

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

IN THE MATTER OF THE HEARING CALLED BY )  
THE OIL CONSERVATION COMMISSION FOR THE )  
PURPOSE OF CONSIDERING: )  
APPLICATION OF HARVEY E. YATES )  
COMPANY FOR EXPANSION OF A UNIT AREA, )  
OTERO COUNTY, NEW MEXICO )

CASE NO. 14,000  
de novo

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

BEFORE: MARK E. FESMIRE, CHAIRMAN  
JAMI BAILEY, COMMISSIONER  
WILLIAM C. OLSON, COMMISSIONER

RECEIVED  
2008 MAY 21 AM 10 03

May 9th, 2008

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, MARK E. FESMIRE, Chairman, on Friday, May 9th, 2008, 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

May 9th, 2008  
 Commission Hearing  
 CASE NO. 14,000, *de novo*

	PAGE
EXHIBITS	4
APPEARANCES	5
APPLICANT'S WITNESSES:	
<u>VERNON D. DYER</u> (Landman)	
Direct Examination by Mr. Bruce	7
Cross-Examination by Ms. Altomare	23
Examination by Commissioner Bailey	41
Examination by Chairman Fesmire	43
Redirect Examination by Mr. Bruce	50
<u>GORDON K. YAHNEY</u> (Geologist)	
Direct Examination by Mr. Bruce	52
Cross-Examination by Ms. Altomare	64
Examination by Commissioner Bailey	86
Examination by Commissioner Olson	91
Examination by Chairman Fesmire	92
Redirect Examination by Mr. Bruce	103
Further Examination by Commissioner Olson	108
<u>VERNON D. DYER</u> (Landman) (Recalled)	
Direct Examination by Mr. Bruce	110
Examination by Chairman Fesmire	111
OPENING STATEMENT BY MS. ALTOMARE	114

(Continued...)

## DIVISION WITNESS:

GLENN von GONTEN (Senior Hydrologist,  
Environmental Department, NMOCD)

Direct Examination by Ms. Altomare	116
Voir Dire Examination by Mr. Bruce	126
Direct Examination (Resumed) by Ms. Altomare	128
Cross-Examination by Mr. Bruce	133
Examination by Commissioner Bailey	142
Examination by Commissioner Olson	157
Redirect Examination by Ms. Altomare	158
Recross-Examination by Mr. Bruce	162
Further Examination by Commissioner Olson	164
Examination by Chairman Fesmire	165

## CLOSING STATEMENTS:

By Mr. Bruce	166
By Ms. Altomare	172

## REPORTER'S CERTIFICATE

182

\* \* \*

## E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	9	22
Exhibit 2	12	22
Exhibit 3	12	22
Exhibit 4	12	22
Exhibit 5	13	22
Exhibit 6	14	22
Exhibit 7	54	63
Exhibit 8	55	63
Exhibit 9	57	63
Exhibit 10	58	63

\* \* \*

Division	Identified	Admitted
Exhibit A	125	127
Exhibit B	125	127
Exhibit C	125	127

\* \* \*

Additional submission by the Division, not offered or admitted:

	Identified
Bennett Ranch, schematic cross-section	75

\* \* \*

## A P P E A R A N C E S

## FOR THE COMMISSION:

CHERYL BADA  
Assistant General Counsel  
Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

## FOR THE APPLICANT:

JAMES G. BRUCE  
Attorney at Law  
P.O. Box 1056  
Santa Fe, New Mexico 87504

## FOR THE DIVISION:

MIKAL M. ALTOMARE  
Assistant General Counsel  
Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2 9:05 a.m.:

3           CHAIRMAN FESMIRE: The next cause before the  
4 Commission is Case Number 14,000. It's the *de novo*  
5 Application of Harvey E. Yates Company for expansion of a  
6 unit area in Otero County, New Mexico.

7           Are counsel present for this case?

8           MR. BRUCE: Yes, Mr. Chairman.

9           MS. ALTOMARE: Yes, sir.

10          CHAIRMAN FESMIRE: Are you ready to proceed?

11          MS. ALTOMARE: Yes.

12          CHAIRMAN FESMIRE: Okay, why don't we begin with  
13 the entry of appearance by counsel?

14          MR. BRUCE: Mr. Chairman, Jim Bruce of Santa Fe,  
15 representing Harvey E. Yates Company. I have two  
16 witnesses.

17          CHAIRMAN FESMIRE: Ms. Altomare?

18          MS. ALTOMARE: Mikal Altomare on behalf of Oil  
19 Conservation Division. I have one witness.

20          CHAIRMAN FESMIRE: Since it's Yates' Application,  
21 I assume you're going to begin, Mr. Bruce?

22          MR. BRUCE: I would prefer to, sir.

23          CHAIRMAN FESMIRE: Okay.

24          Ms. Altomare, did you -- ?

25          MS. ALTOMARE: I just -- I guess you're --

1           CHAIRMAN FESMIRE: Mr. Bruce, do you have an  
2 opening statement?

3           MR. BRUCE: Mr. Chairman, I'd prefer just to  
4 proceed with my witnesses.

5           CHAIRMAN FESMIRE: Okay. Ms. Altomare, do you  
6 have an opening statement, or would you like to reserve it  
7 for the beginning of your case?

8           MS. ALTOMARE: I'd like to reserve it for the  
9 beginning of my case.

10          CHAIRMAN FESMIRE: Mr. Bruce, you said you had  
11 two witnesses?

12          MR. BRUCE: Yes, sir.

13          CHAIRMAN FESMIRE: Will they at this time stand  
14 to be sworn?

15                 (Thereupon, the Applicant's witnesses were  
16 sworn.)

17          CHAIRMAN FESMIRE: Mr. Bruce, are you ready to  
18 begin?

19          MR. BRUCE: Yes, sir.

20                         VERNON D. DYER,  
21 the witness herein, after having been first duly sworn upon  
22 his oath, was examined and testified as follows:

23                                 DIRECT EXAMINATION

24 BY MR. BRUCE:

25           Q. Will you state your name for the record?

1 A. It's Vernon D. Dyer.

2 Q. And what is your occupation?

3 A. I'm a landman, petroleum landman.

4 Q. For the Commission, would you please summarize  
5 your educational and employment background?

6 A. I have a bachelor's degree with a triple major in  
7 geology, business and history. I've done graduate work at  
8 Texas Tech.

9 My background, I've been in the oil industry for  
10 41 years. I worked for Texaco a little over 11 years, then  
11 went with Santa Fe Energy and worked with them till I took  
12 early retirement in '95. Moved to Roswell, went to work  
13 for Harvey E. Yates in '98, and last Wednesday I retired  
14 from Harvey E. Yates.

15 Q. Have you been retained by Harvey E. Yates Company  
16 for the purposes of this hearing?

17 A. Yes, I have.

18 Q. Now your jobs with Texaco, Santa Fe Energy and  
19 Heyco, have you been a landman for all of those companies?

20 A. Yes, I have.

21 Q. And primarily in the Permian Basin of west Texas  
22 and southeast New Mexico?

23 A. Primarily, yes.

24 Q. And at Heyco were you the landman in charge of  
25 the Bennett Ranch Unit?

1           A.    When I came on board, yes, I took over the  
2 Bennett Ranch Unit.

3           Q.    And are you familiar with the land matters  
4 involved in this Application?

5           A.    Yes, I am.

6           MR. BRUCE: Mr. Chairman, I'd tender Mr. Dyer as  
7 an expert petroleum landman.

8           MS. ALTOMARE: No objection.

9           CHAIRMAN FESMIRE: Noting no objection, Mr. Dyer  
10 will be so accepted as an expert petroleum landman.

11          Q.    (By Mr. Bruce) Mr. Dyer, could you identify  
12 Heyco Exhibit 1 for the Commission?

13          A.    It's the land map of the unit, being -- the blue  
14 outline is the unit existing now, the orange outline is the  
15 proposed unit outline.

16          Q.    What type of lands are within the unit area?

17          A.    State and federal.

18          Q.    And that would pertain to both the existing unit  
19 and the unit as it may be expanded?

20          A.    Yes, that is correct.

21          Q.    In looking at the area around the unit, starting  
22 off with Township 26 South, Range 12 East, Section 16, what  
23 type of land is that?

24          A.    That is state acreage, state mineral owner.

25          Q.    And if you look on the very southeast corner of

1 the unit, there's a Section 32, which I believe is 26  
2 South, 13 East. What type of land is that?

3 A. That is also state minerals.

4 Q. What type of land is -- are all of the rest of  
5 the sections adjoining the unit area as expanded?

6 A. It is federal acreage controlled by the BLM.

7 Q. What is the status of all of the -- oh, and then  
8 if you go to, excuse me, 25 South -- I forgot, there is one  
9 additional thing, 25 South, 12 East, Section 36, just to  
10 the north of the unit, what type of land is that? Is that  
11 state land?

12 A. That's state land.

13 Q. Okay. Now what is the status of all of the  
14 acreage adjoining the expanded unit, insofar as the leasing  
15 status goes?

16 A. All of it is unleased except Section 34 in 12-26,  
17 and Heyco has the oil and gas lease on that.

18 Q. Okay, so the only offsets are the BLM, the State  
19 Land Office and Heyco?

20 A. That is correct.

21 Q. Okay. Except of course to the south. What forms  
22 the southern boundary of the unit?

23 A. That is the Texas state line, and the land below  
24 that is university lands.

25 Q. Okay. How many wells have been drilled to date

1 in the unit area?

2 A. We have two completed wells in it.

3 Q. What type of wells are they? Oil or gas?

4 A. They're natural gas.

5 Q. What is the OCD's well spacing for gas wells in  
6 this area at this time?

7 A. 160 acres.

8 Q. Okay. What has been Heyco's proposal with  
9 respect to wells within the unit area?

10 A. In our discussion with the BLM we felt that it  
11 would be better if we just drilled one per section at this  
12 time. Instead of trying to go on a 160 basis, go ahead and  
13 go on a 640. The indication is, the one well would drain  
14 the full section. So that's what we've been discussing  
15 with the BLM.

16 Q. Okay. And is that the reason -- and -- is that  
17 the reason for expanding the unit, to include full  
18 sections?

19 A. Well, to include the -- or to comply with the OCD  
20 rules of 160 and to bring in the full section-type unit --

21 Q. Okay --

22 A. -- or proration unit.

23 Q. -- and that is the basic reason for the expansion  
24 of the unit?

25 A. That is correct.

1 Q. What is Exhibit 2, Mr. Dyer?

2 A. That is the order from the OCD hearing -- no --  
3 yeah, it's the order from the OCD hearing in 1995 for the  
4 original establishment of the unit.

5 Q. Okay, and it approved the unit area for the lands  
6 described in Exhibit A to that order, correct?

7 A. Yes.

8 Q. Does the unit agreement -- is the unit agreement  
9 depth-restricted?

10 A. No, it is not.

11 Q. So it covers all formations?

12 A. That is correct.

13 Q. Is it restricted as to type of hydrocarbons, oil  
14 or gas?

15 A. No, it's not. It's exploratory unit, which means  
16 all -- everything is available.

17 Q. Okay. What is Exhibit 3?

18 A. That is the proposed -- that is the acreage in  
19 the proposed outline of the expansion.

20 Q. Okay, that would be the complete description of  
21 the expansion?

22 A. Right, that is correct.

23 Q. And what is Heyco Exhibit 4?

24 A. That is the preliminary approval from the State  
25 Land Office for us expanding the acreage, with the caveat

1 that it comes to the BLM.

2 Q. Or the OCD?

3 A. The OCD, I'm sorry, yes. Thank you. Too many  
4 letters.

5 Q. And what is Exhibit 5?

6 A. That is approval from the BLM for the expansion  
7 of the Bennett Ranch Unit, without any conditions on it.

8 Q. And attached to that approval, is there a  
9 complete description, a new Exhibit B to the unit agreement  
10 containing a complete description of all leases?

11 A. Yes, there is.

12 MR. BRUCE: Mr. Chairman, I just noticed  
13 something. My copy of Exhibit 5 -- and it may be on yours  
14 -- the very last page of it is an e-mail from a client,  
15 which I think you can safely -- regarding some title  
16 information, that I think you can safely take and throw  
17 away. It wasn't meant to be part of this exhibit.

18 CHAIRMAN FESMIRE: Exhibit 5?

19 MR. BRUCE: Exhibit 5, yeah. Maybe it wasn't on  
20 yours, but it was on mine.

21 CHAIRMAN FESMIRE: I think the last page I have  
22 on Exhibit 5 was just the signature page --

23 MR. BRUCE: Okay --

24 CHAIRMAN FESMIRE: -- from the --

25 MR. BRUCE: -- I must have gotten a little too

1 enthusiastic with the stapler in my office.

2 Q. (By Mr. Bruce) Finally, insofar as your exhibits  
3 go, Mr. Dyer, were the BLM and the State Land Office  
4 notified of the original Division Hearing in this matter?

5 A. Yes, they were.

6 Q. And is that reflected in the affidavit of notice  
7 submitted as Exhibit 6?

8 A. Yes, it is.

9 Q. And of course, as you previously testified, the  
10 Land Office and the BLM would be the only offsets to the  
11 unit as expanded?

12 A. That is correct.

13 Q. Now just a few more questions, Mr. Dyer.

14 You said two wells have been drilled to date in  
15 the unit. Approximately when were those two wells drilled?

16 A. One was drilled in 1997, and the other was  
17 drilled in 2001.

18 Q. And were they on state or federal acreage?

19 A. Federal acreage.

20 Q. What -- Why haven't wells been drilled since that  
21 time?

22 A. Because the RMP that was in place at the time  
23 allowed for drilling and completing but it did not allow  
24 for producing and transport --

25 Q. Okay, you --

1 A. -- so we had to re-write the RMP for production.

2 Q. And what is a -- define the -- what is the R- --  
3 what does RMP stand for?

4 A. Oh, RMP is the resource management plan for an  
5 area that each BLM office has to present.

6 Q. Okay, so that's a BLM document?

7 A. Yes.

8 Q. Okay. Was a -- Was an RMP, a resource management  
9 plan, for further drilling and production eventually  
10 approved by the BLM?

11 A. Yes, it was.

12 Q. But is that now tied up in litigation?

13 A. Yes, it is, once they issued the record of  
14 decision on it, the Attorney General from the State of New  
15 Mexico, along with some -- and some wildlife foundations,  
16 filed an action against it, to have it set aside and start  
17 all over again.

18 Q. Okay. And as a result, there has been -- Heyco  
19 has been unable to further explore the unit area since  
20 about 2001?

21 A. Yes, that is correct.

22 Q. Now you've read the order that was issued by the  
23 Division in this matter, have you not?

24 A. Yes, I have.

25 Q. And the order made some references to possible

1 contraction of the unit?

2 A. Yes.

3 Q. Is there a provision in the unit agreement itself  
4 providing for contraction?

5 A. Yes, it's an exploratory unit agreement that sets  
6 a time limit for exploration, which at certain times it  
7 contracts automatically, and anything that is producing or  
8 in a PA, which is a participating area, remains in the  
9 unit, and everything else falls out.

10 Q. Okay. Now what was the contraction period in the  
11 unit agreement?

12 A. Well, it was -- originally it was five years from  
13 the date of the unit.

14 Q. Has that been extended?

15 A. That -- because of the legal problems and  
16 everything, that has been extended by the BLM.

17 Q. Does that five-year contraction period also  
18 provide for continuous development if there's continuous  
19 development at the end of that five years?

20 A. Yes, at the end of five years you make an  
21 application with an authorized officer, and they can extend  
22 the exploration period if you haven't completed your  
23 drilling program.

24 Q. And you mentioned the PA or a participating area.  
25 What -- just briefly, what is a PA?

1           A.    Well, a PA is the -- let me get it for you  
2 correctly here -- the acreage deemed reasonably prudent to  
3 be productive of unitized substance in paying quantities.  
4 And that's in the unit agreement.

5           Q.    Okay.

6           A.    Come right out of that.

7           Q.    Our next witness will get into this, but have  
8 participating areas been approved for the two wells or  
9 certain zones within the unit area?

10          A.    Yes, they have.

11          Q.    And for which producing -- or which producible  
12 formations?

13          A.    The 1Y is for the Mississippian, and for the 25-1  
14 it's the Canyon.

15          Q.    Okay.  Were there original and expanded PAs for  
16 both of those zones?

17          A.    Yes, there was.

18          Q.    Okay.  Were they approved by the BLM and the Land  
19 Office?

20          A.    Yes, they were.

21          Q.    Was the Oil Conservation Division notified of the  
22 participating areas and the participating area expansions?

23          A.    Yes, they were.

24          Q.    Did they ever deny the participating area or  
25 participating area expansions?

1 A. No, they did not.

2 Q. Mr. Dyer, also in the order of the Division  
3 which denied the unit expansion, there was a discussion of  
4 the original target, which apparently was 40-acre oil; is  
5 that correct?

6 A. That is correct.

7 Q. And at least to this date, the discoveries have  
8 been gas?

9 A. That is correct.

10 Q. Did the order talk about the potential for gas  
11 lines -- gas pipelines, due to the discovery of gas?

12 A. Yes, it did.

13 Q. In your opinion, would surface use be less if  
14 this is a gas-producing unit?

15 A. Be much less of a gas-producing unit.

16 Q. The oil spacing under the Division's general  
17 rules is --

18 A. -- 40 acres.

19 Q. And your proposal to the BLM is to develop the  
20 gas resource on one well per --

21 A. -- 640 at the present time, yes.

22 Q. Okay. Now when you have more wells, aren't there  
23 more facilities, roads, *et cetera*?

24 A. Yes, there's much more on the -- just getting to  
25 the -- there's a lot more there.

1 Q. Okay, so there could be more roads. What other  
2 type of equipment for oil wells?

3 A. The oil wells we have to use, they have to set up  
4 scrubber tanks for one, or set up separators, and besides  
5 putting a natural gas line or an oil line in there, we'd  
6 have to put a casinghead gas pipeline also.

7 Q. So there would be two pipelines --

8 A. Two pipelines --

9 Q. -- for each oil wells?

10 A. -- yes. Then --

11 Q. Would there also be pumps and electric lines?

12 A. Electricity, to electrify them, and there would  
13 be electric lines going all through there, to each well.  
14 It would just turn it into a regular oilfield where every  
15 40 acres you're going to have a pumping jack and either  
16 have to put a central battery somewhere that's going to  
17 cause a -- numerous pipelines going to the central battery,  
18 both oil and water, and then we'll have pumping from there  
19 out, somewhere else we'll have it all trucked out, which  
20 will cause truck traffic going on, whereas the natural gas,  
21 we just have one gathering line running through there,  
22 which the BLM has already approved the right-of-way, we  
23 just can't build a pipeline --

24 Q. So a right-of-way has been approved, but --

25 A. Yes.

1 Q. -- but you have not been able to build that  
2 pipeline?

3 A. Because of the RMP, wouldn't let us build a  
4 pipeline, we have to wait till the new one is approved. So  
5 we've got the approved right-of-way right now for the 1Y  
6 and the 25-1.

7 Q. Now if the unit isn't expanded, could that lead  
8 to more facilities than if the unit area is expanded?

9 A. Yes, it will, because we still have the oil and  
10 gas leases, and we -- still, our main function is to find  
11 petroleum products. So instead of being into a unit well,  
12 it would be a nonunit well, and then we'd definitely have  
13 to keep separated with different facilities.

14 Q. With an expanded unit area, all of the facilities  
15 could be centralized?

16 A. Right, we could centralize them.

17 Q. And if there is acreage -- leased acreage outside  
18 the unit, that would have to have it separate facilities,  
19 to comply with various Division rules?

20 A. Yes, it would.

21 Q. Now Mr. Dyer, you said your -- you've been in the  
22 business now for 40-plus years?

23 A. Yes, that is correct.

24 Q. And as part of your duties as a landman at the  
25 various companies that you worked for, have you helped in

1 drilling in wells, whether wildcat wells or development  
2 wells?

3 A. Yes.

4 Q. Quite a number of wells?

5 A. Yes, quite a few, we've made -- with both  
6 companies, we became -- we -- Texaco was very active here  
7 when we -- when I was with Santa Fe and we moved into New  
8 Mexico and opened our operations, we went from twentieth  
9 producer to number two or three in natural gas production  
10 and three or four in oil production in the state of New  
11 Mexico.

12 So our facility really -- our operations really  
13 increased.

14 Q. When Heyco or Santa Fe Energy or Texaco submitted  
15 APDs to the Oil Conservation Division for wildcat wells,  
16 did you ever have to submit economics on the well to the  
17 OCD?

18 A. No, we never submitted economics on anything that  
19 I know of.

20 Q. And the Bennett Ranch Unit is an exploratory  
21 unit, is it not?

22 A. That is correct.

23 Q. And the wells drilled were wildcat wells, were  
24 they?

25 A. Yes, and the next ones will be too.

1 Q. And as part of your duties with your various  
2 employers, were you also in charge of obtaining approval  
3 for various exploratory units?

4 A. Yes.

5 Q. And did the Division ever require you -- your  
6 company to submit economics on the development of an  
7 exploratory unit to obtain approval?

8 A. No, they never have.

9 Q. Mr. Dyer, were Exhibits -- Heyco Exhibits 1  
10 through 6 either prepared by you or under your supervision  
11 or compiled from company business records?

12 A. That is correct.

13 Q. And in your opinion, is the granting of the unit  
14 expansion in the interests of conservation and the  
15 prevention of waste?

16 A. Definitely, in my opinion.

17 MR. BRUCE: Mr. Chairman, I'd move the admission  
18 of Heyco Exhibits 1 through 6.

19 CHAIRMAN FESMIRE: Any objection?

20 MS. ALTOMARE: No objection.

21 CHAIRMAN FESMIRE: Exhibits 1 through 6 will be  
22 admitted.

23 MR. BRUCE: And I pass the witness.

24 CHAIRMAN FESMIRE: Ms. Altomare.

25 MS. ALTOMARE: Thank you.

## CROSS-EXAMINATION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

BY MS. ALTOMARE:

Q. Were you -- Mr. Dyer, were you with the company when the original Application went through in 1995?

A. No, I was not.

Q. You had indicated that there were two wells that have been drilled on this unit that were completed --

A. Yes.

Q. -- correct?

In fact, the first well that was drilled actually was attempted but was not completed; isn't that right?

A. Yes.

Q. Okay. Do you know why -- Can you explain to the Commission why that occurred?

A. No. I could, but it wouldn't be as accurate as letting Gordon do it --

Q. Okay, it would --

A. -- our geologist.

Q. -- be more appropriate --

A. He was -- he was actually on the rig. I wasn't even --

Q. Okay.

A. -- well, no, I wasn't even employed at that time.

Q. Okay. Are you familiar with the issues that were involved -- the problems that were encountered, and are you

1 involved at all in addressing those issues for future  
2 drilling?

3 A. Am I personally involved?

4 Q. I mean, are you one of the people involved -- in  
5 the company that would be involved in addressing those  
6 issues for future drilling on this unit?

7 A. No, I would not, that would --

8 Q. Okay.

9 A. -- be geology.

10 Q. You had indicated that preliminary approval was  
11 given by the State Land Office, and you acknowledged that  
12 they did also put in there that the OCD needs to also give  
13 approval before their approval is confirmed; is that right?

14 A. Yes, that is correct.

15 Q. Okay. And I think you stated that you had also  
16 received approval from the BLM, but no conditions had been  
17 given in their approval; is that right?

18 A. Correct.

19 Q. But in the actual operations agreement, it's  
20 required that all expansion approval -- whether or not it's  
21 actually stated in the BLM approval itself, any approval of  
22 an expansion actually has to be approved by the OCD as  
23 well?

24 A. No, it doesn't state that.

25 Q. Okay, do you have the operations agreement in

1 front of you?

2 A. The -- what -- which operations agreement are  
3 you --

4 Q. You had referred to something earlier during your  
5 testimony, the Bennett Ranch Unit unit agreement.

6 A. Okay, no, I do not.

7 Q. Okay.

8 A. The request from the BLM was a request to come  
9 through here, not a requirement.

10 Q. Okay. Would it surprise you to know that it's a  
11 requirement from the BLM in the unit agreement for the  
12 development and operation of an exploratory unit that the  
13 expansion or contraction upon approval by the AO, the Land  
14 Commissioner and the Division, become effective as of the  
15 date prescribed by the notice, that the OCD has to approve  
16 it as well?

17 A. It said the OCD has to approve it as well?

18 Q. Yeah, would that surprise you?

19 A. Yes.

20 MS. ALTOMARE: This hasn't been made an exhibit,  
21 but I'm going to go ahead -- May I approach the witness?

22 CHAIRMAN FESMIRE: You may.

23 Q. (By Ms. Altomare) Does this look familiar to you?

24 A. Yes, that title looks familiar. Is all of it  
25 here? Is this the whole thing?

1 Q. Yeah, it's an unexecuted copy, I believe, that  
2 was submitted with one of Heyco's previous applications to  
3 the BLM. But if you turn to page --

4 A. Then this is not an executed agreement.

5 Q. This is the version that -- this is --

6 A. No, I said, is this an executed agreement?

7 CHAIRMAN FESMIRE: Mr. Dyer, she asks the  
8 questions. You give the answer.

9 THE WITNESS: Okay.

10 Q. (By Ms. Altomare) This was submitted by Heyco,  
11 attached with one of their applications to the BLM, and it  
12 was approved for execution.

13 If you could look at page 3, subsection D -- and  
14 I could provide the Commission -- I didn't realize I would  
15 need to attach this as an exhibit. I presumed that it  
16 would be made part of the record because it was part of the  
17 original application.

18 This is the original operations agreement -- I  
19 mean the original unit agreement upon which this  
20 application was based back in 1995. This is part of the  
21 record. I'd ask the Commission to take administrative  
22 notice that this document -- is this in the record? -- I  
23 pulled this off of our court records, or OCD records.

24 CHAIRMAN FESMIRE: Any objection, Mr. --

25 MR. BRUCE: No, I don't have any objection to

1 making the unit agreement part of the record, and if the  
2 Commission would care, I could make copies and submit that  
3 as part of the record.

4 CHAIRMAN FESMIRE: Well, Ms. Altomare states that  
5 it's part of the OCD records, so it's -- we'll take  
6 administrative notice --

7 MR. BRUCE: -- of the entire OCD file?

8 CHAIRMAN FESMIRE: Yes, sir.

9 MR. BRUCE: That is perfectly fine with me.

10 MS. ALTOMARE: I apologize for not making a copy  
11 ahead of time.

12 Does counsel confirm that page 3 of that  
13 agreement, subsection D, does indeed read as I had stated?

14 MR. BRUCE: Yes.

15 MS. ALTOMARE: Okay, I just wanted to make sure  
16 that I'm not -- since my copy is not executed.

17 Q. (By Ms. Altomare) Given that that's included in  
18 the unit agreement, would you concur that even the BLM has  
19 indicated that the OCD does indeed have to approve --

20 A. I agree that --

21 Q. -- any exceptions?

22 A. -- it's in that document you have, yes.

23 Q. Okay.

24 A. I don't know whether that's the official document  
25 or not --

1 Q. Okay.

2 A. -- what you --

3 CHAIRMAN FESMIRE: Mr. Dyer --

4 THE WITNESS: I don't mean to --

5 CHAIRMAN FESMIRE: -- your attorney can bring  
6 those points up --

7 THE WITNESS: Okay.

8 CHAIRMAN FESMIRE: -- on redirect.

9 Q. (By Ms. Altomare) You have indicated that the --  
10 further development of the unit has been held up due to the  
11 RMP being in litigation?

12 A. Yes.

13 Q. That as a result, you haven't been able to do  
14 further exploration of the unit; is that right?

15 A. That is correct.

16 Q. Does that preclude Heyco from going in and doing  
17 any additional testing or evaluation of the unit?

18 A. I don't know what kind of evaluation. It doesn't  
19 preclude us from testing.

20 Q. I mean, you can go on to the unit, to the land  
21 and test the soils, test the water, you can do evaluations  
22 of the unit besides actual drilling for exploration of oil  
23 and gas, right?

24 A. Yes, we can -- well, we have to do seismic, if  
25 that's what you're talking about.

1 Q. Including seismic.

2 A. We would have to get permission -- get a special  
3 permit from the BLM to do that --

4 Q. Okay --

5 A. -- yes.

6 Q. -- and has Heyco conducted any additional seismic  
7 testing?

8 A. No, we have not.

9 Q. Okay. Have they considered doing additional  
10 seismic testing during this downtime --

11 A. Yes, we --

12 Q. -- to further --

13 A. -- have.

14 Q. -- evaluate the unit?

15 And why was the decision made not to proceed with  
16 that?

17 A. It was a management decision, because of the --  
18 so I don't know.

19 Q. Okay. So at this time, when was the last seismic  
20 data obtained on this unit?

21 A. By us?

22 Q. Yes.

23 A. I'll let Gordon answer that because he's been  
24 involved in that. I haven't been involved in any of the  
25 seismic.

1 Q. You had talked about a participating area as  
2 being an area deemed reasonably prudent to be productive of  
3 unitized substances; is that right?

4 A. Yes.

5 Q. Okay. At this point, based on the data that  
6 Heyco has in its possession, is there any data or evidence  
7 to suggest that the areas to the north are such areas that  
8 would be reasonably prudent to be productive of unitized  
9 substances and should be included in that PA area?

10 A. Which PA area are you talking about? There's two  
11 PA areas out there.

12 Q. Okay, so are you talking about -- when you're  
13 talking about the PA area, what are you talking about?

14 A. We're talking about the PA for each well.

15 Q. Okay.

16 A. That's what that well, we feel, can cover.

17 Q. Okay. What about the northern part of the unit?

18 A. We haven't got a well up there to be able to  
19 explore it, to really put it in a PA at this point.

20 Q. Okay, and you haven't -- there's no seismic data  
21 either to indicate whether or not there's --

22 A. Well --

23 Q. -- any unitized substances that are --

24 A. -- I just said the seismic is going to be handled  
25 by him.

1 Q. Okay.

2 A. Any answer I would give you would be pure  
3 speculation, because I'm not a geophysicist.

4 Q. Okay, but you did testify earlier about the  
5 contraction issue; is that right?

6 A. Yes.

7 Q. Okay. And in your opinion you don't think that  
8 there's anything to justify contracting the unit?

9 A. No, because we haven't even had the chance to  
10 actually explore the unit yet.

11 Q. Okay. But you've already testified that you  
12 haven't done any additional testing either, to assess --  
13 further assess the unit?

14 A. These two wells don't need testing. What other  
15 testing do you want us to do?

16 Q. Have you done additional testing in the northern  
17 part of the unit to further assess whether or not that part  
18 of the unit would justify contraction at this point in  
19 time?

20 A. I don't understand testing. What are you talking  
21 about we need to do to test it?

22 Q. Have you done any seismic -- You testified that  
23 you haven't done any seismic assessments.

24 A. We haven't done any seismic on it, as far as I  
25 know.

1 Q. Okay.

2 A. As far as I know. Now I told you, I'm not going  
3 to answer that --

4 Q. Okay.

5 A. -- because I don't know that.

6 Q. Okay. But you've indicated that at this point  
7 it's your contention that basically one well can drain an  
8 entire 640 --

9 A. No, we said it appears that it might, and we want  
10 to test it this way on our exploration part of the deal, to  
11 not have to be drilling every 40 acres to work our way out,  
12 so we can work our way and do some good evaluation of it.

13 Q. Okay, so -- but you are planning on approaching  
14 this unit on a 640-acre spacing approach at this point in  
15 time?

16 A. On the drilling -- on the drilling application,  
17 yes.

18 Q. Okay. Have you addressed yet how you're going to  
19 -- how and when you're going to apply for special pool  
20 rules to address the 640-acre spacing?

21 A. Have we addressed -- How and when?

22 Q. Yes.

23 A. When we have enough wells to justify that it can  
24 be done on 640.

25 Q. Okay, and have you considered what would happen

1 if you later apply for special pool rules and are denied  
2 the 640-acre spacing at a later time?

3 A. Then we would drill on 160s.

4 Q. Okay. Is there a reason that you haven't  
5 submitted the 640-acre spacing special pool rule request  
6 simultaneously with this Application, given that it's the  
7 foundation for your request for expansion?

8 A. No, it's not the foundation for a request for  
9 expansion. Our foundation is to get it so it would comply  
10 with the OCD rules of 160 spacing right now, so we can  
11 square it off. Because if we don't do it -- Once we get  
12 through there and see that it is feasible to do it with one  
13 on every 640, then we will apply for it. But we'll have  
14 geology and engineering to back it up.

15 We have been discussing this with the BLM, to  
16 cover as little land as we can without damaging it, and  
17 trying to see if this is a feasible thing.

18 Q. Okay. But haven't you testified that the basis  
19 for this expansion is that you plan to use 640-acre  
20 spacing?

21 A. If it's tested, that would be our eventual goal,  
22 yes.

23 Q. Okay.

24 A. But we're so early into the exploration,  
25 everything we do on something like this is really a

1 speculation. We're hoping that that works, but you have to  
2 test it.

3 Q. Why -- why do you think that there's potential  
4 for it to be feasible to only need 640-acre spacing?

5 A. At this point we're doing it to save the  
6 exploration, and Gordon can give you all that answer. What  
7 we're trying to do is put as little footprint out there as  
8 we can while we're trying to explore. That's all the  
9 reason we're doing -- I'm saying that from my standpoint.  
10 Gordon can give you better answers on that.

11 Q. Okay. Has there been consideration regarding the  
12 correlative-rights issues that could arise if a well is  
13 drilled too close to the perimeter of the unit on a 640-  
14 acre spacing unit?

15 A. Yes, that's been considered by Gordon, geology,  
16 when he places the wells.

17 Q. Okay.

18 A. I'm assuming. It's not my job, I don't place the  
19 wells.

20 Q. Okay. So you're not here to testify about  
21 whether or not Heyco has addressed --

22 A. We've addressed it at our meetings, yes, but I'm  
23 not the one that actually addresses it and does the  
24 platting of the well on the ground.

25 Q. Okay.

1           A.    But that's always been a concern, just like  
2 drilling as little as we can and making -- damaging as  
3 little as possible. That's our concern. That's why we've  
4 been talking about one well every section right now.

5           Q.    Okay. But you recognize that there's an issue,  
6 if you drill a well too close to the perimeter, that you  
7 could be draining property that is not part of the unit?

8           A.    I recognize that, and the people that approve the  
9 unit recognize it, but they didn't have a concern.  
10 Otherwise they would have voiced it, the State Land Office  
11 or the BLM would have voiced it to us.

12          Q.    All right, you had testified that you never  
13 before had to submit economics for an exploratory or  
14 wildcat unit or well application; is that right? --

15          A.    That's correct --

16          Q.    -- to the OCD?

17          A.    -- as far as I know, I never have.

18          Q.    Okay.

19          A.    We never have.

20          Q.    So the original application for the BLM you did,  
21 though; isn't that right?

22          A.    I don't know, I wasn't in on the original  
23 application for the BLM.

24          Q.    Would it surprise you to know that as part of the  
25 application process for an exploratory unit, the BLM does

1 require the submission of economics?

2 A. Okay, okay, I see what you're talking about.  
3 Yes, we had to submit something there, but that's not true  
4 economics. That -- you know, there is no true economics on  
5 a wildcat well.

6 Q. Right, but you submit some economic data --

7 A. -- projected, based on the wells that we think  
8 can be done.

9 Q. Okay, now --

10 A. But that was before any well was drilled.

11 Q. Exactly. And in 1995, the wells that you were  
12 predicting that were going to be drilled were 40-acre-  
13 spacing oil wells, correct?

14 A. That's because the closest well to the area was  
15 an oil well.

16 Q. Okay, and you were drilling to the Fusselman,  
17 right?

18 A. Yes.

19 Q. Okay. Now the entire nature of the unit is  
20 pretty much changed. You're drilling natural gas wells,  
21 shallower, with much different spacing, right?

22 A. No, every well we've drilled has been to the  
23 Fusselman, and the next well is going to go to the  
24 Fusselman too.

25 Q. So you still plan to drill to the Fusselman, even

1     though --

2           A.    We're still looking for it.  The whole section is  
3     open game for us --

4           Q.    Okay.

5           A.    -- and just because we didn't find it in the  
6     south end, the temperature may be better or more correct to  
7     actually get the oil production from the north end.  We  
8     don't know, we haven't been up there yet.

9           Q.    Okay, so you're still targeting both oil and  
10    gas --

11          A.    Yes.

12          Q.    -- in this unit?

13          A.    Yes.

14          Q.    Would you say the primary target of this unit has  
15    switched to gas, though?

16          A.    No, not at this point.

17          Q.    Okay.

18          A.    We would -- actually, that would be the -- Okay,  
19    let me rephrase that.  Yes, that would be the primary  
20    target, because we know it's got a good chance there.  But  
21    that secondary target is anything else that's in there.

22          Q.    Okay, so --

23          A.    That doesn't stop us from completing in a -- at a  
24    different zone.

25                   And again, Gordon can do this a lot more than I

1 can --

2 Q. Okay.

3 A. -- because he's the geologist.

4 Q. Okay. But given how much additional information  
5 has been acquired in the course of the drilling of the  
6 three wells that you have done out there, and the change of  
7 the nature of your target, why weren't new economics  
8 submitted to the BLM, given that the picture has changed?

9 A. The picture hasn't changed. That's not our -- We  
10 found two gas wells out there in two different zones, and  
11 the -- Gordon can answer all this, I can't. But that  
12 doesn't mean we've changed and gone just primarily --  
13 You're getting a little ahead of the game on economics --

14 Q. Okay.

15 A. -- in an exploration...

16 Q. Okay. But the bottom line is that you did -- or  
17 Heyco did, who you represent today, submit economics for  
18 the original application for the unit approval?

19 A. Yes, before anything was drilled.

20 Q. Okay.

21 A. And that was based on speculation.

22 Q. And they have not now submitted any additional  
23 economics to support the unit expansion? To the BLM, the  
24 State Land Office --

25 A. No --

1 Q. -- or the OCD?

2 A. -- we have not. No, we have not.

3 Q. Okay. At this point in time, how many additional  
4 wells are planned?

5 A. One.

6 Q. One.

7 A. One at a time.

8 Q. One at a time. And where is the next well  
9 planned to be drilled?

10 A. The APD was submitted in September of '06, you  
11 have a copy of it, the OCD has a copy of it. It is in  
12 Section 24 --

13 Q. Okay.

14 A. -- is that correct?

15 Q. Okay, and what is -- Again, you're drilling all  
16 the way to the Fusselman to explore for oil in this --

17 A. To explore for anything in the hole --

18 Q. Okay.

19 A. -- whether it be oil and/or gas. That's what  
20 exploration is.

21 Q. All right. And well -- more issues and water  
22 issues would be something I need to ask the geologist  
23 about, correct?

24 A. Yes.

25 Q. You said that the pipeline rights-of-way have

1 already been approved?

2 A. Yes.

3 Q. I presume that that's to be a buried pipeline, or  
4 is it to be above ground?

5 A. I think it's buried. I'll have to look at and  
6 see. It's been so long since it's been approved, I haven't  
7 read it in a long time. And we do a lot of pipelines, so I  
8 don't remember which one -- which it was.

9 Q. Do you remember the specifics about the pipeline  
10 as to the size, the diameter, that kind of thing, that's  
11 been proposed?

12 A. We -- No, I don't. I think we submitted for a  
13 bigger one than we was going to need in case we did need it  
14 when we became able to do it, but that doesn't mean it's  
15 going to be that size. It's going to be whatever size we  
16 need.

17 Q. Okay. And where is the pipeline going to be run  
18 to?

19 A. Texas state line, goes due south from the well to  
20 the Texas state line. And it has been -- had an  
21 environmental/archaeological study on it.

22 MS. ALTOMARE: I don't think I have anything  
23 additional for this witness, so I'll go ahead and pass the  
24 witness.

25 CHAIRMAN FESMIRE: Commissioner Bailey?

## EXAMINATION

1  
2 BY COMMISSIONER BAILEY:

3 Q. You're not asking for any kind of exemption or  
4 difference that would be covered under Rule 21, which is  
5 specific to Otero and Sierra Counties, are you?

6 A. We are not. We're not asking for any exemptions  
7 to anything. We're just asking to move the line out.

8 Q. And even if the expansion is denied, you could  
9 still communitize with those lands on the borders, should  
10 you find productive wells --

11 A. Yes.

12 Q. -- along the borders?

13 A. Yes.

14 Q. So a denial of the expansion would not prevent  
15 you from being able to drill on the outside borders of the  
16 unit, right?

17 A. That is correct. It wouldn't prevent us from  
18 drilling anywhere in the existing unit at this time.

19 Q. Would the expansion approval reset the clock for  
20 contraction dates that were set out in the unit agreement?

21 A. It does not, does not change that at all.

22 Q. So there's no effect on the length of time that  
23 you've been approved for contractual dates?

24 A. That is correct.

25 Q. During your tenure at Heyco, were you involved in

1 any land transactions or APDs or wells that were drilled in  
2 the Carlsbad karst area?

3 A. No, I was not. I don't remember any, for us. Do  
4 you, Gordon? You'd have to ask Gordon that, I don't know.

5 Q. Yeah, I'm just wondering if as a landman you were  
6 connected with any of those.

7 A. No, as a landman I never -- never was with that.  
8 And I was the land manager, so I should have been involved  
9 if it was there.

10 Q. Okay. I have heard in the past that there were  
11 oil and gas wells to the south of the Texas line --

12 A. That is correct.

13 Q. -- maybe even as far as Mexico, but definitely  
14 south of the New Mexico state line?

15 A. That is correct.

16 Q. And those are extremely prolific wells, aren't  
17 they?

18 A. You can talk to Gordon, he's been following them.  
19 I don't know.

20 Q. Okay, you haven't followed them as a landman?

21 A. As a landman I've just been negotiating contracts  
22 with them, I didn't --

23 COMMISSIONER BAILEY: Okay, then those are all  
24 the questions I have for you.

25 CHAIRMAN FESMIRE: Commissioner Olson?

1 COMMISSIONER OLSON: I don't have any questions.

2 EXAMINATION

3 BY CHAIRMAN FESMIRE:

4 Q. Mr. Dyer, the lands that -- to be included in the  
5 expanded unit, they're all leased by Heyco?

6 A. No, they're not.

7 Q. Who else are -- is -- holds the leases out there?

8 A. Up in Section 2 it was leased at the last -- at  
9 the land sale recently by a speculator in Las Vegas,  
10 Nevada. He buys a lot of sale, and he bought it too.  
11 Actually, he bought it, outbid me, and then he turned  
12 around and called me and asked me if I wanted to buy it.

13 Q. Okay, I'm a little confused. The map I've got  
14 shows all of Section 2 in the current unit. Or am I  
15 misreading something?

16 A. Well, the blue outline is incorrect, it comes up  
17 this way.

18 MR. BRUCE: Mr. Chairman, I plead scribner's  
19 error. I was the one who highlighted. And really, if you  
20 look at that dashed --

21 THE WITNESS: -- that dotted --

22 MR. BRUCE: -- dashed and dotted line --

23 CHAIRMAN FESMIRE: Okay.

24 MR. BRUCE: -- in the northeast part, that should  
25 actually be the northeastern boundary of the existing unit.

1 I apologize.

2 Q. (By Chairman Fesmire) Okay. So that tract that  
3 you've got marked 11a is the one that sold?

4 A. Yes, that's the one that sold.

5 Q. Okay. And --

6 A. And I can't -- not remember the gentleman's name  
7 right now.

8 Q. Okay. It looks like that's the only change on  
9 the map.

10 Then the lands in Section 18 are Heyco lands?  
11 They're leased by Heyco?

12 A. Section 18?

13 Q. Yes, on Range 13.

14 A. Yes, that is correct.

15 Q. Okay. Now what about the ones that you have  
16 marked tract 7a? Are they --

17 A. That is correct.

18 Q. That's a Heyco lease also?

19 A. Yes.

20 Q. And 8a?

21 A. That's the only lease that is not ours, that --  
22 it goes into the expanded area, is that Section 2.

23 Q. Section 2?

24 A. To that 11a.

25 Q. Tract 11a?

1 A. Tract 11a.

2 Q. Okay, but the rest of it's all Heyco lands?

3 A. Yes.

4 Q. For my edification, on exploratory units, should  
5 you establish production from wells within the exploratory  
6 unit, is that production shared by everybody in the  
7 exploratory unit?

8 A. That is correct.

9 Q. Until it's contracted?

10 A. That is correct.

11 Q. Okay.

12 A. Well, even when it's contracted, if the owner's  
13 land was contracted out, that he's still a member, he still  
14 shares it --

15 Q. Okay.

16 A. -- or she.

17 Q. If the -- Within the existing unit, is there any  
18 other operator holding leases within the current unit?

19 A. No, there's not.

20 Q. How would it change the participating percentage  
21 between the federal and state leases if the proposed  
22 expansion were approved?

23 A. As percentage in the lands?

24 Q. Uh-huh.

25 A. In the existing one, I don't have that in front

1 of me, do it? The existing one that...

2 In the expanded one here, it -- Okay, it does not  
3 -- or it does -- I take that back. It gives the state .24  
4 additional interest.

5 Q. Okay, so --

6 A. .24 percent additional interest.

7 Q. Okay, so that's about -- just a little less than  
8 7 percent in the current unit, state participation, right?  
9 Based on the land?

10 A. Based on the exhibit from the unit agreement in  
11 1995, the federal lands has 90.959591 percent and state  
12 land has 9.040409.

13 Q. So the expansion would increase the state's  
14 percentage over the -- at the expense of the federal --

15 A. Yes --

16 Q. -- some quarter of a percent --

17 A. -- it would increase it from .04 to .24.

18 Q. Have there been any other wells drilled in this  
19 exploratory unit, besides the two that have tested gas?

20 A. Not that I know of. Gor- -- that's -- Again,  
21 that's a question for Gordon.

22 Q. Okay. Now you made the statement, these two  
23 wells don't need testing. If I remember correctly, there  
24 was an application to test at least one of them for a  
25 significant period of time.

1 A. Yes, there was.

2 Q. How does that jibe with what you said, these two  
3 wells don't need testing?

4 A. Well, first of all, I'm not a geologist or an  
5 engineer, I'm a landman, and that statement was based on  
6 the fact that it was going to be too costly and we couldn't  
7 do it to test them, based on the royalties we was going to  
8 have to pay people and the amount of fees to the EPA.

9 Q. Okay. Now the two wells that are drilled, I  
10 haven't correlated the data. What sections are they in, in  
11 the current unit?

12 A. Gordon, correct me if I'm wrong --

13 Q. No, no --

14 A. -- 14? --

15 Q. -- do you know the answer?

16 A. No, I don't.

17 Q. Okay.

18 A. I do, but not off the top of my head.

19 Q. Okay, we'll ask Gordon, unless you have something  
20 there that can answer that for us.

21 A. No.

22 Q. Now you said that there were indications that one  
23 well will drain the whole section, and I remember Ms.  
24 Altomare talked to you a little bit about that. Is that  
25 something we'll have to talk to Gordon about, or where does

1 that assumption come from?

2 A. That assumption comes with our discussion with  
3 the BLM. And yes, Gordon needs to explain all that.

4 Q. Okay. Now you said that expansion of the unit  
5 would prevent waste. Would you explain to me how that  
6 occurs, what you meant when you said that?

7 A. Well, because -- it would commit waste because  
8 otherwise somebody could get a lease and come in and come  
9 right up against this area and drill while this unit is  
10 still going on.

11 But the main thing is getting it to conform. We  
12 want to be able to conform with the unit, the OCD unit --  
13 proration rules.

14 Q. Okay --

15 A. So --

16 Q. -- I think you misspoke there. You said it would  
17 commit waste. You meant prevent waste?

18 A. Prevent waste, yes.

19 Q. Okay, by -- I didn't quite understand that  
20 theory.

21 A. Okay, what -- Let's go back then.

22 Q. Okay, you said it would prevent waste by keeping  
23 somebody from snuggling up to your unit line and drilling  
24 another well?

25 A. That's correct, if the tracts were leased out

1 there, somebody could do that.

2 Q. Would that be a correlative rights issue or a  
3 waste issue?

4 A. Probably a correlative-rights issue.

5 Q. So how would --

6 A. Well -- All right, ask the question again.

7 Q. Okay.

8 A. Let me make sure I've got the right question.

9 Q. Okay. Expanding the unit area would prevent  
10 somebody from snuggling up to your unit line and drilling  
11 an additional well --

12 A. Yes.

13 Q. -- and your statement was that that would prevent  
14 waste. How would that prevent waste?

15 A. I was mistaken on that.

16 Q. But you're saying that it becomes a correlative  
17 rights issue?

18 A. Yes.

19 Q. Okay, aren't the spacing rules -- the statewide  
20 rules that would be in effect, sufficient to protect your  
21 unit from drainage in that situation, if the unit boundary  
22 were not expanded?

23 A. I don't think I know the answer to that right off  
24 the top of my head.

25 Q. But I can say this, there's nothing to stop us

1 from drilling offset there, because we have the lease on  
2 it.

3 Q. So what is the advantage of expanding the unit?

4 A. I don't know the answer to that question.

5 CHAIRMAN FESMIRE: Okay. Mr. Bruce, I have  
6 further questions. I'm assuming you'll have some redirect  
7 of this witness?

8 MR. BRUCE: Just a few.

9 REDIRECT EXAMINATION

10 BY MR. BRUCE:

11 Q. Mr. Dyer, the Division's attorney asked you about  
12 additional testing. At this point you can't drill any  
13 additional wells to test the unit?

14 A. That's correct.

15 Q. And you can't even produce the existing ones at  
16 this point?

17 A. That's correct.

18 Q. Getting back to a question that Commissioner  
19 Bailey asked you regarding whether a lease is inside or  
20 outside the unit, as a lessee you should be entitled to  
21 develop your acreage?

22 A. That is correct.

23 Q. Insofar as the correlative rights of people  
24 outside the unit, again you stated that's all state and  
25 federal acreage?

1 A. Yes.

2 Q. And if the state and federal governments were  
3 worried about protecting their correlative rights outside  
4 the unit, they could put that acreage up for lease, could  
5 they not?

6 A. That's correct.

7 Q. They cannot independently -- under statutory  
8 schemes, they cannot independently develop their own  
9 acreage? They would have to put it up for lease?

10 A. That's correct.

11 Q. And insofar as the expanded unit goes, there are  
12 benefits in unitized management, are there not?

13 A. Very much benefits there.

14 Q. It minimizes surface use?

15 A. It would minimize surface use and separate  
16 facilities on the production.

17 Q. And so you would have centralized management,  
18 centralized facilities --

19 A. Yes.

20 Q. -- rather than development on a lease-by-lease  
21 basis?

22 A. That is correct.

23 MR. BRUCE: That's all I have, Mr. Chair.

24 CHAIRMAN FESMIRE: Ms. Altomare, anything on  
25 those -- on the subject of redirect?

1 MS. ALTOMARE: I don't believe so.

2 CHAIRMAN FESMIRE: Anything further from the  
3 Commissioners?

4 COMMISSIONER BAILEY: No.

5 CHAIRMAN FESMIRE: Mr. Dyer, thank you very much.  
6 Mr. Bruce, your next witness is -- ?

7 MR. BRUCE: Call Mr. Gordon Yahney to the stand.

8 CHAIRMAN FESMIRE: Mr. Yahney, you've been  
9 previously sworn in this case?

10 MR. YAHNEY: Explain, sir?

11 CHAIRMAN FESMIRE: You've been sworn in in this  
12 case, you swore to tell the truth?

13 MR. YAHNEY: Yes, I did.

14 CHAIRMAN FESMIRE: Okay --

15 MR. YAHNEY: Yes.

16 CHAIRMAN FESMIRE: -- please take the stand.

17 GORDON YAHNEY,

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

20 DIRECT EXAMINATION

21 BY MR. BRUCE:

22 Q. Would you please state your name and city of  
23 residence for the record?

24 A. My name is Gordon Yahney, and city of residence  
25 is Roswell, New Mexico.

1 Q. Could you spell your last name for the court  
2 reporter, please?

3 A. My last name is spelled Y-a-h-n-e-y.

4 Q. Could you -- and are you the -- What is your  
5 occupation?

6 A. I am a geologist.

7 Q. And who do you work for?

8 A. I work for Harvey E. Yates Company and its  
9 affiliates.

10 Q. And are you the geologist responsible for the  
11 Bennett Ranch Unit?

12 A. Yes, I am.

13 Q. Could you describe your educational and  
14 employment background for the Commission?

15 A. Educational background, I have a bachelor's in  
16 science from Defiance College, a master's in geology from  
17 Bowling Green State University in Ohio.

18 Work experience, eight years with Texaco and 23  
19 with Harvey E. Yates Company.

20 Q. And your area of responsibility at Harvey E.  
21 Yates Company includes this area of southern New Mexico,  
22 does it not?

23 A. That's correct.

24 MR. BRUCE: Mr. Chairman, I tender Mr. Yahney as  
25 an expert petroleum geologist.

1 CHAIRMAN FESMIRE: Any objection?

2 MS. ALTOMARE: No objection.

3 CHAIRMAN FESMIRE: Mr. Yahney's credentials will  
4 be so accepted.

5 Q. (By Mr. Bruce) Mr. Yahney, let's run through  
6 your exhibits first. First of all, what is Exhibit 7?

7 A. Exhibit 7 is a plat showing the expanded extent  
8 of the Bennett Ranch Unit that has been applied for. The  
9 expanded unit boundary contains the three wells that have  
10 been drilled to date, the Bennett Ranch Unit Number 1, its  
11 replacement well, the Bennett Ranch Unit Number 1Y in  
12 Section 14, and the Bennett Ranch Unit Number 25-1 in  
13 Section 25 of 26 South, 12 East, Otero County.

14 Q. Okay. And what zone is the 1Y well completed in?

15 A. The 1Y is completed as a shut-in gas well from  
16 the Mississippian Helms formation.

17 Q. And what about the 25-1 well?

18 A. The 25-1 is completed as a shut-in gas well from  
19 the Canyon formation.

20 Q. The 1Y well was drilled in what year?

21 A. That year was 1997.

22 Q. And when was the 25-1 well drilled?

23 A. 2001.

24 Q. Getting back to a question the Chairman asked Mr.  
25 Dyer, are there any other wells within the unit area or the

1 unit area as expanded?

2 A. No, there is not.

3 Q. I notice just to the south in Texas there's a  
4 couple of well symbols. What are those?

5 A. In Texas, in Section 1 of block B, University  
6 Lands, in the northeast quarter, is a well drilled by Trail  
7 Mountain called the University Serengeti B Number 1.

8 Q. Okay. Is that a fairly recent well?

9 A. Yes, that well was drilled shortly after the  
10 Bennett Ranch 25 Number 1.

11 Q. Okay. What footage is that off of the Section  
12 35? Do you know, roughly?

13 A. I believe it's 600.

14 Q. Okay. Six hundred feet?

15 A. Right.

16 Q. What is Exhibit 8, please?

17 A. Exhibit 8 is a schematic cross-section that's  
18 been adapted from some documentation by Bruce Black to  
19 depict in general terms the Bennett Ranch Unit structure  
20 and the formations involved.

21 Q. And could you go into a little detail on your  
22 geologic concepts for the unit?

23 A. The unit was put together based on a 40-acre  
24 Fusselman gas -- I mean Fusselman oil prospect. That was  
25 based on 2-D seismic that was acquired by Heyco from

1 various sources, one of them being Texaco, Inc.

2 That structure was the basis -- the closure that  
3 was mapped off of that seismic was the basis for the  
4 outline of the unit as it was proposed and originally set  
5 out in 1995.

6 The schematic cross-section here depicts a little  
7 -- it would be roughly a -- looking from northwest on the  
8 left to southeast on the right. This particular cross-  
9 section would be of -- an evolvment based on some later  
10 seismic that was shot after the initial discovery well, the  
11 Bennett Ranch Unit Number 1Y.

12 The Fusselman oil prospect to date has not been  
13 productive.

14 Q. Let me interrupt.

15 A. Okay.

16 Q. When the unit was drilled, was the Fusselman the  
17 nearest well that had tested any -- was the Fusselman the  
18 nearest zone that had tested for hydrocarbons?

19 A. The Fusselman was tested in the Texaco Number 1  
20 FO about 8 to 10 miles to the south and west of the Bennett  
21 Ranch Unit. It was also tested in the Texaco State of  
22 Texas FP, which is about 15 to 20 miles south of the unit.

23 Both of the Texaco wells, if I remember right,  
24 had shows of oil in the Fusselman, and the FP, which is the  
25 one that was a little further away, had very extensive

1 shows in the Fusselman.

2 Q. Okay. Continue, please.

3 A. Besides the Fusselman, we recognized that there  
4 was a significant unconformity at the base of the Wolfcamp  
5 section, which removed the Cisco and to some extent the  
6 Canyon formations in the area of the unit.

7 Because of outcrop work that we had done in  
8 looking in the Hueco Mountains, we recognized that this  
9 particular unconformity was something that was active as a  
10 petroleum system, and reservoirs in the upper Pennsylvanian  
11 were possible. In fact, the Texaco FO well, that is  
12 southwest of the unit, tested oil from a carbonate  
13 development in the Cisco section. It was cored, there was  
14 oil in the cores.

15 Subsequent drilling by H.L. Brown tried to offset  
16 that and make a commercial oil well from the Cisco.

17 Q. So there are always secondary zones in the unit  
18 area?

19 A. That is correct.

20 Q. Let's move on to Exhibits 9 and 10. What do they  
21 reflect?

22 A. Exhibit 9 is an expanded Canyon participating  
23 area. The darker blue outline and color fill represents  
24 the initial Canyon participating area that was done on 160-  
25 acre spacing.

1           The lighter greenish-blue represents the expanded  
2 participating area based on 640-acre spacing.

3           Q.    Okay.  And that is based on the 25-1 well?

4           A.    That -- Yes, that expansion is based on the 25-1  
5 well.  Our engineers modeled the pressure and permeability  
6 information that we had from the 25-1 and determined that  
7 that particular well with those conditions would drain at  
8 least 640 acres.

9           Q.    And again, that well, other than some minor  
10 testing, has not produced to date?

11          A.    That's correct.

12          Q.    And Exhibit 10, please?

13          A.    Exhibit 10 is an expanded participating area plat  
14 showing the expansion of the initial Mississippian  
15 participating area from 320 acres -- 320 acres to a much  
16 larger area that incorporates 640-acre spacing.

17          Q.    And again, the participating areas as expanded,  
18 the data was submitted to the BLM, the Land Office and the  
19 Oil Conservation Division?

20          A.    That's correct.

21          Q.    The supporting data for the participating areas?

22          A.    To my knowledge, that's correct.

23          Q.    So looking at these two participating areas --  
24 and I didn't do an exact calculation, Mr. Yahney, but with  
25 these two participating areas about two-thirds of the unit

1 area has been deemed reasonably productive of hydrocarbons,  
2 has it not?

3 A. That is correct.

4 Q. With only two wells?

5 A. That's correct.

6 Q. And Heyco would like to develop additional wells  
7 within the unit area?

8 A. Exactly.

9 Q. Is there an APD, application for permit to drill,  
10 currently pending before the Bureau of Land Management?

11 A. Yes, there is, for the Bennett Ranch Unit Number  
12 6 location in Section 24 of 26 South, 12 East.

13 Q. And what will that well test?

14 A. That well is scheduled to go to approximately  
15 6100 feet to test the entire section down through to the  
16 Fusselman.

17 Q. At this point, due to the limited amount of  
18 drilling and the inability to produce the wells, has there  
19 been enough drilling to either -- to condemn acreage within  
20 the unit?

21 A. We do not believe at this point that there's been  
22 enough drilling to condemn any specific acreage within the  
23 unit.

24 Q. Whether the unit area as it exists or the unit  
25 area as expanded?

1 A. That's correct.

2 Q. At this point, can you tell or limit the full  
3 extent of the Canyon and Mississippian reservoirs?

4 A. No, we cannot. We can expect possibly that each  
5 of these reservoirs has some limitations, because they  
6 weren't directly seen in the second well. But as to the  
7 full extent of those reservoirs, we do not know what that  
8 is.

9 And I might add that the seismic that we have is  
10 not of the definition that would tell us the extent of the  
11 producible areas of these reservoirs either.

12 Q. And again, this is an exploratory unit, is it  
13 not?

14 A. That's correct.

15 Q. And in your opinion, should you conduct a full  
16 exploration program before the unit is contracted?

17 A. Yes, sir.

18 Q. Have you reviewed the order of the Division  
19 denying the unit expansion?

20 A. Yes, I have.

21 Q. One of the issues they address is the water that  
22 was encountered in drilling the wells. In your opinion,  
23 does this have anything to do with unit expansion?

24 A. No, it does not.

25 Q. What does that have to do with?

1           A.    That has to do with the APD approval process and  
2 the drilling program that may be set out by the controlling  
3 body.

4           Q.    Okay.  So really, it has to do with the adequacy  
5 of the wellbore design?

6           A.    That's correct.

7           Q.    Do operators in New Mexico drill through water-  
8 bearing zones basically every day of the year?

9           A.    Yes, they do.

10          Q.    And even if the unit isn't expanded, Heyco could  
11 still file for an APD on its non-unit lands, could it not?

12          A.    Yes, sir, it could.

13          Q.    Have you encountered pools that were -- in your  
14 geologic work in New Mexico, that were spaced on 640 acres?

15          A.    Yes.

16          Q.    Are you aware of the types of setbacks they have?

17          A.    Yes, I am.

18          Q.    And what are they, generally?

19          A.    Setbacks for 640-acre spacing are normally either  
20 1650 acres from the section line or 660 acres from the --

21          Q.    Not acres, but --

22          A.    No, feet, excuse me, yes.

23          Q.    They're either 1650 feet or as far as, sometimes,  
24 660 feet?

25          A.    That's correct.

1 Q. Is there any need for any of those setbacks for  
2 wells in the interior of the unit?

3 A. No, there is not.

4 Q. Because once the wells are in a participating  
5 area, everyone shares production anyway?

6 A. That's correct, as I understand it.

7 Q. I suppose you'll get this question anyway, Mr.  
8 Yahney, but obviously Heyco hasn't applied for -- to the  
9 Division for 640-acre spacing?

10 A. No, we have not, as of this time.

11 Q. And at this time no one has been -- whether the  
12 spacing is 160 or 640 acres, no offset has been adversely  
13 affected?

14 A. That's correct.

15 Q. The two producing wells are quite a ways within  
16 the interior of the unit area?

17 A. Yes.

18 Q. And if you can produce -- if you can commence  
19 production from those wells, your engineers would obtain  
20 additional data, would they not?

21 A. Yes, they would.

22 Q. And Heyco isn't adverse to seeking an expansion  
23 of the well spacing if that's what the engineering  
24 dictates; is that correct?

25 A. That's correct.

1 Q. Do you have any other comments at this point, Mr.  
2 Yahney?

3 A. No, I do not.

4 Q. Were Exhibits 7 through 10 prepared by you or  
5 under your supervision?

6 A. Yes, they were.

7 Q. And in your opinion, is the granting of the unit  
8 expansion in the interests of the prevention of waste,  
9 protection of correlative rights?

10 A. Yes, it is.

11 MR. BRUCE: Mr. Chairman, I'd move the admission  
12 of Heyco Exhibits 7 through 10.

13 CHAIRMAN FESMIRE: Any objection?

14 MS. ALTOMARE: No objection.

15 CHAIRMAN FESMIRE: Exhibits 7 through 10 will be  
16 so admitted.

17 MR. BRUCE: I pass the witness, Mr. Chairman.

18 CHAIRMAN FESMIRE: At this point, why don't --  
19 before we begin the cross-examination, let's take a 10-  
20 minute break and reconvene at 25 till 11:00.

21 Thank you all.

22 (Thereupon, a recess was taken at 10:25 a.m.)

23 (The following proceedings had at 10:39 a.m.)

24 CHAIRMAN FESMIRE: Okay, let's go back on the  
25 record. Let the record reflect that this is a continuation

1 of Case Number 14,000, that all three Commissioners are  
2 still present, we still therefore have a quorum.

3 And I believe we were about to begin the cross-  
4 examination of Mr. Yahney by Ms. Altomare.

5 MS. ALTOMARE: Thank you.

6 CHAIRMAN FESMIRE: Proceed.

7 CROSS-EXAMINATION

8 BY MS. ALTOMARE:

9 Q. Mr. Yahney, were you involved in the drilling of  
10 the first well that was attempted on this unit?

11 A. Yes, I was.

12 Q. And can you explain to the Commission what  
13 happened as to why that well was not completed?

14 A. That well was drilled to somewhere around 2600  
15 feet, and in drilling through the bottom part of the  
16 Wolfcamp into the Powwow formation we cut a shale, kind of  
17 a greenish shale, that we later found out swelled  
18 significantly on us. And when we attempted to run an  
19 intermediate set of casing to isolate water that we  
20 encountered, we could not get that casing down and ended up  
21 junking that well. Couldn't get the casing down, couldn't  
22 get it out, and had to plug and skid.

23 Q. Was any testing done on the water that was  
24 encountered as you drilled that well?

25 A. Probably, yes.

1 Q. Do you recall whether that water was fresh or  
2 what the nature of that water was?

3 A. The water encountered on the original well, I  
4 guess most of it, if I remember right, would be considered  
5 under the definition of the OCD as fresh, containing less  
6 than 10,000 parts per million total dissolved solids.

7 Some of the water at TD, when we were having all  
8 of our problems, tested in the range of 10,000 to 12,000  
9 parts per million total dissolved solids.

10 Q. At TD on the first well or on the first --

11 A. On the first well --

12 Q. -- completed well?

13 A. -- the first well, the one that we junked.

14 Q. Okay. On the second well that was drilled, how  
15 did you drill it differently to accommodate -- to overcome  
16 the problem that was encountered in the first well?

17 A. We switched from a smaller rig to a bigger rig  
18 with more compressed air capabilities, and we did not leave  
19 the problem formation open to drilling fluids, formation  
20 waters, for a length of time that would allow it to swell  
21 and give us problems, and we cased it off.

22 Q. Okay. And at what point in that second well --  
23 which is the 1Y; is that right? --

24 A. That's correct.

25 Q. -- at what point in the drilling of the second

1 well did you encounter water?

2 A. We encountered water in roughly the same places  
3 that we encountered water in the first well. A little bit  
4 in the Abo, various little places in the Wolfcamp, and then  
5 again at the base of the Wolfcamp, at the unconformity with  
6 the Pennsylvanian section. We also had gas in those zones.

7 Q. Okay, so the gas and the water were adjacent to  
8 one another?

9 A. In that area they were in close proximity to each  
10 other, that's correct.

11 Q. Was the water that was discovered in the drilling  
12 of the 1Y considered fresh by OCD standards?

13 A. I don't know that I've got any kind of analysis  
14 on the waters that were tested in that upper part of the  
15 1Y.

16 Q. Was any kind of fluid used to complete the  
17 drilling of the 1Y well? Were muds used, drilling muds?

18 A. The 1Y was -- which ended up being completed as a  
19 gas well in the Mississippian, was drilled with air until  
20 we got through the big gas zone in the Mississippian. So  
21 after that, it was -- after that zone was cased off, we  
22 drilled ahead with a normal, conventional mud system.

23 Q. Okay, and what -- In a normal, conventional mud  
24 system, what is comprised of the normal, conventional mud  
25 system used by Yates -- by Heyco?

1           A.    I don't have those details, I can't give you  
2   that.  It was probably a low-chloride system that -- with  
3   certain gels and additives to take care of water loss.

4           Q.    Okay.  When you use a mud system for drilling, do  
5   you have a mud engineer on site?

6           A.    We have a mud engineer that's -- in this case,  
7   was on site, that's in terms of our normal drilling  
8   operations.  That mud engineer may not be on site around  
9   the clock --

10          Q.    Were steps --

11          A.    -- but for --

12          Q.    -- were steps taken to protect the waters in the  
13   area from the fluids that were being used to drill with?

14          A.    I don't know exactly what you mean by steps here.

15          Q.    Were -- was anything done by Heyco in the process  
16   of drilling once you switched over to a fluid system to  
17   ensure that no contamination of groundwater occurred?

18          A.    While we're drilling, we're using a mud system  
19   that -- you know, if we know that we're invading the  
20   formations, that we will increase the water loss and build  
21   a filter-cake so that that invasion does not incur, to a  
22   great extent.

23          Q.    What would you consider a great extent?

24          A.    I don't know what I would consider a great  
25   extent.  We try to monitor our losses from our pits.

1 Q. Okay, and how is that monitoring conducted?

2 A. With floats, usually. I'm not the person to be  
3 asking about engineering-type operations, but yes.

4 Q. And Heyco is not presenting an engineer today to  
5 testify as to any engineering aspects; is that right?

6 A. That's correct.

7 Q. Would you be surprised to know that your  
8 predecessor at the preceding hearing testified that a high  
9 concentration of KCl was used in the drilling of the 1Y?

10 A. We used KCl in, you know, concentrations between  
11 2 and 7 percent for certain things. And in the 1Y we may  
12 have even used a concentration -- similar concentration of  
13 calcium chloride. And we did that because we ran some  
14 tests that tried to tell us about the interaction of the  
15 drilling fluids that we had with the clay mineralogy that  
16 was present in the shales.

17 Q. Okay, and so those percentages that you were  
18 citing is what you would consider a high concentration of  
19 chloride?

20 A. I don't know that I'd consider that a high  
21 concentration of chlorides.

22 Q. Okay. If somebody --

23 A. And let me say, when we're drilling with air,  
24 we're putting in a calcium- -- or a potassium-chloride  
25 solution into a mister, we're not using a lot of calcium-

1 chloride solution. We're putting that into a mister, into  
2 the compressed air stream that we're pumping down the well,  
3 and we're -- that's not a large volume of water.

4 Q. Okay. Did you -- I'm trying to find the name of  
5 the gentleman that testified at the last hearing. Was it  
6 Underwood?

7 A. John Underwood.

8 Q. Did you work with him on this site?

9 A. Yes, I have.

10 Q. Okay. And he is -- is he likewise a geologist?

11 A. He is a geologist and a geophysicist, with a  
12 degree in geological engineering from Colorado School of  
13 Mines.

14 Q. So if he were to use the -- if he were to say to  
15 you that you were using a high concentration of potassium  
16 chloride, what would you interpret that to mean?

17 A. I don't know what necessarily -- I wasn't there  
18 for that particular testimony. I know it's pretty easy for  
19 certain things to get taken out of context.

20 Q. What kind of casing was run in the 1Y? Was it  
21 run all the way to the surface?

22 A. Casing? The 1Y casing program, we have a surface  
23 string, and I believe it was set at a certain depth which  
24 would have gotten it into the top of the Wolfcamp.

25 Q. Okay.

1           A.    A second string that was intermediate, that was  
2 set in the -- below the unconformity, and a -- somewhere  
3 below the unconformity, and then a production string that  
4 was run to TD.

5           Q.    Were there any difficulties in running the casing  
6 strings with the 1Y well?

7           A.    I don't recall any.

8           Q.    And drilling the third well, the 25-1, was that  
9 drilled in the same way as the 1Y?

10          A.    It was drilled with air to a point where we got  
11 into the porosity development in the Fusselman, at which  
12 time we switched to -- you know, a little bit past that, we  
13 switched to water --

14          Q.    Okay.

15          A.    -- a mud system.

16          Q.    And again, it would have been the same standard  
17 mud system that you would have used in the 1Y?

18          A.    It would probably have been quite similar.

19          Q.    Do you recall at what point you encountered  
20 waters in the 25-1 well?

21          A.    We encountered water at approximately 3300 feet.

22          Q.    And do you recall the nature of that water?

23          A.    That water probably had total dissolved solids in  
24 the neighborhood of 3000 to 4000 parts per million, and it  
25 was soft. It had low hardness readings and higher

1 chlorides.

2           That particular phenomenon is something  
3 associated with an igneous silt that's carrying altered  
4 feldspars and has a concentration of zeolites in it that  
5 are acting as basically ion-exchange-type materials.

6           No water was seen in the same zones that were --  
7 that it was seen in, in the 1Y or the 1.

8           Q.    Okay, so the water encountered in the 25-1 was at  
9 different levels than at the preceding two --

10          A.    That's correct.

11          Q.    -- drill...

12                So this is a variable area; is that right?

13          A.    I would classify it as such, yes.

14          Q.    I'm going to refer you to the Exhibit 8 that you  
15 had talked about, which is the schematic cross-section --

16          A.    Yeah.

17          Q.    -- you had referred to. And the only thing that  
18 was noted on it -- it says Bennett Ranch schematic cross-  
19 section, although I tried to write down quickly -- You had  
20 mentioned that it was taken from some source. Where is  
21 this information derived --

22          A.    It was modified from some documentation by Bruce  
23 Black, probably resulting from his PhD dissertation from  
24 the University of New Mexico.

25          Q.    Okay, and when was this compiled?

1           A.    When did I do the work, or when did Bruce do the  
2 work?

3           Q.    When did Bruce do the work?  When did the -- the  
4 data that led to this schematic?

5           A.    Well, the date of the dissertation, I believe, is  
6 1973, so that would probably be some -- he did a lot of  
7 work in the area in the early '70s, so somewhere in there.

8           Q.    And then when did you do the work to put together  
9 this adaptation?

10          A.    This was, you know, prepared and modified just  
11 for this hearing.

12          Q.    Okay, and what modifications did you make to it  
13 from the original schematic as prepared by Ms. [sic] Black?

14          A.    Well, it's -- some of the formational boundaries  
15 have been moved, and some additional minor details have  
16 been added.

17          Q.    Okay.  And on what basis did you make these  
18 changes?

19          A.    Based on my knowledge of the Bennett Ranch unit.

20          Q.    Okay.  Was it based on seismic data?

21          A.    To a minor extent, yes.

22          Q.    Okay, and what seismic data was it based on?

23          A.    There exists a significant data set of 2-D data  
24 that was shot between the mid-'60s to the early '80s,  
25 probably -- yeah, early '80s -- which Heyco bought a good

1 portion of. It's also based on a line that was jointly  
2 shot by the partners in Bennett Ranch Unit across the area,  
3 a 2-D line.

4 Q. And is this meant to depict a particular section,  
5 a particular --

6 A. This is meant to basically show a schematic that  
7 would start off the north end of the unit and continue to a  
8 point off the south end of the unit, running from northwest  
9 to southeast.

10 Q. Okay. Is there a reason that you did not include  
11 groundwater depiction in this schematic?

12 A. I did not think that it was important in terms of  
13 the concept for exploration.

14 Q. Where on this schematic, if you are able to  
15 specify, would the currently existing wells be located?

16 A. Okay, approximately in the middle of the  
17 Pennsylvanian, the label that says Pennsylvanian --

18 Q. Okay.

19 A. -- the Bennett Ranch Number 1 and 1Y would be --  
20 would have been drilled in that position.

21 And further to the right, at an approximate  
22 position in the middle of the word Woodford, would be the  
23 25-1.

24 Q. Okay. And is there a reason that you didn't  
25 include those two wells for points of reference on this

1 schematic?

2 A. I didn't think it was necessary.

3 Q. This is an area that is known to be highly  
4 faulted; isn't that right?

5 A. I disagree.

6 Q. You disagree with that?

7 A. Yes.

8 Q. Okay. I'm going to go ahead and show you -- this  
9 is not a formal exhibit, this is part of the OCD record,  
10 but we did make additional copies for the Commission so  
11 that you have --

12 CHAIRMAN FESMIRE: And for Mr. Bruce?

13 MS. ALTOMARE: Yes.

14 THE WITNESS: Would you clarify what you mean by  
15 "highly"?

16 CHAIRMAN FESMIRE: Why don't you approach the  
17 witness?

18 MS. ALTOMARE: What?

19 CHAIRMAN FESMIRE: Why don't you approach the  
20 witness?

21 MS. ALTOMARE: May I approach the witness?

22 CHAIRMAN FESMIRE: You may.

23 Q. (By Ms. Altomare) Do you recognize this document?

24 A. Sure do.

25 Q. Okay.

1 A. Helped build it.

2 Q. What did you say?

3 A. I helped build it.

4 Q. Okay. I'm going to represent for the record that  
5 this is a schematic cross-section that was labeled Exhibit  
6 Number 4, Bennett Ranch, Heyco, and it is identified by J.  
7 Underwood. And I think this was an exhibit to the original  
8 application in 1995 for the Bennett Ranch Unit.

9 This particular schematic shows -- or purport to  
10 show the same area that is portrayed by Exhibit 8, does it  
11 not?

12 A. It is roughly 90 degrees opposing the example of  
13 Number 8.

14 Q. 90 degrees opposing. Okay.

15 A. Exhibit 8 is perpendicular to this schematic.

16 Q. Okay. Is there a reason that you chose to submit  
17 an exhibit in this proceeding that is far less detailed  
18 than the exhibit that was prepared in the original  
19 application in '95?

20 A. I prepared this exhibit specifically to show the  
21 structure in the other direction, plus the intended  
22 objectives of the petroleum system that I perceive is there  
23 at the unconformity, going out to the north, where stated  
24 in the denial of the -- by the OCD, they have a problem  
25 with our expanding the unit in that direction.

1 Q. Okay. But since 1995 a significant amount of  
2 additional information has been acquired about this unit;  
3 isn't that right?

4 A. There has been two additional wells, seismic  
5 data, yes.

6 Q. So wouldn't it follow that the Commission and the  
7 Division would not be unreasonable to expect a more  
8 detailed exhibit of a schematic of this area, based on the  
9 fact that you now have more information, not a less  
10 detailed exhibit?

11 A. Well, I don't know that -- in my mind, that that  
12 is necessary. I don't -- as an explorationist, I don't  
13 particularly want to put in the public record things that  
14 will allow my competitors to have the same competitive  
15 advantage as I have.

16 Q. Okay. Would the inclusion of identification of  
17 location of fractures in this area give any kind of an edge  
18 to competitors?

19 A. I don't see any fractures identified on --  
20 anywhere here. I see faults that do not penetrate the --  
21 much beyond the base of the Wolfcamp. They do not come to  
22 the surface.

23 Q. Okay, I apologize if I'm using the wrong  
24 verbiage. Faults. There are faults depicted on the  
25 schematic cross-section that I'm showing you that's been

1 labeled as Exhibit 4 to the original Application; isn't  
2 that right?

3 A. That's correct.

4 Q. Okay. And they do permeate down beyond the  
5 Fusselman, correct?

6 A. Yes, they would go down below the Fusselman.

7 Q. Okay, and the Fusselman is the area to which  
8 Heyco is currently drilling?

9 A. Yes, that's correct.

10 Q. And there are no faults depicted at all on your  
11 Exhibit 8 schematic for today?

12 A. That is correct.

13 Q. Okay. Were you involved in the submission of the  
14 application or the statement of the -- the request for the  
15 expansion that was submitted to the BLM originally in 2007?

16 A. I suppose so, yes.

17 Q. Okay. So what is your understanding of what the  
18 reason for this expansion request is?

19 A. The expansion request is to develop the gas  
20 reservoirs that have been proven by the two wells on --  
21 that have been proven by the two wells, instead of on 160-  
22 acre spacing or 40-acre spacing as the unit outline was  
23 originally set out, but to develop that on 640-acre  
24 spacing. And we supplied what information we had to  
25 justify that to the BLM, and you should have obtained

1 copies of such.

2 Q. Okay. So the goal of this expansion, including  
3 the expansion that's requested to the north, is to pursue  
4 gas recovery at 640-acre spacing?

5 A. That would be part of it, yes.

6 Q. Okay.

7 A. Not necessarily all of it.

8 Q. Okay. The request that was submitted to the BLM  
9 specifically stated that the expansion was being requested  
10 to accommodate development of a probable gas resource,  
11 which is yet to be fully delineated.

12 Where in that statement is there any kind of a  
13 request for any other kind of justification for expansion  
14 to the north, besides searching for gas?

15 A. I don't see where anything else is needed.

16 Q. Okay. What other information do you have to  
17 justify expansion to the north, that there's gas to the  
18 north?

19 A. As I stated earlier, in trying to describe the  
20 Exhibit 8, we identified with the drilling of the Number 1  
21 and the 1Y that there is gas, and to some extent a little  
22 bit of oil, possible in a petroleum system associated with  
23 the unconformity, which the crest of the structure takes it  
24 off to the north and to the northwest.

25 As you pick up section that you did not see in

1 the Number 1 or 1Y, or that you did not see in the top of  
2 the structure or near the top of the structure in the 25-1,  
3 those new formations that are in an active petroleum system  
4 have not been looked at. And we have not tested those  
5 zones in the 1Y at this point.

6 Q. Okay, if Heyco knew that they were going to be  
7 applying for this unit expansion, that they were going to  
8 have to support the Application, why wasn't additional  
9 seismic testing done in the northern part of the unit to  
10 justify the Application?

11 A. We did not feel that seismic testing would tell  
12 us the answers that we would need. You have to have some  
13 significant resolution in your seismic to be able to pick  
14 up a reservoir. These -- you know, if the reservoir is  
15 similar in thickness to the Canyon sand that we have,  
16 you're not going to see it on seismic.

17 Q. Was it even attempted?

18 A. There is a 3-D shoot that has been shot across  
19 most of the unit. I can tell you that the data is of  
20 rather poor quality, and to my interpretive abilities does  
21 not able anybody to try to determine what you're asking of  
22 us.

23 Q. And this information has not been shared with any  
24 of the agencies to which this Application has been  
25 submitted?

1           A.    That is correct.  That is not normal process.

2           Q.    The basis for the expansion and for the 640-acre  
3 spacing is that this area is very permeable; is that right?

4           A.    The reservoirs that we have established, the  
5 Mississippian and the Canyon, both have permeabilities and  
6 production information that have told us that we can drain  
7 640 acres, which means that we've got permeabilities in  
8 excess, you know, of hundreds of millidarcies or greater.

9           Q.    Okay.  And the same thing that enables this high  
10 permeability for accessing the natural gas and other  
11 hydrocarbons also increases the permeability for  
12 transmission of contamination; isn't that right?

13          A.    I don't know that I totally understand your  
14 question here.

15                   Looking at the schematic, you've got a section of  
16 faults here.  Okay?  And you would assume that there's  
17 fractures associated with these faults.

18                   But the seismic tells us that most of these  
19 faults do not penetrate the base of the Wolfcamp, and we  
20 know that there are shales at the base of the Wolfcamp that  
21 act as a seal.  Otherwise we wouldn't have reservoirs in  
22 the Canyon with producible quantities of hydrocarbons in  
23 them.

24          Q.    Okay, but you also know that there is water at  
25 various levels throughout this unit, correct?

1 A. Sure do.

2 Q. Okay. These fractures run through the different  
3 levels -- the different stratigraphy in the unit?

4 A. There's no proof to tell us that the fractures in  
5 this area run from surface to basement.

6 Q. But the faults run -- as depicted on the  
7 schematic from 1995, run through several different layers?

8 A. That's correct.

9 Q. Okay. And the water that you've encountered has  
10 likewise been found in several of those layers?

11 A. We have found water in some of those layers --

12 Q. Okay.

13 A. -- that is correct. And some of that water has  
14 -- could be considered to be fresh by the OCD, and some of  
15 it can't.

16 Q. So the same thing that renders this area  
17 permeable for purposes of obtaining the hydrocarbons also  
18 renders it at risk for high transmissibility for  
19 contamination of groundwater, correct?

20 A. Groundwater -- if you describe groundwater as  
21 being the water that --

22 Q. For water-bearing zones, for fresh water in  
23 water-bearing zones.

24 A. I really don't know how to respond to that.

25 Q. Okay.

1           A.    You drill for oil and gas in areas that have  
2 freshwater zones all the time. That's not something that's  
3 new. There's rules and regs to handle that.

4           Q.    There's a difference between drilling through a  
5 water-bearing zone and accessing a resource that is  
6 sandwiched in between water-bearing -- freshwater-bearing  
7 zones, though; isn't that right?

8           A.    I'm -- again, I'm confused as to where you're  
9 trying to go with this.

10          Q.    You had testified that there was data to support  
11 the 640-acre spacing, about the rate of drainage and  
12 whatnot. Why wasn't that data submitted along with the  
13 application at either the original -- the original hearing  
14 with -- to the Division, or at this date, until now?

15          A.    Didn't feel it was necessary.

16          Q.    You also mentioned that the 640-acre spacing --  
17 that there are standard setbacks that are usually  
18 associated with that?

19          A.    That's correct.

20          Q.    Those setbacks usually come into force when  
21 special pool rules are implemented; isn't that right?

22          A.    That's my understanding.

23          Q.    Okay, and you haven't applied for special pool  
24 rules yet, right?

25          A.    That's correct.

1 Q. Has directional drilling been a consideration at  
2 all in this unit?

3 A. Not to this point. It may be in the future, but  
4 it's not been a consideration at this point. Directional  
5 drilling is usually a tool that's used when you know the  
6 extents of your reservoirs. We may not know that yet.

7 Q. Is it something that Yates plans to assess once  
8 the extent of the reservoir has been determined?

9 A. We'd like to drill to find out those extents --

10 Q. Okay.

11 A. -- drill vertical wells.

12 Q. Okay, and once the extents have been determined,  
13 is Heyco willing to consider directional drilling? Are  
14 they planning to consider directional drilling in this --

15 A. Well, I'm sure that it would be considered. I  
16 don't know that it -- necessarily, that it would be in our  
17 minds the prudent and proper thing to do.

18 Q. And at this point do you know, long-term -- or at  
19 least in the short term, what the plan is for how many  
20 wells?

21 A. I do not know what the plan is necessarily. The  
22 first well that we want to do here, the Bennett Ranch  
23 Number 6, will dictate what happens after that.

24 Q. Okay. I believe the only plan of operation that  
25 was submitted was the 2004 one that had a depiction of any

1 kind of a plan for additional drilling, and that depicted  
2 five additional wells in the southern part of the unit.  
3 Are you familiar with that one?

4 A. There is a plan of development that was submitted  
5 after the Canyon discovery that had development wells in  
6 the southern part of the unit, that is correct. Four or  
7 five different wells, different locations.

8 Q. Okay. And is that still Heyco's general plan for  
9 proceeding with this unit at this time?

10 A. That would be considered a general plan, although  
11 I don't think that all of the wells that you saw on that  
12 particular plan of development are probably necessary. The  
13 reservoir study that we did was conducted after the plan of  
14 development that was submitted, where those locations were  
15 set out.

16 We also submitted at one time in the late '90s a  
17 plan of development showing an additional four locations to  
18 develop the Mississippian reservoir in the northern part of  
19 the unit. Those are still -- could be viable locations.  
20 And one of them is in the acreage that is above the  
21 participating areas.

22 Q. You're aware that a large aquifer has been  
23 designated beneath this particular area?

24 A. Well, I'm aware that Rule 21 covers a large area  
25 out here. I'm aware that there is an extensive aquifer in

1 the Victorio Peak Shelf Reef section in the Dell City area.

2 Q. Are you familiar with the Salt Basin aquifer and  
3 its attributes?

4 A. That's the aquifer that I'm talking about.

5 Q. Okay. Do you know what the significance is when  
6 the State Engineer's Office designates a basin as an  
7 aquifer?

8 A. I can't say that I do, exactly.

9 Q. Do you understand that there are water rights  
10 associated with that body of water?

11 A. Yes, I do.

12 Q. Okay. Does Heyco have any plan as it proceeds  
13 for ensuring that the aquifer is protected from the -- from  
14 any contamination from any activity?

15 A. We don't expect any contamination from our  
16 activities to get to the aquifer as we understand it. As  
17 we understand the aquifer, it is limited to the lower part  
18 of the San Andres and the Victorio Peak section. Those  
19 formations aren't at Bennett Ranch.

20 Q. Okay. At this point would you say that the  
21 primary target of this unit is natural gas?

22 A. It is a primary target. It's not the only  
23 target.

24 Q. Okay. And as your colleague testified, you do  
25 still intend to drill these wells to the Fusselman?

1           A.    We intend to drill at least one more to the  
2   Fusselman.  I don't know beyond that.

3           Q.    How familiar are you with the fracturing in this  
4   area?

5           A.    It's hard to say.  Certain areas I'm familiar  
6   with, other areas I'm not.

7           Q.    Can you say whether or not the fractures -- the  
8   water that is -- has been found located above 2500 feet  
9   might connect to the water that is found below 2500 feet in  
10   this area because of the fracturing in this unit?

11          A.    Well, the different water chemistry suggests that  
12   it probably is not connected, but I don't know that for  
13   sure.

14          Q.    So it's possible?

15          A.    I would assume maybe it's possible.  You have a  
16   number of seals that you need to get through, formations  
17   that don't fracture easily.

18                   MS. ALTOMARE:  I think that's all I have.  I'll  
19   go ahead and pass the witness.

20                   CHAIRMAN FESMIRE:  Commissioner Bailey?

21                                   EXAMINATION

22   BY COMMISSIONER BAILEY:

23           Q.    Don't know where to start.  I really don't know  
24   where to start.

25                   On the southern edge of the boundary of -- in

1 Texas Section 1 of Block B, you've located the University  
2 Serengeti B 1 well, 600 feet off of the New Mexico state  
3 line?

4 A. Yes, that sounds correct.

5 Q. Okay. Who is the operator of that well?

6 A. The well was operated by Trail Mountain.

7 Q. Is it producing now?

8 A. That well is plugged.

9 Q. Did it produce for any length of time, or was it  
10 just drilled and abandoned?

11 A. It did not produce at any length of time or test  
12 any -- to my knowledge, any significant rates of gas. That  
13 well had shows in the upper Pennsylvanian section, and it  
14 was tested. The equivalent to the -- roughly the  
15 stratigraphic equivalent of the Bennett Ranch 25-1 pay was  
16 tested in that well, and it is two thousand -- roughly 2500  
17 feet downdip.

18 Q. So there's no possibility of drainage from that  
19 particular well?

20 A. No.

21 Q. Had you been involved in drilling any wells in  
22 the Carlsbad karst area?

23 A. I can't say that I have.

24 Q. Does Heyco operate any wells in the Carlsbad  
25 karst area?

1           A.    I don't think we do.  And I might ask for a  
2 definition of where that area is, but I don't think we do.

3           Q.    I read the advertisement for this case, and the  
4 advertisement for this case talks about expansion of unit  
5 area, areal expansion.  You're not a drilling engineer?

6           A.    No.

7           Q.    You're not a mud engineer?

8           A.    No.

9           Q.    You may have been a witness to the drilling of  
10 the two Heyco wells, but you were not the authority in  
11 charge during those -- that drilling, were you?

12          A.    That's correct.

13          Q.    Have you any clue why you've been questioned  
14 about drilling when we're not here to talk about drilling  
15 of wells that have occurred in the past years?

16          A.    I missed that.  Would you repeat that?  I just --

17          Q.    It's a common --

18                CHAIRMAN FESMIRE:  He apparently missed the  
19 point.

20          Q.    (By Commissioner Bailey)  -- the appropriate  
21 forum for the questions that you've been asked for the  
22 drilling of the wells when we're here to talk about areal  
23 expansion of the unit.  Not drilling of the wells within  
24 the unit, that's covered in a different forum, isn't it?

25          A.    That's -- that's my understand- -- that's what I

1 understand, yes, that's what I think should happen.

2 Q. Okay. Because we are here to answer -- to hear  
3 cases on a lot of different subjects, and it's, in my mind,  
4 best to keep very clear what we're talking about and not  
5 argue cases that haven't even been advertised. So that's  
6 my side point on that.

7 Your Exhibits 9 and 10 show expanded  
8 participation areas. Have those expansions been approved  
9 by the BLM and the Land Office?

10 A. To my knowledge, they have.

11 Q. Are you involved in Heyco's hierarchy for APD  
12 approvals?

13 A. Yes, I'd have to say -- I don't know what exactly  
14 you mean by that, but yes, I probably am, as you're --  
15 describe it there.

16 Q. Are drilling programs normally handled by  
17 district -- OCD district personnel?

18 A. I'm --

19 Q. Approval of APDs and drilling programs that are  
20 laid out, handled by BLM and OCD?

21 A. That's my understanding.

22 Q. Questions have come up about the running of  
23 seismic.

24 Even though you may run seismic and have the best  
25 geophysicists possible, just because you pick a spot based

1 on seismic doesn't guarantee a well, does it?

2 A. No, it doesn't. Drilled plenty of dry holes.

3 Q. That's right.

4 The question came up about the Salt Basin  
5 aquifer. The Bennett Ranch Unit is not connected to the  
6 Salt Basin aquifer, is it?

7 A. I don't think it is.

8 Q. Because don't the maps indicate that that Salt  
9 Basin is many, many miles to the east?

10 A. Yes, it's a good distance off. And like I said,  
11 I don't think there is really much in the way of a  
12 formational continuity between there and where we're at at  
13 Bennett Ranch.

14 Q. I'm sure you've read some of the referenced  
15 literature that OCD has offered as their exhibits.

16 A. Yes, I've read most all of that, most of it in  
17 the distant past.

18 Q. Yes, because they were written back in '85,  
19 before there was new information for descriptions in the  
20 area, because isn't it accurate to say that technical  
21 papers change over time, according to what developments --

22 A. Yes, what new information gets added, yes, they  
23 do.

24 Q. Okay. The case between the Attorney General's  
25 Office and the BLM concerning the RMP for this area is

1 still in the courts, isn't it?

2 A. To my knowledge, yes.

3 Q. So we are not here to question any of those  
4 topics that are part of that case, are we?

5 A. I agree.

6 COMMISSIONER BAILEY: I reserve the right to ask  
7 more questions at a later time.

8 CHAIRMAN FESMIRE: Commissioner Olson?

9 EXAMINATION

10 BY COMMISSIONER OLSON:

11 Q. You were mentioning that you were seeing fresh  
12 waters. I guess it wasn't clear to me where you're -- what  
13 formations you're seeing these fresh waters from.

14 A. Fresh waters were seen in the Abo, in the  
15 Wolfcamp, in the -- to a little bit of an extent in the  
16 upper Pennsylvanian, in the Mississippian and the Fusselman  
17 and the Ellenburger.

18 So in -- pretty much in various places up and  
19 down through the section.

20 Those waters weren't all the same, by any means.

21 Q. But by "fresh" you're saying they're less than  
22 10,000 milligrams per liter total dissolved solids?

23 A. That's right.

24 And we also saw waters that had greater than that  
25 number in the base of the Wolfcamp, top of the upper

1 Pennsylvanian, and through the upper Pennsylvanian.

2 Q. And you were mentioning that some of these waters  
3 were in close proximity to the gas zones. What do you  
4 consider close? What kind of distance you're talking  
5 about?

6 A. Probably 50 to 100 feet, maybe less.

7 COMMISSIONER OLSON: I think that's all the  
8 questions I have.

9 EXAMINATION

10 BY CHAIRMAN FESMIRE:

11 Q. Mr. Yahney, I want to start with a question. I  
12 may have got something wrong in my notes, but it seemed to  
13 me that you said that the Texaco FO had extensive shows; is  
14 that correct?

15 A. The FO had shows. The FP had extensive shows in  
16 the Fusselman.

17 Q. Okay. Pulling out the cross-section that was  
18 provided to you by counsel that is not part of the record  
19 -- I mean that is part of the record but not part of the  
20 record in this case, I'm hard -- did you complete in an  
21 interval that you didn't DST -- or did Texaco complete in  
22 an interval that they didn't DST there?

23 A. This well has not been completed. It was  
24 extensively tested, as you see from the records here,  
25 but --

1 Q. And that's --

2 A. -- if you would look at --

3 Q. -- Mr. Yahney, that's the point I'm trying to  
4 make, is, I don't see a show in the tests that they did  
5 here.

6 A. Yeah, and you also don't see the mud log, and you  
7 don't see the core description --

8 Q. That's true.

9 A. -- much beyond what's generally there. I can  
10 personally tell you that there was oil coming out of the  
11 core in the -- that was taken in the Cisco or Virgil  
12 section of that well.

13 Q. But the DST shows absolutely nothing producible,  
14 right? Or nothing that would be worth testing again?

15 A. Right, but this well was twinned by H.L. Brown.  
16 They thought the shows that were in this well warranted a  
17 second test, and so the entire section was tested again,  
18 and unsuccessfully.

19 Q. Would you classify H.L. Brown as a slow learner  
20 then?

21 A. Well, obviously he thought that there was  
22 something that was missed by Texaco, and maybe they...

23 Q. Now you said that your people modeled the  
24 drainage and that it would drain -- that a well drilled out  
25 there would probably drain 640 acres. What formation were

1 you talking about there?

2 A. The well that we modeled was the 25-1, sir.

3 Q. And you aren't the modeler, I'm assuming?

4 A. No, I was not.

5 Q. Did you have anything to do with determining the  
6 input parameters for that model?

7 A. I probably did.

8 Q. And can you tell me what some of those input  
9 parameters were?

10 A. Not at the moment.

11 Q. Okay. So you can't tell me what kind of range of  
12 permeability they were using? I'm assuming they were gas  
13 models.

14 A. This was -- Yes, this was a gas model, and yes,  
15 the permeability range was based on sidewall core data for  
16 the Canyon, and those numbers were between 100 and 200  
17 millidarcies permeability.

18 Q. Okay. Do you know anyplace else, either in the  
19 vicinity in here or on into the Permian Basin, where the  
20 Canyon ranges between 100 and 200 millidarcies?

21 A. I can't say that I do, but I don't know that I've  
22 looked specifically for that.

23 Q. Okay. Were there any other important assumptions  
24 in this model that we should know about?

25 A. Well, just the formation pressures that were

1 involved and the -- you know, the pressures from the  
2 drawdown tests that we did do. And I -- you know, the  
3 bottomhole pressure for that particular reservoir, if I  
4 remember right, was somewhere in the neighborhood of 475  
5 pounds.

6 Q. Okay. Initial bottomhole pressure was --

7 A. -- four hundred --

8 Q. -- extrapolated 475 pounds?

9 A. That's correct. This is a low-pressure, high-  
10 permeability reservoir.

11 Q. Well that wouldn't be very exciting even at a low  
12 permeability, would it?

13 A. At a low permeability, that wouldn't be exciting  
14 at all, you wouldn't get anything out of it.

15 Q. I mean at a high permeability it wouldn't be  
16 exciting at all, would it?

17 A. Well, it's capable of delivering above 3 million  
18 a day.

19 Q. For a short period of time at 475 pounds, you'd  
20 have an awfully low capacity, wouldn't you?

21 A. Well, 475 pounds -- How big is your areal extent?

22 Q. Well, you're telling us 640 acres here, aren't  
23 you?

24 A. I'm telling you that a well will drain 640 acres;  
25 I'm not telling you that the reservoir is that size.

1 Q. What would the reserves be at 475 pounds, at 640  
2 acres?

3 A. I -- The reserves, which generally are  
4 proprietary numbers for something like that -- you know,  
5 we've made some calculations, and we expect that well to be  
6 able to do between 3/4 and 1 BCF from that zone, just like  
7 it is.

8 Q. For 640-acre drainage?

9 A. Whatever it drains, whether that's --

10 Q. Well, aren't the reserves a function of the  
11 drainage area?

12 A. Yes, they are. It may be able to drain more than  
13 that, and in that case maybe the reserves would be better.

14 Q. And you're thinking an EUR of between 3/4 and 1  
15 BCF?

16 A. For that particular well, with that drainage. I  
17 think that's probably the number that was in that model.

18 Q. Is that a respective -- I mean, is that a  
19 representative thickness for the reservoir that you expect  
20 to encounter?

21 A. We expect that reservoir to thicken offstructure,  
22 and that's pretty much proven by the thickness that we  
23 encountered and that was penetrated in both the 1Y and the  
24 Serengeti.

25 Q. So offstructure to the north and to the east?

1 A. To the southwest.

2 Q. To the southwest.

3 Now you said you skidded the rig on the Bennett  
4 Ranch Unit Number 1 to the 1Y.

5 A. That's inaccurate, that's not correct. That's --  
6 I misspoke there.

7 Q. Okay --

8 A. We moved that little rig off and brought in a  
9 bigger rig to drill the second well.

10 Q. Okay, so you didn't skid it, that was just a  
11 misstatement?

12 A. Right, that's correct.

13 Q. And you said something about the expansion being  
14 approved by the BLM. That was a bit of a misstatement too,  
15 wasn't it?

16 A. Not to my knowledge, I think they have approved  
17 the expansion of the unit.

18 Q. Didn't they condition that approval on the  
19 approval of the OCD?

20 A. That's not a question for a geologist.

21 Q. You mentioned you had some partners in the  
22 Bennett Ranch Unit.

23 A. Yes, we do.

24 Q. Who are those partners?

25 A. The Redmon Partnership and ConocoPhillips,

1 inherited from Burlington Resources, and various internal  
2 entities within Heyco.

3 Q. Now you mentioned that the reason that Heyco  
4 wanted to expand the unit was to facilitate 640-acre  
5 development, and then you said that was part of the reason.  
6 What is the reason that they want to expand the unit?

7 A. I don't follow that. We wanted to expand the  
8 unit to develop the gas reservoirs that we saw, both of  
9 which we thought had enough permeability to be able to  
10 drain 640-acre spacing.

11 Q. Okay.

12 A. Yes, we also wanted to at some point explore  
13 further on this particular unit, and to facilitate that in  
14 the best possible manner we thought that expansion of the  
15 unit would be in order.

16 Q. Okay, and the expansion is -- with the exception  
17 of Tract 11a, the expansion includes already leased Heyco  
18 leases; is that correct?

19 A. Yes, that is correct.

20 Q. Are those 100-percent Heyco leases, or are they  
21 leased by the partnership?

22 A. At this point, those leases -- I can't tell you  
23 that again, that's a question for a landman.

24 Q. Okay. So why expand the unit? I guess I don't  
25 understand why.

1           These leases are 100-percent Heyco, and they end  
2 up draining 640 acres, and you have the models that show  
3 that they drain 640 acres. Why hold it with an exploratory  
4 unit? Why not just pool that drilling unit and accomplish  
5 the same thing?

6           A. Well, the federal leases that we hold have a time  
7 clock running on them. Okay. By putting them into the  
8 unit and drilling in a development program approved by the  
9 authorized officer, we can hold those particular acreage  
10 with a continuous development.

11          Q. Okay so -- You hit on something there that's kind  
12 of curious to me. So the -- one of the purposes of the  
13 expansion of the unit is to hold those federal leases for a  
14 longer period of time; is that correct?

15          A. Well, that could be considered a reason for  
16 expansion, yes.

17          Q. Okay.

18          A. That's not an unusual situation.

19          Q. What is the result of holding those leases for a  
20 longer period of time, with respect to correlative rights  
21 and the prevention of waste?

22          A. Well, if we truly can develop on 640 acres and  
23 the reservoirs that we find are capable of that, we've  
24 prevented waste. We've drilled something on a smaller  
25 spacing with less dollars to generate the maximum return of

1 the resource.

2 Q. Okay, could you elaborate a little bit on that,  
3 because I don't understand the reasoning.

4 A. Okay, so we've gone out here to the edge of the  
5 unit on one of the sections that's not in the participating  
6 area. We make another discovery out there. It's gas.  
7 Okay?

8 We've got it on 640-acre spacing, we're able to  
9 develop it on 640-acre spacing, apply for new field rules,  
10 and not have to develop that with -- against competition,  
11 to over-drill that particular reservoir or part of the  
12 structure, and we prevent waste in doing so.

13 Q. Going back, Mr. Dyer was not part of the original  
14 development, but you apparently were?

15 A. That's correct.

16 Q. What were the original boundaries of the unit  
17 based on?

18 A. They were based on the -- what we perceived as  
19 the closing contour to the Fusselman formation, and they  
20 were based on 40-acre oil spacing. There probably should  
21 have been a map that went with this particular exhibit that  
22 showed you that.

23 Q. Now let's change. Why do we need -- Is there a  
24 geologic reason to expand the unit?

25 A. We at this point have not tested the -- what we

1 feel is the third hydrocarbon reservoir that was seen in  
2 the 1Y and the Number 1. We think that that particular  
3 reservoir may extend northward.

4 And it's an exploratory unit. We don't know  
5 where those extents will end up, and we want to develop our  
6 acreage.

7 Q. Okay. The first well in the unit was the 1, and  
8 then the 1Y was the replacement well for that. The second  
9 well in the unit was the 25-1, which is numbered for the  
10 section that it's in.

11 A. That's right.

12 Q. The next well that you're proposing is the  
13 Bennett Ranch Unit Number 6.

14 A. Uh-huh.

15 Q. How do we get to that numbering system?

16 A. Well, there was a sequence of Mississippian  
17 development wells, 2, 3, 4 and 5, that were part of the  
18 plan of development that was submitted after the 1998 --  
19 '97 discovery of Mississippian gas.

20 Q. And they were never drilled?

21 A. They were never drilled. We obtained additional  
22 seismic information that told us that the next best  
23 location to drill was the 25-1.

24 Q. So since you drilled the 1 and the 1Y and the  
25 25-1, you've run no more seismic?

1 A. We ran seismic in between the 1Y and the 25-1.

2 Q. And where was that seismic run?

3 A. It was run -- the 2-D seismic was run in a  
4 northwest-to-southeast, along the crest of the anticline.

5 Q. Did it -- did any of that seismic data -- Were  
6 any of the expansion areas included in that seismic?

7 A. Yeah, that seismic goes across the expansion --  
8 some of the expansion area, yes.

9 Q. Northwest to southeast? I guess I don't see -- I  
10 don't see how that could be oriented, since the original  
11 unit was oriented northwest to southeast and extends from  
12 corner to corner, with the exception of that -- maybe that  
13 Tract 11a in the north.

14 A. I'm not following you.

15 Q. Let me make sure I've got my directions right.  
16 Northwest to southeast, from Seattle to Fort Lauderdale,  
17 right?

18 A. Yup.

19 Q. How could a line run along the crest of the  
20 anticline in that direction have tested any of the  
21 expansion areas, since the expansion areas are to the  
22 southwest and the northeast and a little bit to the north?

23 A. I guess I see what you're saying there, and  
24 you're correct in that the -- most of Section 3 there,  
25 which is up at the northwest end of that particular seismic

1 line, was already in the existing unit area.

2 Q. That's my point.

3 A. Yes, I agree.

4 CHAIRMAN FESMIRE: Okay. I don't have any  
5 further questions.

6 Commissioner Bailey, did you think of anything  
7 else you want to discuss?

8 COMMISSIONER BAILEY: No, but I might later.

9 CHAIRMAN FESMIRE: Okay.

10 Mr. Bruce, did you have a redirect of this  
11 witness?

12 MR. BRUCE: Yeah, a few questions.

13 REDIRECT EXAMINATION

14 BY MR. BRUCE:

15 Q. Again getting to this 640-acre spacing, at this  
16 point that has been used for the participating areas, has  
17 it not, Mr. Yahney?

18 A. Right.

19 Q. And the participating areas under the unit  
20 agreement are the areas deemed reasonably productive of  
21 hydrocarbons?

22 A. That is correct.

23 Q. And again, regardless of the spacing, no one is  
24 affected by the spacing at this time because, first, the  
25 well -- the existing wells are in the interior of the unit,

1 correct?

2 A. Correct.

3 Q. And you can't produce them at this point?

4 A. That's correct.

5 Q. And you keep getting asked about seismic and  
6 additional testing, whatever that may be.

7 The only way to really test the unit is to drill  
8 additional wells, correct?

9 A. That's my opinion, yes.

10 Q. That's why you have an exploratory unit?

11 A. Correct.

12 Q. And insofar as preventing waste there is, of  
13 course, waste of hydrocarbons, correct?

14 A. Correct.

15 Q. Couldn't there also be economic waste?

16 A. Yes, there can be.

17 Q. Now in exploratory units, isn't it -- isn't one  
18 of the main factors is simply orderly development of the  
19 reservoir or reservoirs found in an exploratory unit?

20 A. That's correct.

21 Q. You don't have to worry about lease expiration  
22 dates; you can take -- as you drill, you can develop your  
23 model and continue drilling in an orderly manner so that  
24 you're not wasting money?

25 A. That's correct.

1 Q. So once you drill one well, then you take that  
2 data and move on to the next best location, as you see it?

3 A. Correct.

4 Q. And oftentimes what you're doing is stepping out  
5 from one well to another, rather than, say, moving five,  
6 six, seven miles away to preserve an existing lease?

7 A. Correct.

8 Q. The Division's attorney also asked you what kind  
9 of plan, well plan, you had.

10 This isn't like a secondary recovery unit, where  
11 you pretty much know how you're going to develop the unit?

12 A. That's correct.

13 Q. Every new well adds additional data that you can  
14 then use to refine your method?

15 A. Indeed.

16 Q. And you mentioned -- and I think you mentioned  
17 this in your direct, but getting -- obviously at this point  
18 there is Mississippian -- proven Mississippian production?

19 A. Yes, there is.

20 Q. And Canyon, correct?

21 A. Correct.

22 Q. And you mentioned a third zone. What other --  
23 What had the well shown regarding a third potentially  
24 productive zone?

25 A. When we drilled the Number 1, we had gas at the

1 unconformity between the Powwow formation and the Virgilian  
2 or Cisco. That gas, we thought, was possibly commercial,  
3 and at this point we have not been able to test it.

4 Q. It makes no sense to go into your existing wells  
5 and perforate that zone at this time?

6 A. No, it does not.

7 Q. So as you drill, these wells may have two or  
8 three, or even more productive zones in them?

9 A. That would be very nice.

10 Q. And Mr. Yahney, also you were questioned about  
11 identification of fresh water, *et cetera*. Are you familiar  
12 with a unit formed in Hidalgo County several months ago by  
13 Dan A. Hughes Company?

14 A. Yes, I am.

15 Q. That unit covers some 82,000 acres, I believe?

16 A. It covered a lot of acres.

17 Q. Does Heyco have some leases in that area?

18 A. Heyco contributed some leases to that unit.

19 Q. Did you attend the hearing?

20 A. Yes, I did.

21 Q. And there was testimony -- there were questions  
22 asked and testimony presented about potential water zones  
23 in that area, correct?

24 A. Yes, there was some.

25 Q. But at that hearing Dan A. Hughes Company didn't

1 have to present testimony regarding wellbore design, did  
2 it?

3 A. I do not recall such.

4 Q. They didn't have to present any economics, did  
5 they?

6 A. I don't recall seeing that either.

7 Q. And now this one I don't remember. They did  
8 present some geology as to the target formation, did they  
9 not?

10 A. Yes, they did.

11 Q. Was there any seismic?

12 A. Their geology was based on some seismic, but I  
13 don't recall that any seismic was actually -- was actually  
14 shown to the Division.

15 Q. And the name of that unit is the Hueco South  
16 Exploratory Unit?

17 A. That's correct.

18 MR. BRUCE: That's all I have, Mr. Chairman.

19 CHAIRMAN FESMIRE: Ms. Altomare, anything on the  
20 subjects of the redirect?

21 MS. ALTOMARE: I don't believe so, thank you.

22 CHAIRMAN FESMIRE: Commissioner Bailey, do you --

23 COMMISSIONER BAILEY: No.

24 CHAIRMAN FESMIRE: Is it okay to release this  
25 witness?

1           COMMISSIONER BAILEY: Can I call him up after the  
2           OCD testimony?

3           CHAIRMAN FESMIRE: It's okay with me, as long as  
4           Mr. Bruce agrees.

5           MR. BRUCE: Perfectly fine.

6           CHAIRMAN FESMIRE: Commissioner Olson?

7           THE WITNESS: Okay.

8           CHAIRMAN FESMIRE: Mr. Yahney, I --

9           COMMISSIONER OLSON: Oh, just one question --

10          CHAIRMAN FESMIRE: Oh, I'm sorry.

11          COMMISSIONER OLSON: Yes.

12                           FURTHER EXAMINATION

13          BY COMMISSIONER OLSON:

14           Q.       And I think this comes back to what you were  
15           just asked.

16                    The participating areas are the ones that you're  
17           defining as the most productive areas; is that right?

18           A.       Most likely to be productive.

19           Q.       And those look like they're pretty much entirely  
20           within the existing unit, aren't they?

21           A.       Yes, they would be, at this point.

22           Q.       So I guess, then, coming back again, what -- the  
23           purpose of the expansion of the unit, that it sounds like  
24           it's just to preserve the leases for the order -- more  
25           orderly development of --

1           A.     That is part -- that's got -- a big part of it,  
2     yes.

3           COMMISSIONER OLSON:   Okay, thank you.

4           CHAIRMAN FESMIRE:   Any other questions of this  
5     witness?

6           Mr. Yahney, for the first time since I've been on  
7     the Commission, we're going to allow you to step back but  
8     reserve the right to recall you.

9           MR. YAHNEY:   Okay.

10          CHAIRMAN FESMIRE:   Mr. Bruce?

11          MR. BRUCE:   One final thing, if I could just let  
12     him sit here, recall Mr. Dyer pertaining to one question  
13     you asked this witness.

14          CHAIRMAN FESMIRE:   You would like to recall Mr.  
15     Dyer?

16          MR. BRUCE:   Yes, sir.

17          CHAIRMAN FESMIRE:   I have no problem with that.  
18     Any objection, Ms. Altomare?

19          MS. ALTOMARE:   No objection.

20          CHAIRMAN FESMIRE:   Why don't you go ahead and  
21     recall him?

22          MR. BRUCE:   The -- and if the record could  
23     reflect, he was previously sworn in.

24          CHAIRMAN FESMIRE:   Let's go ahead and put him --

25          MR. BRUCE:   Okay.

1 CHAIRMAN FESMIRE: -- on the witness stand, such  
2 that it is.

3 VERNON D. DYER (Recalled),  
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. BRUCE:

8 Q. Mr. Dyer, there's a question about the ownership  
9 of the Heyco leases outside the currently existing unit.  
10 Will the ownership of those leases be the same as Heyco's  
11 leases inside the existing unit?

12 A. That is correct, the ownership will not change at  
13 all --

14 Q. Okay, so --

15 A. -- same working interests.

16 Q. So all of the Heyco-operated leases inside or  
17 outside the unit will have the exact same ownership?

18 A. Yes, that is correct.

19 MR. BRUCE: That's all I have, Mr. Chairman.

20 CHAIRMAN FESMIRE: Ms. Altomare?

21 MS. ALTOMARE: (Shakes head)

22 CHAIRMAN FESMIRE: Commissioner Bailey?

23 COMMISSIONER BAILEY: No.

24 CHAIRMAN FESMIRE: Commissioner Olson?

25 COMMISSIONER OLSON: (Shakes head)

## EXAMINATION

1  
2 BY CHAIRMAN FESMIRE:

3 Q. Mr. Dyer, if that's true then what is the  
4 advantage to Heyco to expand the unit area?

5 A. The advantage to Heyco --

6 Q. To -- to Heyco --

7 A. -- not to our partners? Because we -- it doesn't  
8 make any difference --

9 Q. Well, to any of the partners. What's the -- if  
10 the ownership is exactly the same in the leases, what is  
11 the advantage to the partners of expanding the unit, other  
12 than holding the leases for a longer period of time?

13 A. So that we can conform to OCD rules when we have  
14 to, and we don't end up with trying to communitize or  
15 coming back to another hearing to try to get it expanded so  
16 that we can get the -- get the wells drilled.

17 CHAIRMAN FESMIRE: I have no further questions.

18 Does anyone else have a question of this witness?

19 MR. BRUCE: No, sir.

20 CHAIRMAN FESMIRE: Thank you, Mr. Dyer.

21 MR. BRUCE: And that concludes my case, Mr.

22 Chairman.

23 CHAIRMAN FESMIRE: Thank you, Mr. Bruce.

24 Ms. Altomare, how long is your witness going to  
25 take?

1 MS. ALTOMARE: Longer than 10 minutes.

2 CHAIRMAN FESMIRE: We're not thinking on the same  
3 frequency here.

4 MS. ALTOMARE: For our part of it, probably --  
5 I'd say about a half an hour. I would like to do a little  
6 bit of an opening and address some of the legal standards  
7 as far as how we -- the dynamic between our agency and the  
8 BLM with these units.

9 (Off the record)

10 CHAIRMAN FESMIRE: Before we do that, Ms.  
11 Altomare, we've decided that we'll go ahead and break now  
12 and come back at a quarter to 1:00 and reconvene at a  
13 quarter to 1:00.

14 Is that satisfactory to you, Mr. Bruce?

15 MR. BRUCE: Yes, sir.

16 CHAIRMAN FESMIRE: Ms. Altomare, that's okay with  
17 you?

18 MS. ALTOMARE: (Nods)

19 CHAIRMAN FESMIRE: Okay. Why don't we break  
20 right now and, like I said, reconvene at a quarter to 1:00?

21 (Thereupon, noon recess was taken at 11:53 a.m.)

22 (The following proceedings had at 12:53 p.m.)

23 CHAIRMAN FESMIRE: Let's go back on the record.

24 The record will reflect that it's about 10  
25 minutes to 1:00. This is a continuation of Cause Number

1 14,000. The record should also reflect that all three  
2 Commissioners are present, that a quorum is therefore  
3 present.

4 I believe, Ms. Altomare, you was about to -- you  
5 was about to --

6 (Laughter)

7 CHAIRMAN FESMIRE: You were about to begin your  
8 direct examination of Mr. von Gonten.

9 Mr. von Gonten, have you been sworn yet?

10 MR. von GONTEN: No, sir.

11 CHAIRMAN FESMIRE: Would you like to stand and be  
12 so?

13 MS. ALTOMARE: Actually -- Sorry. Before we do  
14 Mr. von Gonten, I would like to make a brief opening.

15 CHAIRMAN FESMIRE: Okay, does that preclude us  
16 swearing him in?

17 MS. ALTOMARE: No, but I did want to -- whatever  
18 you want to --

19 CHAIRMAN FESMIRE: Let's go ahead and swear him  
20 in and let you do your opening --

21 MS. ALTOMARE: Okay.

22 CHAIRMAN FESMIRE: -- and then we'll begin his  
23 questioning.

24 (Thereupon, Mr. von Gonten was sworn.)

25 CHAIRMAN FESMIRE: Ms. Altomare, you were going

1 to give an opening statement.

2 MS. ALTOMARE: Yes. I just wanted to touch on a  
3 couple of things, just because these exploratory units are  
4 kind of a unique beast created by the BLM, not actually  
5 something that is created and managed by the OCD directly.

6 And our rule -- our involvement in the process  
7 stems directly from the BLM regs and from the language of  
8 the agreements themselves, rather than out of any OCD rules  
9 or out of New Mexico statute, which is kind of a unique  
10 scenario, unlike a lot of the other ways that we find  
11 ourselves involved in regulation of the oil and gas  
12 industry.

13 That being said, I think it's important for the  
14 Commission to note that under the controlling regulation,  
15 federal regulation, when an application for a unit is  
16 approved a couple of things are considered, one being that  
17 the unit is logical in that it is put together in a way  
18 that is logically connected for the development and/or  
19 operation as a unit. There has to be some rationality to  
20 how the unit is put together.

21 It also requires a showing that unitization is  
22 necessary and advisable and in the public interest.

23 Those two things taken together are then viewed  
24 in the context of -- or considered with -- along with  
25 whether or not there are any environmental consequences to

1 the action. Those are the standards that are applied by  
2 the BLM when they're looking at a unit application.

3 Those regulations and the language of the unit  
4 itself call for approval by the other agencies, including  
5 the State Land Office and the OCD, before the actual unit  
6 application or any expansion thereof is actually approved  
7 and enforceable.

8 I would submit that that is because each agency  
9 has their own perspective, their own little piece of the  
10 puzzle that they're looking at.

11 In the case of the OCD, as you well know, the OCD  
12 and the Commission are looking at the protection of public  
13 health and the environment, correlative -- protection of  
14 correlative rights, and the prevention of waste.

15 I know there's been a lot of emphasis on the  
16 protection of correlative rights and the prevention of  
17 waste.

18 I would submit that in this case there is also an  
19 issue of protection of public health and the environment  
20 and that the existence of the aquifer, the location of it  
21 and the lack of additional information submitted by the  
22 Applicant to assure the OCD that in approving this unit  
23 expansion they are serving that purpose, that third purpose  
24 -- I don't -- I think that that is a consideration that  
25 needs to be addressed by the Commission as well, being as

1 it is one of the agencies that is tasked with approving  
2 these things.

3 That being said, I would like to call my first --  
4 my only witness to the stand. That is Glenn von Gonten.

5 CHAIRMAN FESMIRE: Mr. von Gonten, would you take  
6 the stand, please?

7 GLENN von GONTEN,  
8 the witness herein, having been previously duly sworn upon  
9 his oath, was examined and testified as follows:

10 DIRECT EXAMINATION

11 BY MS. ALTOMARE:

12 Q. Can you state your full name for the title -- for  
13 the -- name and title for the record, please?

14 A. My name is Glenn von Gonten, I'm a senior  
15 hydrologist with the Oil Conservation Division.

16 Q. Okay. And have you testified before the  
17 Commission and been qualified as an expert in your field?

18 A. Yes, I have.

19 MS. ALTOMARE: I would therefore move to qualify  
20 Mr. von Gonten as an expert hydrologist.

21 CHAIRMAN FESMIRE: Mr. Bruce, do you have any  
22 objection?

23 MR. BRUCE: I have no objection.

24 CHAIRMAN FESMIRE: Mr. von Gonten's credentials  
25 are so accepted.

1 MS. ALTOMARE: At this time, in an effort to  
2 expedite the process, I would ask the Commission and  
3 counsel if it would be all right to let Mr. von Gonten go  
4 through some demonstrative aids to exhibits and things for  
5 the Commission, and then we can go through some  
6 clarification things afterward. I think that that might  
7 speed up the process a little bit.

8 CHAIRMAN FESMIRE: Mr. Bruce, do you have any  
9 objection to that?

10 MR. BRUCE: I'll reserve any objections to the  
11 exhibits for later.

12 CHAIRMAN FESMIRE: Okay. Proceed, ma'am.

13 Q. (By Ms. Altomare) Mr. von Gonten, can you go  
14 ahead and go through the slides that you prepared for  
15 today?

16 A. Be happy to.

17 The area that is before the Commission today, the  
18 unit, is located slightly to the west of the Cornudas  
19 Mountains, right on the Texas-New Mexico border in south  
20 central New Mexico.

21 This figure is actually taken from the cover of  
22 the Geologic Circular 198, which was, I believe, provided  
23 as a reference. It is the only figure from that document  
24 that I'll be using. It was chosen because I think it  
25 fairly well establishes the structural and physiographic

1 setting of this area.

2           The declared basin that I'll be detailing a  
3 little bit later is referred to as the Salt Basin,  
4 underground water basin, and it is bounded on the east by  
5 the Guadalupe uplift, on the west by the Jarilla Mountains,  
6 the Hueco Mountains, and on the north by the Sacramento  
7 uplift, and extends south into Texas.

8           The Salt Basin -- and this is taken from a  
9 regional water- -- or actually from a 2004 publication,  
10 shows in a little more detail the Salt Basin. Again, the  
11 Guadalupes on the east and on the west we have the Otero  
12 Mesa. We have -- the Cornudas Mountains are actually  
13 formed from paleozoic and volcanic rocks and intrusives.

14           And generally speaking, the outcrop youngs from  
15 south from the Abo -- I mean the -- yeah, the Abo Hueco  
16 formation in the south to the Yeso formation, over to the  
17 San Andres formation, crosses a Quaternary alluvial fill,  
18 which is also referred to as the Crow Flats, and then has  
19 undifferentiated Permian rocks, broke off mountains and  
20 then the level phase.

21           Call to your attention a couple of lines of  
22 cross-section. The first one is to the -- east-west, on  
23 the north side, going through the Otero Mesa -- I'll be  
24 showing that in a second -- and followed later by a B-B'  
25 cross-section in the south, just north of the Texas state

1 line, which goes very closely through the Bennett Ranch  
2 unit.

3 This is an exhibit which was provided by Heyco in  
4 its 1995 application, and it zooms into the location and  
5 shows some interesting features, such as the Hueco  
6 Mountains, the Cornudas Mountains, and actually shows the  
7 area where they do have the seismic. You can pick up some  
8 seismic lines in this area here, which is where the Bennett  
9 Ranch Unit is located.

10 Before the area was busted up by faulting -- this  
11 is a simplified diagram, taken from Mayer and Sharpe, which  
12 actually shows the pre-deformation sequence from the Yeso  
13 to the -- Victorio Peak, lower San Andres and the Bone  
14 Spring, going east to the Salt Basin graben.

15 As I mentioned, this is a source from 2004 which  
16 was prepared for the Otero Mesa Coalition. I'm using it  
17 not for their purposes but for the purposes of OCD, and  
18 that is to depict the conditions of the Salt Basin aquifer.

19 Again, this is showing the same indicator map  
20 with the cross-sections. We'll be first looking at the  
21 A-A' cross-section.

22 This map -- this cross-section goes from west to  
23 east. You can see the -- there's some extreme vertical  
24 exaggeration. This is six miles on this scale here, and  
25 this is 1000 feet vertically here.

1           This shows that there's a groundwater divide on  
2 Otero Mesa, and the groundwater actually flows to the west,  
3 then that divide and flows generally east. We'll be  
4 looking at a groundwater contour map in a minute, going  
5 over to a highly faulted area on the east.

6           There is a mistake on this diagram. It's  
7 corrected later. This is not all Precambrian undivided.  
8 It should say pre-Permian undivided.

9           Another figure from the same source actually has  
10 corrected that, and it refers to pre-Permian rocks, which  
11 are shown below this dashed line. It's again the same  
12 figure, without color, and it has corrected this typo.

13           Again, looking more at the Bennett Ranch area,  
14 which would be in this area here, just to the west of the  
15 Cornudas Mountains, this is the east-west -- or west-to-  
16 east cross-section. Again, the vertical exaggeration, one  
17 inch is approximately -- this -- these bars are 1000 feet  
18 vertically, and again the zero to six miles. So it's quite  
19 an extreme exaggeration.

20           It shows that the Bennett Ranch would be in  
21 approximately this area, and it shows the proximity to the  
22 Cornudas Mountains which have Tertiary intrusives.

23           And again, this is really focusing on the  
24 groundwater, water-table aquifer, and it is showing that  
25 that occurs primarily in the Permian formations, and

1 they're lumping everything else as being basically pre-  
2 Permian below that interval.

3 This also depicts some of the regional faulting.  
4 And again, this just shows that they had a black-and-white  
5 version of it.

6 This shows the pre-development, so-called pre-  
7 development groundwater elevation contours and direction of  
8 groundwater flow. Again, this is the area which we're  
9 referring to in the Bennett Ranch. Generally there would  
10 be a groundwater divide with water going to the north from  
11 that area, and it also indicates that the -- at some point  
12 it would flow south into Texas. Groundwater would wrap  
13 around and go through this area which is referred to as the  
14 Otero Breaks and over to Crow Flats.

15 Recharge is occurring from the north and is --  
16 generally speaking, this is fresher to the north, as you  
17 would expect in a recharge area, and TDS increases to the  
18 south and into the Basin.

19 There's a lot of stratigraphic charts that people  
20 have put together, and I'm not a particular fan of this  
21 one, but it was used in this publication. What I've done  
22 is shade it slightly. If you can see this area here, this  
23 is the interval that is the uppermost aquifer in the Salt  
24 Basin.

25 I'm showing here that in the upper Pennsylvanian

1 was where Heyco actually had gas, shown by this pink-  
2 highlighted area here. That's not the name that they use.  
3 And the Helms is their Mississippian production or gas  
4 reserves, are shown in here in the Mississippian. So we  
5 have gas in this interval.

6 And we also had water. Originally it was  
7 supposed to be an oil-bearing interval that was predicted,  
8 but in fact the Fusselman turned out to be water-bearing,  
9 and I believe that there was testimony that there was  
10 additional water-bearing zones, freshwater-bearing zones or  
11 more salty water-bearing zones, below the Fusselman as  
12 well.

13 This is from the Bennett Ranch 25-1, and again it  
14 shows their tops, and this was just used to illustrate that  
15 the Canyon has gas and that there were at least three  
16 water-bearing zones, major water-bearing zones, at 3300.  
17 And as Heyco's geologist testified, this is somewhat  
18 different than other wells in the region, and different  
19 from the original Y -- or 1 and 1Y wells, which encountered  
20 shallow groundwater above 1000 feet.

21 And this is a summary of basically what these  
22 graphics have tried to depict. We're talking in this  
23 particular study about the role of fractures and regional  
24 groundwater flow, and they summarize and say the region is  
25 largely undeformed but is cut by many extensional faults,

1 there's a broad fracture zone extending from the Sacramento  
2 Mountains to the Salt Basin near Dell City.

3 Dell City, I believe, has been mentioned as an  
4 area where there's fairly intensive agricultural  
5 development, and it's using the water taken from the Salt  
6 Basin or the Texas equivalent.

7 Most of the fractures and the faults would be  
8 parallel -- Excuse me, the fractures parallel the major  
9 faults and are oriented north 20 west, and there is this  
10 intense fracturing which is known over -- as the Otero  
11 Breaks on the east side of the Salt Basin, and there's  
12 fresh water coming from the north to the south. And they  
13 point out that their modeling or their study shows that  
14 fracturing has created a high-permeability zone that  
15 funnels recharge from the Sacramento all the way into  
16 Texas.

17 This was a regional water plan. I'll be taking  
18 some figures from this. This was prepared in accordance  
19 with the State water plan, and this actually shows the  
20 water quality in the Salt Basin, at least on the New Mexico  
21 side.

22 And their estimates are that the recoverable  
23 fresh water -- that is, fresher than 10,000 -- or  
24 protectible groundwater would perhaps be a better way of  
25 putting it -- is 28 million acre feet, and the Crow Flat

1 alluvial aquifer has another 1.5 million.

2 So about 30 million acre-feet of recoverable from  
3 this study, as an estimate.

4 I would also point out that, generally speaking,  
5 most of the volume of the groundwater in this area is  
6 fresher than 3000 parts per million total dissolved solids,  
7 and it's -- at least it's summarized on this figure as at  
8 least all protectible under the Water Quality Control  
9 Commission regulations.

10 Again, coming to the end of my presentation here,  
11 most of the Salt Basin is in the bedrock, or most of the  
12 groundwater occurs in bedrock aquifer. Approximately 28  
13 million acre-feet of recoverable. They are estimating that  
14 the bedrock aquifer is 750 feet thick. Most of this is in  
15 the Permian. So they're saying that they could produce 93  
16 million acre-feet per year for a hundred years from this  
17 area.

18 The Crow Flat area also has the alluvial aquifer,  
19 which has another 1.5 million acre-feet, and that would be  
20 another 14,000 acre-feet per year.

21 In the area that they studied -- and this study  
22 was put together, also included the Tularosa Basin, for  
23 example. The Salt Basin is fresher than the Tularosa  
24 Basin, which probably is not a surprise to anybody who's  
25 lived around it.

1           And that concludes my slide presentation.

2           Q.    Thank you.  Before we go on with the substantive  
3 part of the testimony, I'd like to direct your attention to  
4 Exhibits A and B.  Can you identify those for the record?

5           A.    I don't have those in front of me.

6                    Yes, Exhibit A was the 2004 Shomaker publication,  
7 which I relied on for a number of my slides.

8           Q.    Okay.  And Exhibit B is -- ?

9           A.    Exhibit B is Circular 198 from the New Mexico  
10 Bureau of Mines and Mineral Resources, which I used to  
11 provide a structural and physiographic overview of what  
12 we're seeing into the more detailed figures.

13          Q.    Okay.  Both of these documents were used for your  
14 review and preparation for your testimony in this case?

15          A.    That is correct.

16          Q.    And if I could direct your attention to Exhibit  
17 C, can you identify that for the record, please?

18          A.    Exhibit C -- Excuse me, Exhibit C is the  
19 transcript of Case Number 14,000, heard before Hearing  
20 Examiners in Santa Fe on September 20th, 2007.

21          Q.    And did you review this document also in  
22 preparation for today's testimony?

23          A.    Yes, I did review it.

24                   MS. ALTOMARE:  I would move Exhibits -- OCD  
25 Exhibits A, B and C into the record.

1 CHAIRMAN FESMIRE: Mr. Bruce?

2 MR. BRUCE: May I ask a couple of questions of  
3 the witness?

4 CHAIRMAN FESMIRE: You may.

5 VOIR DIRE EXAMINATION

6 BY MR. BRUCE:

7 Q. Mr. von Gonten, Exhibit A, did you have any had  
8 in preparing this document?

9 A. I had no involvement with it.

10 Q. And Exhibit B is simply an old -- you're not an  
11 oil and gas engineer or geologist, are you?

12 A. Not anymore.

13 Q. And you had no hand in preparing Exhibit B?

14 A. No, sir, I did not.

15 MR. BRUCE: Mr. Chairman, I would object to the  
16 submission of both exhibits, especially as to Exhibit A. I  
17 had no opportunity to cross-examine Mr. Finch and ask him  
18 about this exhibit, and therefore -- and Exhibit B is --  
19 you know, it's a state record but once again, I have no  
20 chance to cross-examine these witnesses, and I object to  
21 them both.

22 CHAIRMAN FESMIRE: Okay. Mr. Bruce, as an expert  
23 is he not entitled to rely on these as part of his  
24 testimony today?

25 MR. BRUCE: He's entitled to rely on them. I

1 don't believe that they would be proper as exhibits.

2 MS. ALTOMARE: I believe under the hearsay  
3 exceptions they're admissible as exhibits, and -- as relied  
4 on by testimony. And my understanding of the rules for the  
5 Commission is that the rules of evidence are not to be --

6 CHAIRMAN FESMIRE: -- are relaxed?

7 MS. ALTOMARE: Yeah. And it is our position that  
8 these documents would be instructive and helpful to the  
9 Commission in rendering a decision in this matter.

10 CHAIRMAN FESMIRE: Mr. Bruce, in light of the  
11 fact that Mr. von Gonten is qualified as an expert,  
12 especially with respect to Exhibit A, I think he's entitled  
13 to rely on it. That doesn't prevent you from cross-  
14 examining him on it, though. I mean, the conclusions that  
15 he reaches based on the evidence in here are entirely open  
16 to any questions that you would want to ask him during  
17 cross-examination.

18 So having said that, I'll go ahead and admit  
19 Exhibits A and B -- A, B and -- Did you request C?

20 MS. ALTOMARE: I did. I don't believe he had any  
21 objection to C.

22 MR. BRUCE: I have no objection to Exhibit C.

23 CHAIRMAN FESMIRE: We'll go ahead and admit  
24 Exhibits A and B -- A, B and C, I'm sorry.

25 MR. BRUCE: Mr. Chairman, before I begin my

1 cross-examination, one question of clarification.

2 MS. ALTOMARE: I actually haven't finished my  
3 direct, so --

4 MR. BRUCE: Oh, I'm sorry.

5 CHAIRMAN FESMIRE: Is it on the exhibits?

6 MR. BRUCE: Partially, but it can wait until the  
7 end of her direct.

8 CHAIRMAN FESMIRE: Okay.

9 Ms. Altomare, why don't you continue?

10 MS. ALTOMARE: Thank you.

11 DIRECT EXAMINATION (Resumed)

12 BY MS. ALTOMARE:

13 Q. Mr. von Gonten, you heard the testimony that was  
14 presented by the Applicant today, by both of the witnesses?

15 A. I did.

16 Q. And what if any concerns do you have, or what  
17 issues do you have that you'd like to express to the  
18 Commission regarding the request being made by the  
19 Applicant for the unit expansion?

20 A. I reviewed this, not with the background and  
21 experience of a Hearing Examiner, but as a geologist  
22 reviewing a technical application.

23 My concern was that they specified very clearly  
24 what they wanted, but they didn't seem to provide any  
25 technical basis for it with -- specifically, any figures,

1 diagrams, maps, cross-sections, things along that line that  
2 would allow someone to make an objective opinion -- or form  
3 an objective opinion about their Application.

4 Q. Is there any doubt in your mind that this unit  
5 does indeed sit right on top of the Salt Basin aquifer.

6 Q. Okay. What is the significance of the State  
7 Engineer designating the Basin as an aquifer?

8 A. Well, all the state of New Mexico has been  
9 declared in one basin or another. The Salt Basin was  
10 declared, I believe, in 2000. And the reason is, of  
11 course, to protect New Mexico's resources.

12 Q. Do you have any recollection as to what led to  
13 the designation, what precipitated that designation on the  
14 Salt Basin aquifer?

15 A. I've seen some discussion on it. I have no  
16 firsthand knowledge of what led to the State Engineer  
17 making that determination.

18 Q. Okay. Do you have any opinion as to the  
19 likelihood that waters below 2500 feet are hydrologically  
20 connected with waters above 2500 feet?

21 A. I think that it hasn't been demonstrated one way  
22 or the other. I would say that it is -- certainly  
23 considering that there are a number of faults in the area,  
24 it's extensional, I would think that it would remain to see  
25 -- be seen whether these faults are sealing or if in fact

1 they would actually allow subsurface waters to percolate up  
2 through the fault zone.

3 Q. And what is the significance of that in terms of  
4 oil and gas exploration in this area?

5 A. Well, it generally means that there's -- in the  
6 faulted area like this, it means that your regional seal is  
7 not well known. It would have to be a combination seal  
8 above -- a stratigraphic seal and a structural seal.  
9 Therefore, any contamination could migrate up these fault  
10 lines and contaminate groundwater, that could be an  
11 explanation.

12 And that could be naturally occurring, as well as  
13 something that occurs during drilling. For example, it was  
14 noted that the shallow 3300-foot interval in the 25-1  
15 actually, I believe, had gas as well as water. That would  
16 indicate perhaps that there was a leaky fault and that some  
17 gas from lower in the stratigraphic interval was migrating  
18 up the fault line and being trapped below the regional  
19 unconformity, which the Heyco geologist referred to.

20 Q. Okay. Have you formed any opinions or  
21 conclusions based on the information you've been provided  
22 with about the three wells that Heyco has drilled or  
23 attempted to drill on this unit to date?

24 A. I'm not sure what you're asking.

25 Q. Any conclusions about wellbore issues, the

1 location and quantity and quality of water in the area,  
2 concerns about those kinds of issues?

3 A. Well, I did review the well file that we had on  
4 our OCD online, and I paid particular attention to any  
5 sorts of reports of important water sands, or water sands  
6 that were encountered, or water-bearing zones more  
7 correctly, in the casing program.

8 It appears that the 25 -- Bennett Ranch 25 Unit  
9 Number 1 was somewhat anomalous in that it did not  
10 encounter shallow groundwater above 1000 feet.

11 Most or all of the other -- Well, I shouldn't say  
12 that, but most of the other wells did encounter shallow  
13 groundwater, above 1000 feet. This was somewhat unusual.  
14 So this appears to indicate that there is protectible  
15 groundwater at a depth that they will have to penetrate,  
16 but that's not unusual, as I believe was testified by the  
17 Heyco geologist.

18 Q. Do you feel that Heyco has provided the  
19 Commission with enough information and evidence at this  
20 time to support a finding that approval of their  
21 Application serves the purposes of prevention of waste,  
22 protection of correlative rights, as well as protection of  
23 human health and the environment?

24 A. That would be for the Commission to determine. I  
25 will say that my review of their Application leaves me with

1 a lot of questions. I don't think that I understand their  
2 justification for it, I don't think that they explained  
3 their position so that a technical person such as myself  
4 could actually follow it and understand it.

5 As I said earlier, they said what they wanted.  
6 They didn't actually justify it.

7 Q. Do you have an understanding from the review of  
8 the information that has been presented as to what the  
9 justification for the proposed expansion to the north of  
10 the unit is?

11 A. No, I do not understand that proposal.

12 Q. And from a hydrogeo- -- a geological perspective,  
13 from a technical perspective, does there appear to be any  
14 evidence in the record at this point to justify such an  
15 expansion?

16 A. In the verbal record, based on the testimony that  
17 was presented by the Heyco witnesses today, I gained a  
18 better understanding of their sub-unconformity play that  
19 they wish to pursue, but I did not see that in the original  
20 case, Number 14,000.

21 Q. Was the verbal testimony sufficient to satisfy  
22 you that the proposed -- the expansion in the north as  
23 proposed is fully justified?

24 A. I always like to see figures. So I would say the  
25 answer is no. I would want to see a map and a cross-

1 section on anything to justify the proposed --

2 Q. Okay. Do you have any additional comments or  
3 concerns that you would like to express to the Commission?

4 A. No, the point of my testimony was to review the  
5 sensitivity of the groundwater area. It is in a designated  
6 -- as everything is, in an underground water basin.  
7 There's certainly protectible water, and generally  
8 speaking, the water resources in the Salt Basin area  
9 adjacent to Otero Mesa, are certainly something that the  
10 Division would be very interested in protecting.

11 MS. ALTOMARE: Okay, I'll go ahead and pass the  
12 witness.

13 CHAIRMAN FESMIRE: Mr. Bruce, would you like to  
14 join us?

15 CHAIRMAN FESMIRE: Mr. Bruce, do you think you'll  
16 need the projector or -- ?

17 MR. BRUCE: No, no. It can probably be turned  
18 off so I don't feel like I'm under the spotlight any more  
19 than I already am.

20 CHAIRMAN FESMIRE: You read my mind, I was going  
21 to offer that.

22 CROSS-EXAMINATION

23 BY MR. BRUCE:

24 Q. Based upon your last comment, Mr. van Gonten --  
25 Excuse me, I didn't want to turn you into a Dutchman rather

1 than a German. Your concerns are based on fresh water?

2 A. Yes, I'm a hydrologist, and what I deal with in  
3 my position in the Division is actually protection of  
4 groundwater.

5 Q. And isn't that a well-design issue?

6 A. It is certainly an issue that should be addressed  
7 in the well design.

8 Q. Okay. It really has nothing to do with whether a  
9 unit exists or is expanded, does it?

10 A. I would agree with that.

11 Q. When -- For instance, let's ignore the unit.

12 When an operator seeks to drill a well -- Are you at least  
13 basically familiar with the OCD's spacing rules, well-  
14 spacing rules?

15 A. Yes, I am somewhat familiar with them.

16 Q. And normally oil wells are spaced on 40 acres  
17 without any special rules, and for the most part gas wells  
18 are spaced on 160 or 320 acres -- I don't mean to put words  
19 in your mouth, but is that correct?

20 A. I understand that, yes.

21 Q. And when you're looking at a well design, it's --  
22 in order to protect fresh water, it is completely  
23 irrelevant to the OCD's well-spacing rules?

24 A. I would agree with that.

25 Q. Does your job at the Division also encompass

1 northwest New Mexico?

2 A. Yes, it does.

3 Q. And certainly when people -- isn't -- I won't use  
4 the word fresh, but isn't the water often encountered in  
5 the Fruitland Coal wells in the northwest and northeast  
6 part of the state relatively fresh or low in total  
7 dissolved solids?

8 A. Generally speaking, that's the case.

9 Q. And yet operators have drilled, at this point,  
10 probably thousands of wells to that zone?

11 A. Yes, sir, that's correct.

12 Q. And what is done with the produced water in those  
13 zones?

14 A. That's a very interesting topic and is, I guess,  
15 going to be covered under the produced water rule.  
16 Actually the disposal of that produced water is something  
17 that I'm not very familiar with. That goes to the people  
18 who would be permitting the surface waste management  
19 facilities.

20 But by understanding is generally -- Well, the  
21 fresh water is a problem. They don't want to waste it as a  
22 resource, but it still must be -- you know, not  
23 contaminate, say, the San Juan River.

24 So as far as its final disposition, I would have  
25 to say that I'm not completely familiar with those details.

1 Q. But it must be produced in conjunction with  
2 producing the gas from the Basin Fruitland Coal formation?

3 A. Yes, there is water associated with the  
4 production.

5 Q. And the Division doesn't prevent drilling of  
6 wells to the Basin Fruitland Coal?

7 A. That's correct, they do not.

8 Q. Isn't there also, as I understand it -- and you  
9 would know better than me on this, but much deeper below  
10 the State Engineer's 2500-foot cutoff, there's also quite a  
11 bit of relatively fresh -- I use that term advisedly --  
12 water in the Mesaverde formation?

13 A. With that -- I'm not familiar with the deeper  
14 subsurface in the San Juan Basin. I tend to deal with  
15 leaks and spills, and they're very shallow.

16 Q. Okay. You're not familiar with -- I believe it  
17 was the -- perhaps the City of Rio Rancho hoping to drill a  
18 water well to the Mesaverde formation west of Albuquerque?

19 A. I have heard some discussion of that, but I don't  
20 have any particular knowledge of that issue.

21 Q. Okay. And certainly the Division allows drilling  
22 of wells to the Mesaverde formation in the San Juan Basin?

23 A. Yes.

24 Q. Your testimony concentrated a lot on the Salt  
25 Basin. What -- Again, what is the appropriate formation or

1 depth of the Basin?

2 A. Excuse me?

3 Q. The Salt Basin aquifer that you were speaking  
4 about.

5 A. Yes.

6 Q. What formation is that?

7 A. It actually occurs generally throughout the  
8 Permian section. It starts off in the Abo-Hueco to the San  
9 Andres and -- Let me think. The A zone, San Andres, and it  
10 also occurs in the Quaternary alluvium in Crow Flats.

11 Q. Okay. You did see the cross-section that -- from  
12 the prior hearing that showed that above the top of the  
13 Pennsylvanian there was virtually no faulting?

14 A. Yes, it appears that the faulting was buried in  
15 the -- by the Permian.

16 I would point out that there is -- I believe  
17 there are surface cuts further to the east, but I don't  
18 believe there's major faulting that cuts the surface in the  
19 area of the Bennett Ranch.

20 Q. When Dan A. Hughes Company applied for approval  
21 of the Hueco South Exploratory Unit, did you review that  
22 material, submitted by that company with respect to the  
23 formation of the unit?

24 A. No, sir.

25 Q. To your knowledge, has the Commission or the

1 Division ever denied approval of an exploratory unit or the  
2 expansion of such a unit based upon concerns about fresh  
3 water?

4 A. Mr. Bruce, this is the first I've been involved  
5 with one of these units, and so I don't know.

6 Q. Why is the Division opposing this Application?

7 A. My understanding is that the Division doesn't  
8 feel that it was provided all the information it needed to  
9 make the determinations that it would be protective of  
10 human health and the environment, protect correlative  
11 rights and prevent waste.

12 Q. What is the jurisdictional statute for the  
13 Division over the protection of human health?

14 A. That is statutory language in the Oil and Gas  
15 Act.

16 Q. And how is human health harmed by the expansion  
17 of the Bennett Ranch Unit?

18 A. I don't know that it would be.

19 Q. Now with respect to the environment, you sat  
20 through the -- Heyco's witnesses' testimony today, did you  
21 not?

22 A. Yes, sir, I did.

23 Q. And with respect to the environment, aren't --  
24 First off, would you agree that an oil and gas lessee  
25 generally has the right to develop his leases?

1 A. Yes, I would.

2 Q. And in order to do that, he has to use at least  
3 some of the surface on those leases?

4 A. That is correct.

5 Q. And I -- you heard that Heyco is now proposing to  
6 limit development essentially based on one well per 640  
7 acres?

8 A. I understood that.

9 Q. And isn't that lessening any effect on the  
10 surface?

11 A. It would certainly minimize the surface impact  
12 with respect to roads and pads.

13 Q. Did you -- in the exhibit packet -- and I don't  
14 know if you reviewed Heyco's exhibits, but the -- Heyco  
15 Exhibit 2 was the original order.

16 A. Just a minute, Mr. Bruce, I'll pull it up.

17 Q. Heyco Exhibit 2, sir.

18 A. The 1995 order?

19 Q. That's correct, Mr. --

20 A. Yes --

21 Q. -- von Gonten.

22 A. -- I have it.

23 Q. If you'd look down in the first page to finding  
24 paragraph (5), it talks about protection of correlative,  
25 but that pertains to correlative rights within the unit

1 area, does it not?

2 A. This would be a bit outside my area.

3 Q. But that's what the order says?

4 A. I believe it does.

5 Q. Why is the Division now concerned with protection  
6 of correlative rights outside the unit area?

7 A. I don't know the answer to that question.

8 Q. And the Division's statutory mandate with respect  
9 to waste is primarily with respect to waste of  
10 hydrocarbons, correct?

11 A. I would disagree with that statement. When we  
12 talk about waste, I feel -- I focus on oilfield waste.  
13 Working on the environmental side, we talk about the proper  
14 disposition of oilfield waste. So when you use the word  
15 "waste", that's what I think about.

16 Q. You're talking about --

17 A. I understand that in this --

18 Q. You're talking about --

19 A. -- context subsurface you're talking about waste.

20 Q. You're talking about contaminants?

21 A. Yes.

22 Q. Can you provide me with a statutory cite to your  
23 definition.

24 A. Of oilfield waste?

25 Q. No, no, where the Commission -- Isn't the

1 Commission's mandate for waste having to do with waste of  
2 hydrocarbons?

3 A. The term "waste" also includes nondomestic waste.  
4 I don't have that in front of me, but yes, it is in the  
5 statute.

6 And I'm just to explain that when you talk about  
7 waste --

8 Q. Okay.

9 A. -- my background leads me to focus on that issue  
10 of the disposition of nondomestic waste.

11 Q. Let's focus on the hydrocarbons. If Heyco wasn't  
12 allowed to proceed with any development or production on  
13 the unit, wouldn't that cause waste of hydrocarbons?

14 A. If that was the case in the future, you know --

15 Q. They would have to shut in or plug and abandon  
16 their wells?

17 A. The hydrocarbons would still be there, so they  
18 would not have been wasted. But they -- Certainly Heyco  
19 would have been denied its opportunity to produce those  
20 hydrocarbons.

21 Q. And in essence, that is impairing their  
22 correlative rights?

23 A. I'm less familiar with the issues related to  
24 correlative rights, so I'll decline to answer that.

25 Q. And I don't have a figure, but you don't deny

1 that Heyco has spent money buying leases, drilling wells,  
2 *et cetera*, with the hopes of hydrocarbons under its leases?

3 A. I understand that to be true.

4 Q. And if it had to abandon this project, that money  
5 would be a loss to it?

6 A. Yes, sir, I believe that's the case.

7 Q. And what waste would be caused by unit expansion?

8 A. That's an area outside my area of experience.

9 MR. BRUCE: That's all I have at this time, Mr.  
10 Chairman.

11 CHAIRMAN FESMIRE: Commissioner Bailey?

12 EXAMINATION

13 BY COMMISSIONER BAILEY:

14 Q. Oh, let's start off with the transcript, which is  
15 Exhibit Number C, page 16, 17. There's some confusion on  
16 the OCD's --

17 A. Excuse me, I don't have a copy of that before me,  
18 Commissioner Bailey.

19 MS. ALTOMARE: Did you give it back to me?

20 CHAIRMAN FESMIRE: It's OCD Exhibit C.

21 MS. ALTOMARE: It's the one I handed to you with  
22 the pink sticky.

23 THE WITNESS: Right, I gave it back.

24 MS. ALTOMARE: Oh, here.

25 THE WITNESS: Okay, yes, I do have a copy of

1 that, I'm sorry.

2 Q. (By Commissioner Bailey) Okay, there appears to  
3 be some confusion over the OCD rule in approvals of units.

4 A. Commissioner Bailey, could you point me to where  
5 you were looking?

6 Q. Yes, on page 16, lines 7 through page 17, lines  
7 9. And there's confusion there between Mr. Brooks and Mr.  
8 Bruce, and Examiner Jones is -- must be the Examiner at  
9 that time.

10 I would just -- and then you have discussed, and  
11 your attorney have discussed, OCD's role in unit approvals.

12 I would like to refer you to OCD Rule 507, which  
13 discusses OCD's role.

14 A. Commissioner, I do not have a copy of the OCD  
15 rulebook before me.

16 Q. Then I'll read it to you.

17

18 After petition and notice and hearing, the  
19 Division may grant approval for the combining of  
20 contiguous developed proration units into a unitized  
21 area.

22

23 That is, OCD's role is consideration of combining  
24 contiguous developed proration units, with the purpose, I  
25 would assume, of all of the mantra that you talk about and

1 the protection of correlative rights, prevention of waste,  
2 *et cetera*.

3 I just would like to bring that out, because  
4 there seems to be some question over what OCD is supposed  
5 to be looking at, as far as the addition of 1000 acres or  
6 so to an approved unit.

7 MS. ALTOMARE: If I could interject, it's my  
8 understanding that that is a distinct rule, that that is  
9 separate from exploratory units. Those are for statutory  
10 units. That was my understanding in my review of the law  
11 in preparing for today, and I consulted with several  
12 different attorneys.

13 And my understanding is that unitization under  
14 this rule relates to the statute for statutory unit and not  
15 -- it doesn't specify exploratory units, that the  
16 exploratory unit phenomenon is specific to the BLM  
17 regulation, creation, which then imposes upon OCD an  
18 obligation of approval.

19 COMMISSIONER BAILEY: For the past 58 years, the  
20 OCD has been working with exploratory units, because this  
21 rule was passed in 1950 --

22 MS. ALTOMARE: Right.

23 COMMISSIONER BAILEY: -- and some of those very  
24 early unit cases, and continuing through the years, did  
25 apply to exploratory units, and not necessarily confined to

1 secondary units.

2 MS. ALTOMARE: I may be incorrect, but I spent  
3 the last several days speaking to several different  
4 attorneys, and nobody could tell me what rule it was that  
5 specified in the OCD Rules that specifically allowed for  
6 the creation and approval of exploratory units, and I was  
7 instructed that this related only to statutory unit.

8 So perhaps the Chairman can clarify that.

9 But I just -- I think that there is a tremendous  
10 amount of confusion about that, so I don't know that the  
11 record is clear.

12 MR. BRUCE: Mr. Examiner -- I mean -- sorry, Mr.  
13 Chairman, if --

14 CHAIRMAN FESMIRE: I understand the confusion.

15 MR. BRUCE: -- if I could just throw in my two  
16 cents' worth.

17 If that rule was adopted in 1950s, I would merely  
18 point out that statutory unitization, the Act itself, was  
19 not adopted until the 1970s. Therefore, obviously the rule  
20 had to do with voluntary units, exploratory units.

21 MS. ALTOMARE: Okay, then perhaps -- perhaps I'm  
22 incorrect, but --

23 CHAIRMAN FESMIRE: Mr. Bruce, I'm of the opinion  
24 that the statute allows us to unitize properties only for  
25 purposes of enhancing secondary and tertiary recovery in an

1 oil reservoir, and that this rule was in place to  
2 facilitate that.

3 It's an interesting -- Was the rule modified, or  
4 was the unitization rule not in place at all prior to --

5 MR. BRUCE: And I will be the first to confess  
6 that I too may be wrong, Mr. Chairman.

7 But if that's the case then I would say, Why are  
8 we here today? Because certainly with respect to federal  
9 units, the OCD never approves them, 100-percent federal  
10 units.

11 And when you come to lands that include state and  
12 -- fee units that include state and fee lands, really, the  
13 way I read the regulations is, it's totally at the wish of  
14 the Land Office. NMAC 19.2.100.51 provides -- subsection D  
15 provides with respect to unit agreements that any decision  
16 of the Commissioner may be postponed, pending an action by  
17 the Oil Conservation Division, but it's not mandatory. And  
18 so -- I don't think it's mandatory in any event.

19 And really, it has just become the practice of  
20 oil and gas operators over the decades, whether at the  
21 request of the Land Commissioner or simply just out of  
22 habit, to seek expansion, to seek unit -- exploratory unit  
23 approval or to seek unitary statute -- excuse me,  
24 exploratory unit expansion before the Division.

25 But if the Division is saying there's no

1 regulation that it has regarding exploratory units, then  
2 why don't we just seek permission from the Land Office and  
3 the BLM for the expansion of the Bennett Ranch Unit?

4 CHAIRMAN FESMIRE: I think for -- It's a real  
5 interesting question, because I think perhaps the Land  
6 Office and the BLM, through their orders, have established  
7 some sort of authority in the OCD.

8 Now whether or not that's a valid extension of  
9 authority, I don't know. But I think it's a condition of  
10 their permits --

11 MS. ALTOMARE: It is.

12 CHAIRMAN FESMIRE: -- therefore we are acting in  
13 that capacity, essentially advisory to the BLM.

14 MR. BRUCE: Well, and I will again submit that  
15 100-percent federal units -- I have never seen one approved  
16 by the Division.

17 MS. ALTOMARE: But for those federal units that  
18 also contain state lands, the federal regulations convey  
19 upon the OCD an obligation to review and approve. And it's  
20 from that regulation that we end up here today.

21 CHAIRMAN FESMIRE: I think it's very telling, and  
22 I did not know that the unitization statute post-dates the  
23 unitization rule.

24 MS. BADA: Because the unitization -- if I might  
25 interrupt -- unitization deals with proration, it's not

1 exploratory.

2 COMMISSIONER OLSON: Uh-huh.

3 CHAIRMAN FESMIRE: Okay.

4 MR. BRUCE: But the only reason I know that the  
5 Statutory Unitization Act post-dates that rule is dealing  
6 with Mr. Carr, who I believe had a hand in --

7 (Laughter)

8 MS. ALTOMARE: And he's not here to defend his --

9 (Laughter)

10 MR. BRUCE: And he's only so old.

11 CHAIRMAN FESMIRE: Commissioner Bailey, why don't  
12 we continue with your question, given that...

13 Q. (By Commissioner Bailey) Okay. In the study  
14 that was given to us as Exhibit B, the paper, Oil and Gas  
15 Potential of the Tularosa Basin --

16 A. I believe -- excuse me, I believe that was  
17 Exhibit A?

18 MS. ALTOMARE: Exhibit B.

19 COMMISSIONER BAILEY: Exhibit B.

20 THE WITNESS: Okay.

21 Q. (By Commissioner Bailey) On page 30 and 31 there  
22 are lists of wells that have been drilled within the  
23 Tularosa Basin-Otero platform-Salt Basin graben area.

24 Do you know of any contamination cases that OCD  
25 is dealing with or has dealt with from any of these wells

1 that were drilled prior to the current environmental  
2 protection that is required for drilling of wells right  
3 now?

4 A. Commissioner Bailey, I am not familiar with any  
5 remediation cases in the Otero Mesa area, and the answer  
6 would be, I don't know of any.

7 Q. And these wells would all have been drilled with  
8 unlined drilling pits, disposal probably into unlined pits?

9 A. The older ones, I'm sure that would have occurred  
10 in some cases.

11 Q. And in fact, these papers brought out the fact --  
12 Exhibit A, page 8 -- that wells are converted from oil and  
13 gas exploration to water wells for ranchers out in that  
14 area?

15 A. Yes, Commissioner, some water wells have been --  
16 excuse me, some exploratory wells have been turned over to  
17 surface owners for use as water wells.

18 Q. So clearly these oil and gas wells that were  
19 converted did not contaminate the groundwater aquifer, or  
20 else they would not be used as water wells for human or  
21 stock use?

22 A. Commissioner Bailey, I think my response would be  
23 that there probably was a minor amount of contamination  
24 that occurs when you penetrate a water-table aquifer with  
25 whatever fluids, the casing, the cement program, but it

1 would have been very closely confined to the wellbore  
2 environment, unless it got into a fracture.

3 And the fact that the original wellbores, when  
4 they were turned over to the surface owners, you know, they  
5 probably didn't test them to determine if there were any  
6 traces of hydrocarbon, if there were any other  
7 contaminants, but those would have probably cleaned up over  
8 time, if they were there in the first place.

9 Q. And in Exhibit A, page 99 and page 100 -- page  
10 100, if you place the Bennett Ranch Unit on that map, it  
11 would be on the western edge of fracture zone number 4?

12 A. Commissioner, I'm not with you. What was --

13 Q. Okay, page 100 --

14 A. This is the 2004 --

15 Q. -- of your Exhibit A.

16 A. Yes. Was that a page number that's an  
17 attachment?

18 Q. It's the page number that's on the bottom of that  
19 page, 100 of Exhibit A.

20 A. Yes, ma'am, I see it.

21 Q. If you draw a very rough circle of where the  
22 Bennett Ranch Unit lies on that map, it would be on the  
23 western portion of fracture zone number 4, just right on  
24 the Texas border.

25 And then if you look over on page 99, the facing

1 page, the last part of that paragraph says, Zone 4 includes  
2 primarily the western Otero Meso and Diablo Plateau and is  
3 characterized by relatively sparse fractures and no single  
4 dominant fracture orientation.

5 So that would confirm your comment a while ago  
6 that -- let's see what your quote was -- that there was  
7 very little to no faulting on the Bennett Ranch Unit?

8 A. I believe that's what it says.

9 However, if we were to refer to the 1995  
10 application by Heyco, they did provide a structure contour  
11 map that was approximately -- a seismic structure contour  
12 map at the top of the Fusselman, and they did show a number  
13 of fractures. And those fractures, I believe, are depicted  
14 on one of the PowerPoint slides that I used. It was the  
15 hydrogeologic cross-section B-B', which was Figure 4 of  
16 this document.

17 So this study from whatever this -- this guy was  
18 working on his PhD in 1995. He may have been looking at --  
19 just on the outcrop. And most of those fractures are -- my  
20 understanding is that most of these faults and fractures  
21 would be buried by the Permian section, and that the faults  
22 that were depicted by Heyco were actually in the pre-  
23 Permian section, the Pennsylvanian and Mississippian, all  
24 the way through and in fact into basement.

25 So there is a buried fracture and fault system

1 that may not have been observed by this PhD candidate.

2 Q. Well, let's go farther back into this document,  
3 into the article that's stapled onto it that says Fracture  
4 control of regional ground-water flow in a carbonate  
5 aquifer in a semi-arid region, by two other authors. And  
6 on page -- and that was published in the *GSA Bulletin* in  
7 1998. And on page 277 -- I'll wait for you to get there.

8 A. Yes, ma'am.

9 Q. Okay, on the left-hand side of page 277, under  
10 the heading, Fracture Geometry, the second paragraph says:

11

12 First, except for the western Otero Mesa, there  
13 is a strong preferred fracture orientation...in the  
14 western...Mesa...

15

16 -- which is where the Bennett Ranch Unit would be  
17 located --

18

19 ...there is no single dominant preferred orientation.  
20 Second, fractures are most abundant along the Otero  
21 Break...

22

23 -- but that's far to the north --

24

25 ...The scarcity of fractures in the western Otero Mesa

1           may be lithologically controlled.

2

3                   And then farther on down on that same page, same  
4 left-hand side, the very last three lines, it says:

5

6                   Domain 4...

7

8                   -- which is the same domain that we were talking about  
9 earlier --

10

11                   ...includes the western Otero Mesa and Diablo  
12 Plateau and is characterized by relatively sparse  
13 fracturing...

14

15                   So those analyses are repeated several times by  
16 different authors through time.

17

18                   When Heyco submitted their information for the  
19 original approval of the Bennett Ranch Unit, they were  
20 relying on 2-D seismic data. Do you have much experience  
21 with 2-D seismic data?

22

A.    Yes, I do.

23

24                   Q.    Are you aware how dependent the interpretation is  
25 on the processing of that data and who the person is who  
analyzes it, because it is as much of an art as a science?

25

A.    Yes, especially onshore, the data can be very

1 problematic.

2 Q. Yes, that's true, which means that -- could I be  
3 led to believe that their submittal at the time of their  
4 application of the unit approval contained a great deal of  
5 speculation since they have not drilled a well at that  
6 point?

7 A. That was their interpretation, based on their  
8 data set that they had, and it would certainly be true that  
9 other people would have a different interpretation looking  
10 at it then and versus looking at it now, especially when  
11 they have two completed new wells in that area.

12 Q. But it also shows that it would be speculative to  
13 rely on information that they supplied in '95, before they  
14 drilled any wells, and that the wells either proved or  
15 disproved what their hopes and dreams were at that time?

16 A. Certainly they should -- they -- I believe they  
17 mention that. It's all contingent upon what the next well  
18 -- what you learn from the next well, what their drilling  
19 program would be, or development program would be.

20 Q. That's right. So they can't answer any questions  
21 of where they will go next, as they were asked earlier?

22 A. Commissioner Bailey, asked by whom?

23 Q. In cross-examination of their witnesses.

24 A. (No response)

25 Q. But aside from all of that -- because that really

1 is off the subject of why we're here, in my point of view,  
2 because we're here to decide whether or not the addition of  
3 a little over 1000 acres is warranted under OCD Rules.

4 And I have not heard whether or not this  
5 additional acreage that's in question would have a  
6 detrimental effect on health -- human health, the  
7 environment, *et cetera*, if those acres in particular have  
8 something wrong with them that their addition to the unit  
9 would be detrimental to those things that you are charged  
10 with protecting.

11 A. I would agree with that statement. I think those  
12 are two separate issues.

13 COMMISSIONER BAILEY: How nice of you to admit  
14 that.

15 (Laughter)

16 COMMISSIONER BAILEY: Thank you.

17 Q. (By Commissioner Bailey) So this case doesn't  
18 rely on well designs or contamination or possibilities, it  
19 relies on whether or not these 1000 acres are in any way  
20 detrimental to the State of New Mexico in being included in  
21 this unit?

22 A. Commissioner Bailey, this is an area beyond where  
23 I deal with on a daily basis.

24 But as I understand it, the OCD Hearing Examiners  
25 denied the Application because they did not feel that they

1 had been provided sufficient information to make those  
2 three determinations.

3 Q. And can you say that you have see any evidence  
4 against enclosure of those acres, based on the impact that  
5 those additional acres would have on human health, *et*  
6 *cetera*?

7 A. I have not seen Heyco's exhibits that document  
8 why the unit expansion should be approved. I have not seen  
9 -- we do not have any evidence that would conclusively show  
10 one way or the other.

11 I just think that the Division wasn't provided  
12 with the information it felt it needed, the Hearing  
13 Examiners needed in 2007.

14 Q. Is there any publication or guidelines or any  
15 guidance for industry to rely on when it comes to this kind  
16 of a case?

17 A. Not that I'm aware of.

18 Q. So OCD doesn't have any guidelines for them to  
19 use in their presentation of the case?

20 A. Commissioner Bailey, I'm not a Hearing Examiner  
21 and I don't serve in that capacity, so I don't know the  
22 answer to that question.

23 COMMISSIONER BAILEY: Thank you. That's all I  
24 have.

25 CHAIRMAN FESMIRE: Commissioner Olson?

## EXAMINATION

1  
2 BY COMMISSIONER OLSON:

3 Q. Well, I'll follow up on that a little bit,  
4 because that's been the point that's been confusing me,  
5 that we don't have any process for this, and it seems to me  
6 that the concerns that you're raising are issues that are  
7 dealt with in the APDs; isn't that correct? For protection  
8 of fresh waters? Not just the idea that we have a unit  
9 that may or may not have oil or gas in it?

10 A. That's correct, the APDs must specify a casing  
11 program, and that casing program should be protective of  
12 shallow groundwater, or deeper groundwater. And that is  
13 correct, it should be a part of the APD.

14 Q. Because I also got that from the prehearing  
15 statement that the Division filed. I go back to the last  
16 -- the last paragraph. The Division -- and this is even  
17 proposing the -- if the Commission's inclined to grant it,  
18 that the Division -- or that Heyco be required to obtain  
19 formal approval via hearing in front of the Oil  
20 Conservation Division on wells for APDs.

21 So it seems to me that there is some acceptable  
22 mechanism here that the Division was offering as an  
23 alternative. Did I understand that correctly?

24 A. I'm not familiar with that particular part of the  
25 prehearing statement by Ms. Altomare.

1 Q. Well, I guess, wouldn't through the APD process  
2 be the place that we would look at whether or not we'd  
3 approve an APD, based upon its protection of the issues  
4 that you're bringing up here, such as protection of fresh  
5 waters?

6 A. That would certainly be a part of it, yes,  
7 Commissioner. Yes.

8 COMMISSIONER OLSON: I think that's all I have.

9 CHAIRMAN FESMIRE: I have no questions.

10 Ms. Altomare, do you have a redirect?

11 REDIRECT EXAMINATION

12 BY MS. ALTOMARE:

13 Q. Just a couple of things to clarify, acknowledging  
14 that there's a lot of confusion about the -- what exactly  
15 we're doing in this process and what guidance Applicant  
16 should get.

17 In submitting an application, don't you think  
18 that it's a commonsense standard that if an applicant is  
19 submitting an application asking for a particular relief,  
20 that they submit evidence and data adequate to support the  
21 relief they're asking for?

22 A. I do believe that to be the case generally. If I  
23 were a Hearing Examiner and someone were to come forward  
24 with me and I were to look through the case file and find  
25 out that they're submitting less information than they had

1 submitted previously, I would be very curious as to why  
2 that was.

3 Q. And --

4 A. My experience is, I always want to see a map and  
5 a cross-section.

6 Q. And in this case, do you think the Applicant has  
7 met its burden of submitting the data required to justify  
8 what they're asking for?

9 A. My review of the case of 2007 before the Hearing  
10 Examiners, I didn't see any exhibits there that made their  
11 case for them. I don't see that Exhibit 8 of Heyco today  
12 makes their case for them.

13 To me, it was somewhat frustrating to review. I  
14 wasn't sure where this cross-section was. There was no  
15 index map associated with it, there was no orientation,  
16 there was no horizontal scale, there were no faults --  
17 previously they had faults in the area -- and there was no  
18 indication of where the wells were drilled on that  
19 structure.

20 So I think that it could have been -- and should  
21 have been prepared differently and better.

22 Q. And is it your understanding that the burden is  
23 on the Applicant to provide the evidence to justify the  
24 expansion, or is the burden on the Division to prove why  
25 the expansion shouldn't be granted?

1 A. I believe it's the burden of the Applicant.

2 Q. And the only other thing I wanted to clarify is,  
3 there was some comparison made between this area and the  
4 San Juan Basin. From a geological and hydrological  
5 perspective, are these two areas analogous?

6 A. I think they're different.

7 Q. Okay, and how are they different?

8 A. Well, first off, the San Juan Basin is basically  
9 a sandy shale clastic basin, and this is carbonate --  
10 bedrock carbonate aquifers.

11 There appears to be -- at least in the Salt Basin  
12 region, especially in the Otero Breaks, there's a great  
13 deal of faulting, which seems to control the regional  
14 groundwater flow. That faulting is not as intense to the  
15 west, and it isn't as intense west of the Cornudas  
16 Mountains, for whatever reason.

17 So I think that you can see some structural  
18 differences, and some -- Actually what would be the aquifer  
19 material would be quite different. It would be a sandy  
20 aquifer in the San Juan Basin, and it would be a carbonate  
21 aquifer here.

22 Q. Do you see the same kind of variability and  
23 significant faulting in the San Juan Basin that you see in  
24 the Otero Mesa?

25 A. No, it's not as faulted as this area appears to

1 be.

2 Q. And if you know, what are the -- do people -- do  
3 operators tend to drill with the same kinds of chemicals,  
4 same types of drilling fluids in the San Juan Basin as they  
5 do in the southern part of the state?

6 A. I'm not familiar with the mud programs in either  
7 basin.

8 Q. Okay. Would you say that -- How would you  
9 compare the vulnerability for contamination, based on the  
10 permeability between the San Juan Basin and the Otero Mesa  
11 area?

12 A. I would have to go and do a little research on  
13 that. Again, I think that there are certainly some  
14 vulnerable areas, there's more surface drainage, there's  
15 more surface water in the San Juan Basin.

16 In the Otero Mesa I don't think it's as well  
17 known what the potential risks are to the water table  
18 aquifer. It appears to be quite deep in some areas.  
19 However, the State Engineer has made some calculations that  
20 this is, you know, a very valuable resource to the State of  
21 New Mexico.

22 Q. But the issues are different, affecting the two  
23 areas?

24 A. I think they're different on a technical basis,  
25 but I think that basically groundwater is protected in the

1 San Juan Basin and it's protected in the Otero Mesa area in  
2 the Salt Basin.

3 Q. Okay. And to your knowledge, is anybody using  
4 the water from the Salt Basin aquifer as a domestic water  
5 source at this point?

6 A. I believe I did read that there are a number of  
7 domestic, but primarily I believe it's livestock.

8 MS. ALTOMARE: Okay, I think that's all I have.

9 CHAIRMAN FESMIRE: Mr. Bruce, any recross on  
10 those subjects?

11 RE-CROSS-EXAMINATION

12 BY MR. BRUCE:

13 Q. Mr. von Gonten, you testified about Exhibit 8,  
14 but you're not qualified as an expert petroleum geologist,  
15 correct?

16 A. No, I'm not.

17 Q. And then you discussed the burden of proof. If  
18 it's up to the Applicant to prove its case, why is the  
19 Division here opposing this?

20 A. The Division is opposing it because our Hearing  
21 Examiners made a determination that Heyco had not provided  
22 an adequate amount of information, and we still maintain  
23 that.

24 Q. And many cases are -- Can you name me another  
25 case where the Division denied anything, where the Division

1 appeared in opposition to the Applicant?

2 A. I'm not familiar with that. As I said, this is  
3 my first experience with one of these appeals.

4 Q. Isn't it essentially because the Energy and  
5 Minerals Department opposes any development on the Otero  
6 Mesa?

7 A. Not that I know of.

8 MS. ALTOMARE: I'd like to clarify something. In  
9 the prehearing statement I think it was explicitly stated  
10 that the Division cannot support the Application unless and  
11 until adequate information to support and justify the  
12 proposed expansion is presented. It was never explicitly  
13 stated that we flatly oppose the drilling program that is  
14 proposed for this area.

15 So just for clarification purposes...

16 CHAIRMAN FESMIRE: Well, let Mr. Bruce -- Mr.  
17 Bruce, are you finished?

18 Q. (By Mr. Bruce) Mr. von Gonten, are you familiar  
19 with the letter that the Secretary of the Energy, Minerals  
20 and Natural Resources Department wrote to the BLM January  
21 of this year?

22 A. No, sir.

23 MR. BRUCE: You're not.

24 That's all I have, Mr. Chairman.

25 CHAIRMAN FESMIRE: Anything further from the

1 Commission?

2 COMMISSIONER BAILEY: No.

3 You're not familiar with the letter either, huh?

4 COMMISSIONER OLSON: Well, no, I was coming back  
5 questioning, I guess, some of the line of questioning that  
6 was going on here.

7 FURTHER EXAMINATION

8 BY COMMISSIONER OLSON:

9 Q. It seems to me -- You were here for the testimony  
10 this morning from the Heyco witnesses, correct?

11 A. I was here for the testimony this morning, yes.

12 Q. And maybe I've got this wrong, but it was my  
13 impression that really the only reason for expansion of the  
14 unit, that I can see, is that it preserves their leases; is  
15 that -- Did you hear that the same way I did?

16 A. I heard that this morning, that that was part of  
17 the reason for asking for it.

18 Q. So if they need to preserve their leases just by  
19 the expansion, does that -- doesn't really go towards the  
20 geology, hydrology or other issues --

21 A. That would seem --

22 Q. -- just preservation of a lease?

23 A. That would protect their land position, it  
24 appears to me.

25 COMMISSIONER OLSON: All right. Okay, that's all

1 I have.

2 EXAMINATION

3 BY CHAIRMAN FESMIRE:

4 Q. Mr. von Gonten, what exactly was lacking in the  
5 Application that Heyco made, the reason that the Examiners  
6 turned it down?

7 A. I'm not intimately involved with the Hearing  
8 Officers' decision-making, but when I was asked to review  
9 it I came away with the conclusion that they didn't  
10 actually demonstrate, as I mentioned, with maps and cross-  
11 sections why they needed that north area extension and the  
12 additional 1000-plus acres.

13 Q. Is that the only deficiency that you identified?

14 A. That was the one that was the show-stopper for  
15 me.

16 Q. And what reason would they need to -- why don't  
17 you give me some examples of reasons that they would need  
18 to -- of what they would need to prove, in order for that  
19 to be approved by the OCD?

20 A. The things that I would -- I'm not a Hearing  
21 Examiner, and this is a bit beyond my area of expertise.  
22 Looking at it as a geologist with some familiarity of oil  
23 and gas exploration, what I was left thinking that the  
24 Application was deficient in was just documenting that  
25 there was actually a need to move further to the north,

1 that they would, in fact, have any production that extended  
2 that far to the north.

3 The details of unitization are something I'm not  
4 familiar with.

5 Q. Do you think it was sufficient with respect to  
6 the lands around the border on the east and west sides?

7 A. I have no questions or issues with the  
8 presentation by Heyco's landman.

9 CHAIRMAN FESMIRE: I have no further questions.  
10 Ms. Altomare, anything else?

11 MS. ALTOMARE: (Shakes head)

12 CHAIRMAN FESMIRE: Mr. Bruce?

13 MR. BRUCE: I have nothing further, Mr. Chairman.

14 CHAIRMAN FESMIRE: Commissioners?

15 COMMISSIONER BAILEY: Nothing.

16 COMMISSIONER OLSON: No.

17 CHAIRMAN FESMIRE: Thank you, Mr. von Gonten.

18 Mr. Bruce, do you have a closing?

19 MR. BRUCE: Yes, I do, Mr. Chairman, and I really  
20 don't want to beat a dead horse here, but this goes back to  
21 the point of clarification.

22 Ms. Altomare requested the incorporation of the  
23 entire file, and that's when she was presenting the form of  
24 the unit agreement. And that came from the original case,  
25 11,394, and I just wanted to clarify with the Commission

1 that the entire record from that case would be incorporated  
2 into the record.

3 CHAIRMAN FESMIRE: And you're asking --

4 MR. BRUCE: I would ask --

5 CHAIRMAN FESMIRE: -- the Commission to take  
6 administrative notice?

7 MR. BRUCE: Yes, sir.

8 CHAIRMAN FESMIRE: And I think we've done that.

9 MR. BRUCE: Okay. I just wasn't sure whether it  
10 was just with respect to that one document or not.

11 CHAIRMAN FESMIRE: I think at your request we'll  
12 take administrative notice of the entire file.

13 MR. BRUCE: Mr. Chairman, Ms. Altomare talked  
14 about the federal regulations and about the formation of a  
15 logical unit. It seems to me that the BLM has already made  
16 that decision that this is a logical unit, the unit as  
17 expanded, and I think that's a starting point.

18 And furthermore, the unit agreement as expanded  
19 includes all leases and conforms to Heyco's proposal,  
20 accepted by the BLM and the Land Office, to have one well  
21 per 640 acres.

22 Yes, it's partly a land decision. There's no  
23 question about that. But it certainly makes for a logical  
24 unit and orderly development.

25 And when you get down to it, when you look at the

1 regulations, whether they're State Land Office regulations,  
2 Division Regulations, BLM regulations or the pertinent  
3 statutes, what they talk about first and foremost is  
4 orderly development of the acreage. And that is exactly  
5 what Heyco is trying to do with the expanded unit.

6 Furthermore, under Heyco's proposal there will be  
7 less surface use than under its original proposal. I  
8 really have a hard time seeing what is the harm in  
9 expanding the unit. As a matter of fact, it will benefit  
10 the working interest owners, it will benefit the lessors,  
11 it will benefit the surface itself because there will be  
12 less surface use. There will be orderly development of the  
13 unit, there will be centralized facilities, centralized  
14 management of the unit, and that's what exploratory units  
15 are formed for.

16 Furthermore, when it comes to the geology, I  
17 think Mr. Yahney has adequately described what their  
18 targets are in that there is at least a reasonable  
19 expectation that the acreage on the north side of the unit  
20 will be, or could be, productive.

21 But once again, we get back to development,  
22 exploration, has been forbidden for seven years now. And  
23 until that exploration is allowed to move forward, there's  
24 no sense, certainly in contracting the unit, but it really  
25 makes for sense in expanding the unit.

1           Insofar as contraction goes, that's governed by  
2 the unit agreement itself. After the five-year period, as  
3 it's been extended due to the RMP process, *et cetera*, there  
4 will be expansion.

5           Now some issue has been made about, well, it's  
6 only to extend the leases. The fact of the matter is, the  
7 leases that will be included in the expanded unit area are  
8 new leases. There are no deadlines at this point for the  
9 development of those leases. They are kind of tagged along  
10 with the unit agreement and the formation of PAs, but at  
11 this point those leases aren't in danger of expiring.

12           So that is a red herring, it's a false lead.  
13 There's no need to bring those leases into the unit to  
14 extend their terms, because they already have sufficient  
15 terms remaining in them for exploration and development.

16           Once again, I reiterate that with respect to the  
17 protection of any waters that are found in this area,  
18 that's a well-design issue, not a unit-expansion issue.  
19 And as our witnesses testified, there is a process, there  
20 is an APD before the BLM at this point, and that's where  
21 that should be decided.

22           Next, correlative rights. It's a non-issue. As  
23 the original unit agreement -- order approving the unit  
24 agreement provided, what they were looking at was  
25 protection of correlative rights outs- -- inside the unit.

1 Now all of a sudden it's become expanded to outside the  
2 unit. But the fact of the matter is, it's all federal and  
3 state land. The federal government and the state  
4 government, if they see a problem with respect to  
5 correlative rights, could lease their lands to protect  
6 their correlative rights. They've already approved the  
7 unit expansion. That's a non-issue.

8 Insofar as spacing goes, a witness has said,  
9 Well, they're not really averse to 640-acre spacing. But  
10 the fact of the matter is, at this point with no production  
11 that's not a priority. It's not a priority. Who cares at  
12 this point what the spacing is going to be, until they can  
13 produce the wells and at that point get more information?

14 Now if the Division is worried about protection  
15 of correlative rights outside the unit, they could probably  
16 establish a 1650-foot buffer zone around the exterior of  
17 the unit. Big deal. That's fine. But don't use that as a  
18 reason to deny unit expansion, because once again that's a  
19 false issue.

20 Ms. Altomare also raised --

21 CHAIRMAN FESMIRE: Hold on --

22 MR. BRUCE: -- economics.

23 CHAIRMAN FESMIRE: -- just a minute. Okay.

24 MR. BRUCE: I've been doing this for 25 years.

25 I've never seen the Division ever demand any economics for

1 an exploratory unit, period.

2 Certainly on the Hueco South Unit -- and I can  
3 provide the order, if you folks so desire, Order Number  
4 R-12,841 -- no economics were demanded for the formation of  
5 an 80,000 unit -- 80,000-acre unit.

6 And if you go through the record in that case,  
7 the geology presented didn't prove that the entire unit  
8 would be productive. They hope it is.

9 But that's not the issue. It's to agglomerate  
10 lands for orderly development of reservoirs which may be  
11 discovered.

12 And again, in that order, finding paragraph 3.F,  
13 it talks about gathering information to identification of  
14 fresh waters and wells and drilling operations will be  
15 designed in order to protect and preserve these waters.  
16 That's perfectly fine, but that's no reason to hold up  
17 expansion of the unit area.

18 Finally, we get to the issue of health and human  
19 environment. Even the Division's witness can't say how  
20 expansion of the unit would harm that. That wasn't -- once  
21 again, wasn't an issue in the Hueco South Unit.

22 There are other units that the approved before.  
23 Cottonwood Canyon Unit, over in western New Mexico, west  
24 central New Mexico, Catron County, 90,000-acre unit.  
25 Health and human environment never came up. Why is it

1 here? It's not an issue for unit expansion. Now certainly  
2 everybody in this room wants to protect health and human  
3 environment, but that has nothing to do with expanding the  
4 size of the unit.

5 I fail to see the problem. This expansion will  
6 lead to less surface use, it will lead to orderly  
7 development of the unit. And who knows? Because  
8 participating areas are formed based on what is reasonably  
9 productive, it doesn't require one well to be drilled every  
10 640 acres; it only requires development up to the point  
11 where participating areas are formed around reasonably  
12 productive areas, and that does not require one well every  
13 40 acres.

14 I don't even know why we're here today. This  
15 unit should be expanded without question.

16 Thank you.

17 CHAIRMAN FESMIRE: Ms. Altomare?

18 MS. ALTOMARE: Just briefly.

19 I think why we're here today is because operators  
20 have gotten in the habit of filing applications and not  
21 supporting their request with documentation.

22 For whatever reason, this Application was  
23 submitted with far less information than was needed for the  
24 Division to properly review it and approve it. A whole lot  
25 more information came to fruition at this hearing than was

1 ever presented to the Division at the previous hearing or  
2 through any other transmission of documents prior to this  
3 date.

4 Bottom line is that operators must submit  
5 sufficient information and sufficient evidence to support  
6 anything that they're requesting this Department grant.  
7 And unless and until that data is submitted, those requests  
8 don't -- should not be granted.

9 And in this particular case, the information  
10 simply was not forthcoming. A whole lot of information  
11 came out during the process of the drilling of those three  
12 wells, between the initial granting of the application for  
13 the original unit and the Application for the expansion,  
14 and yet none of that information was included in the  
15 Application for the expansion that was presented. We had  
16 very little to go on to justify -- to figure out why it was  
17 that they wanted to expand into the northern part.

18 Granted, some of the information has been  
19 verbally provided today, but we still have not been  
20 presented with adequate information.

21 In addition, I understand that they're arguing  
22 that the fracturing and the faulting largely occurs below  
23 where the groundwater, you know, is at risk and that kind  
24 of thing.

25 But, you know, the bottom line is, if they're

1 arguing that this area is so permeable that they're going  
2 to be able to use 640-acre spacing and drain it in that  
3 kind of a fashion, that same dynamic is going to create a  
4 vulnerable -- a vulnerability that the Division and the  
5 Commission needs to be aware of and at least consider.  
6 Granted, it may be more appropriate to consider it in more  
7 detail at the APD process, but at least it should be  
8 considered at this stage. And, you know, it wouldn't hurt  
9 to submit information to provide the Division with  
10 assurances that when the time comes, the drilling program  
11 that is put into place will adequately address those  
12 issues.

13           You know, there's been some contention that we  
14 have not been able to show that the expansion of the unit  
15 will cause harm. That's not our burden. Their burden is  
16 to show that there's justification for expansion of the  
17 unit. And frankly, there just hasn't been enough  
18 information for anybody to hang their hat on.

19           That's essentially where we stand at this point.  
20 It's not that we bar none are contesting or opposing the  
21 Application, it's that we were given a very small packet of  
22 material.

23           And I think the Hearing Examiners felt the same  
24 way at the underlying hearing. There was very little  
25 evidence that was presented to justify what was being

1 requested, and they had concerns. And they laid out those  
2 concerns in that order in a very orderly fashion, and still  
3 none of the documentation was forthcoming.

4 So that's the frustration, I think, and that is  
5 why we're here, coupled with the fact that the OCD Rules  
6 are not terribly clear as to what the dynamic is for these  
7 exploratory units.

8 But for better or worse, the OCD has been brought  
9 into this process and has been asked to render some kind of  
10 an opinion. I would submit that the fact that we are being  
11 brought in, that the Commission and the Division are being  
12 asked to render an opinion, means that we have something to  
13 contribute that the other agencies do not, and that means  
14 that we apply our standards. And those are the tasks that  
15 are before us. And that includes the protection of human  
16 health and the environment, as well as prevention of waste  
17 and protection of correlative rights.

18 And whether or not the agreement refers to only  
19 protection of correlative rights within the boundaries of  
20 the unit, the OCD is not limited by that. Protection of  
21 correlative rights in general is part of its burden to  
22 assess.

23 So that being said, I don't think that there has  
24 been sufficient information submitted to justify the  
25 expansion of the unit, particularly into the northern part.

1 If however, the Commission disagrees and does grant the  
2 expansion of the unit, the Commission -- the Division would  
3 ask that Heyco be the -- required to formally seek APD  
4 approval through a hearing process with a Hearing Examiner  
5 with the Division for the continued drilling in this unit.

6 CHAIRMAN FESMIRE: Mr. Bruce, did I understand in  
7 your closing you said that the leases are not in danger of  
8 expiring?

9 MR. BRUCE: Well, I'd have to confirm that, but  
10 at this point there's several years. The federal leases  
11 have 10-year primary terms, State of New Mexico leases have  
12 five-year primary terms.

13 And those leases -- it would be in the exhibit --  
14 the dates of those leases would be in Exhibit 5, which is  
15 the approval of the BLM. There's a new Exhibit B to the  
16 unit agreement attached.

17 And -- I don't have them all, Mr. Examiner, but  
18 think if you look at state lands -- Tract 11a is listed in  
19 this document as unleased, but as Mr. Dyer testified, that  
20 was a recent --

21 CHAIRMAN FESMIRE: Right.

22 MR. BRUCE: -- state lease with a five-year term.

23 CHAIRMAN FESMIRE: Okay.

24 MR. BRUCE: Or is it federal with a 10-year term?

25 No.

1 MR. DYER: It's five.

2 MR. BRUCE: Five. And some of the others have  
3 been issued -- I won't say immediate, but obviously there  
4 are still a couple of years left in the state lease terms,  
5 I believe, I'm not sure. And in the federal acreage they  
6 have 10-year primary terms.

7 CHAIRMAN FESMIRE: Okay. Commissioner Bailey had  
8 something to add.

9 COMMISSIONER BAILEY: Just to correct something,  
10 those are 10-year leases --

11 MR. BRUCE: Oh, the state --

12 COMMISSIONER BAILEY: -- on the state those  
13 are --

14 MR. BRUCE: -- on the state, oh --

15 COMMISSIONER BAILEY: -- because of --

16 MR. BRUCE: -- because of their -- the --

17 COMMISSIONER BAILEY: -- which makes it a 10-  
18 year.

19 MR. BRUCE: They're the -- that's the -- the  
20 form, I'm sorry, I'm used to dealing with --

21 CHAIRMAN FESMIRE: And she would know.

22 MR. BRUCE: And she would know, much more than  
23 me.

24 CHAIRMAN FESMIRE: Rather than deliberating on  
25 this right now, I'm going to propose something to the

1 Commissioners.

2           There are two questions that -- I need some  
3 advice, perhaps, on this, but there are two questions that  
4 need to be -- at least two questions, maybe three.

5           What is the authority of the OCD to grant or  
6 approve exploratory units?

7           What should be the criteria under the Oil and Gas  
8 Act for such a decision?

9           And what should the application include?

10           And I was going to propose that we continue this  
11 case until the next regularly scheduled meeting and ask the  
12 attorneys to brief those three questions, because I don't  
13 think we can make this decision without an understanding of  
14 what's -- or at least a valid outline of what our positions  
15 -- or what our choices would be, or what the answers to  
16 those questions would be.

17           Commissioner Bailey, would you be opposed to  
18 that?

19           COMMISSIONER BAILEY: What were the three? The  
20 role of the OCD and this process --

21           CHAIRMAN FESMIRE: What is the authority of the  
22 OCD to grant or approve exploratory units?

23           What should be the criteria under the Oil and Gas  
24 Act for such a decision?

25           And what should the application include?

1           This decision that we're making is liable to be  
2 precedent-setting, and I would like to -- Counsel Bada,  
3 does this --

4           COMMISSIONER OLSON: So you're asking for legal  
5 briefs, essentially, from the --

6           MS. ALTOMARE: You're asking us to work?

7           COMMISSIONER OLSON: -- parties?

8           CHAIRMAN FESMIRE: Legal briefs, and be prepared  
9 to argue it at the next regularly scheduled meeting.

10          MS. ALTOMARE: When is the next Commission  
11 meeting?

12          MS. DAVIDSON: June 17th [sic].

13          CHAIRMAN FESMIRE: June 17th?

14          MR. BRUCE: Five weeks. That's an eternity for  
15 me.

16           (Laughter)

17          CHAIRMAN FESMIRE: Does that mean you can get it  
18 done?

19          MR. BRUCE: I'll do my best.

20          MS. ALTOMARE: So we have to -- a week ahead of  
21 time?

22          MR. BRUCE: Do we have to -- yeah, that was the  
23 question, should we file them a week ahead of time.

24          CHAIRMAN FESMIRE: They should be filed, as would  
25 any other pretrial statement. And that's what, four -- or

1 Thursday before the meeting?

2 MR. BRUCE: That would be fine.

3 CHAIRMAN FESMIRE: Is that acceptable, Ms.  
4 Altomare?

5 MS. ALTOMARE: Yes.

6 CHAIRMAN FESMIRE: Is that acceptable to the  
7 Commission?

8 COMMISSIONER BAILEY: Yes, it is.

9 COMMISSIONER OLSON: Yes, it is.

10 CHAIRMAN FESMIRE: Okay. So with that -- Is that  
11 acceptable to counsel?

12 MS. BADA: (Nods)

13 CHAIRMAN FESMIRE: With that, we will continue  
14 this hearing to the next regularly scheduled OCD -- OCC  
15 meeting, to be held June 17th in this room. Okay?

16 MS. ALTOMARE: Counsel for the Commission is just  
17 happy that she doesn't have to research.

18 (Laughter)

19 CHAIRMAN FESMIRE: Okay, the next case before the  
20 Commission is --

21 MS. BADA: The only thing counsel for the  
22 Commission is absolutely convinced about is our rules and  
23 our statute are absolutely silent.

24 CHAIRMAN FESMIRE: Yeah --

25 MS. ALTOMARE: Yes.

1 CHAIRMAN FESMIRE: -- and this will be a  
2 precedent-setting decision, so I'm hoping that the -- that  
3 you all will answer the question for us real --

4 MR. BRUCE: May we all be excused, Mr. Chairman?

5 CHAIRMAN FESMIRE: You may, sir.

6 MS. ALTOMARE: Thank you.

7 CHAIRMAN FESMIRE: As if it made a difference,  
8 Mr. Bruce. I missed that noon plane.

9 (Thereupon, these proceedings were concluded at  
10 2:33 p.m.)

11 \* \* \*

12

13

14

15

16

17

18

19

20

21

22

23

24

25

