant go down or
9 anything such as that?

10 A. Not that I'm aware of.

11 EXAMINER STOGNER: I have no other questions of
12 this witness, nor any of your other witnesses.

13 Do you have anything further?

14 MR. CARR: Mr. Stogner, that concludes our
15 presentation in this case.

16 EXAMINER STOGNER: Would you provide me a rough
17 draft?

18 MR. CARR: Yes, sir, I will. Can I have 10 days?

19 EXAMINER STOGNER: On top of your other 10?

20 MR. CARR: No.

21 EXAMINER STOGNER: Total, concurrent 10?

22 MR. CARR: Yes, sir.

23 EXAMINER STOGNER: Okay, you have 10 days, sir.
24 You have my blessing for 10 days. Earlier if you wish.

25 With that, this case, the consolidated cases,

1 13,227 and 13,228, will be taken under advisement at this
2 time.

3 MR. CARR: Thank you.

4 EXAMINER STOGNER: Thank you, gentlemen.

5 (Thereupon, these proceedings were concluded at
6 10:41 a.m.)

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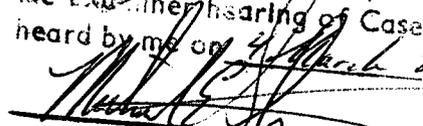
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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case Nos. 13227 and 13228
heard by me on 4 April 2004.

Michael J. Stogner, 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 March 6th, 2004.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 16th, 2006