

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

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

CASE NO. 12,660

APPLICATION OF CHESAPEAKE OPERATING, )  
 INC., FOR COMPULSORY POOLING, LEA )  
 COUNTY, NEW MEXICO )

**ORIGINAL**

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID BROOKS, Hearing Examiner

June 28th, 2001

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID BROOKS, Hearing Examiner, on Thursday, June 28th, 2001, 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.

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OIL CONSERVATION DIV  
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June 28th, 2001  
 Examiner Hearing  
 CASE NO. 12,660

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

## FOR THE APPLICANT:

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By: W. THOMAS KELLAHIN

## FOR AMERIND OIL COMPANY:

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P.O. Box 1056  
Santa Fe, New Mexico 87504

## ALSO PRESENT:

MICHAEL E. STOGNER  
Hearing Examiner  
New Mexico Oil Conservation Division  
1220 South Saint Francis Drive  
Santa Fe, NM 87501

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2   8:20 a.m.:

3           EXAMINER BROOKS: Good morning, ladies and  
4 gentlemen. The order for today is that, as I understand  
5 it, now I am to preside over the hearings that are dealing  
6 only with force pooling, and Mr. Stogner here, my  
7 colleague, is to preside over the other hearings that are  
8 set for today, and we have agreed that we'd go with the  
9 force pooling cases first.

10           As is customary here, we'll begin by going  
11 through the docket. If people have any corrections, please  
12 note them, but let me know.

13           (Off the record)

14           EXAMINER BROOKS: Okay, then I would call Case  
15 Number 12,660, the Application of Chesapeake Operating,  
16 Inc., for compulsory pooling in Lea County, New Mexico.

17           MR. HALL: I beg your pardon, Mr. Brooks, I'll  
18 clear the premises, get the right lawyer.

19           EXAMINER BROOKS: Yeah, we're pulling a switch on  
20 you all from the procedures you're accustomed to.

21           MR. HALL: That's all right.

22           MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of  
23 the Santa Fe law firm of Kellahin and Kellahin, appearing  
24 today on behalf of the Applicant, and I have two witnesses  
25 to be sworn.

1 EXAMINER BROOKS: Okay, are there any other  
2 appearances in 12,660?

3 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe.  
4 I'm representing Amerind Oil Company, Ltd. I have no  
5 witnesses.

6 EXAMINER BROOKS: Okay, will you swear the  
7 witnesses?

8 (Thereupon, the witnesses were sworn.)

9 EXAMINER BROOKS: Okay, it appears these exhibits  
10 I have up here are related to 12,680, so I will put them  
11 aside here and we will get the exhibits here for 12,660.

12 Okay, Counsel may proceed.

13 MR. KELLAHIN: Thank you, Mr. Examiner. May it  
14 please the Division, my first witness is Mrs. Lynda  
15 Townsend. She's a petroleum landman with Chesapeake.

16 LYNDA F. TOWNSEND,  
17 the witness herein, after having been first duly sworn upon  
18 her oath, was examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MR. KELLAHIN:

21 Q. For the record, ma'am, would you please state  
22 your name and occupation?

23 A. My name is Lynda Townsend, I'm a landman with  
24 Chesapeake Operating in Oklahoma City. I have been with  
25 them for about four and a half years. I have about 30

1 years of experience, and I'm a CPL.

2 Q. On prior occasions have you testified before the  
3 Division in matters concerning compulsory pooling  
4 Applications filed on behalf of your company?

5 A. Yes, I have.

6 Q. Were you the principal landman responsible for  
7 identifying the appropriate parties within the spacing unit  
8 for this well?

9 A. Yes, sir.

10 Q. In addition, were you the landman responsible for  
11 sending notification to those parties concerning this well  
12 proposal?

13 A. Yes, sir.

14 Q. And you were responsible for negotiating with  
15 those parties in trying to achieve a voluntary agreement?

16 A. Yes.

17 MR. KELLAHIN: Mr. Examiner, at this time I  
18 tender Ms. Lynda Townsend as an expert petroleum landman.

19 EXAMINER BROOKS: Her credentials are accepted.

20 Q. (By Mr. Kellahin) Ms. Townsend, let me direct  
21 your attention to what we've marked as Chesapeake Exhibit  
22 Number 1. This is a plat, and it shows Section 21, does  
23 it?

24 A. Yes, it does.

25 Q. What is the purpose of the area outlined in the

1 rectangle within the configuration of Section 21?

2 A. This is the 80-acre proposed unit for the Nellie  
3 21-1 well. It's the north half of the southeast quarter of  
4 21, 16 South, 37 East.

5 Q. And what is the proposed well location for the  
6 well?

7 A. It is 660 foot from the east line and 1980 from  
8 the south line.

9 Q. Your legend indicates that you will be subject to  
10 the Northeast Lovington-Upper Penn Pool?

11 A. Yes, sir.

12 Q. You verified for yourself that you're subject to  
13 those rules?

14 A. Yes, sir.

15 Q. And what do those rules provide?

16 A. We have to be within 150 foot of the center of a  
17 governmental quarter quarter section.

18 Q. And how many acres are assigned to each well in  
19 that pool?

20 A. Eighty acres.

21 Q. And this is an oil pool, is it not?

22 A. Yes, it is.

23 Q. Have you employed independent petroleum landmen  
24 as consultants to assist you in gathering and compiling the  
25 data?



1 A. Yes, sir, we have.

2 Q. The Application reflects that it was filed on  
3 April 24th of this year?

4 A. Yes.

5 Q. As of that filing date, have you satisfied  
6 yourself that you and others under your control made a  
7 thorough search of all public recorded documents to  
8 determine the appropriate owners within the spacing unit?

9 A. Yes, sir.

10 Q. And have you done that?

11 A. Yes, we have.

12 Q. When we turn past the first page of Exhibit 1,  
13 the plat, there's a tabulation of names, addresses and  
14 interests. What does this represent?

15 A. These are either open mineral owners or HBP  
16 owners that we have not been able to lease or have not come  
17 to some sort of an agreement with.

18 Q. To the best of your knowledge, do you have  
19 appropriate addresses, or have you searched for appropriate  
20 addresses for all these individuals or entities?

21 A. Yes, sir, we have.

22 Q. And how did you conduct that search?

23 A. We have gone through all the courthouse records,  
24 we have researched all the probate records, we have done  
25 the tax records, we have utilized any programs that were

1 available to us, as far as the computer is concerned, on  
2 addresses, relatives, et cetera.

3 Q. I notice on the first page there's a check mark?

4 A. Yes.

5 Q. What does that represent?

6 A. That represents someone that has signed an AFE  
7 and agreed to participate in the well.

8 Q. So as we move through the three pages there will  
9 be a checkmark, and that's to represent what?

10 A. There should be four entities that have signed  
11 AFEs with us and have agreed to participate in the well,  
12 and they are record title owners.

13 Q. With the exception of those that are checked,  
14 your intent is to have the balance of those individuals  
15 subject to a compulsory pooling order?

16 A. Yes, sir.

17 Q. Have you prepared exhibits that show the  
18 correspondence and efforts on behalf of Chesapeake to  
19 propose the well to all the interest owners?

20 A. Yes, sir, we have.

21 Q. Let me turn to Exhibit Number 2 and ask you to  
22 identify Exhibit Number 2.

23 A. This was a letter that was sent out by Chalfant  
24 Properties, who is our broker in New Mexico that does  
25 contract land work for us. He sends letters out to the

1 record title owners after he's researched the title at the  
2 courthouse.

3 Q. The first page of Exhibit 2 is a letter dated  
4 February 26th --

5 A. Yes, sir.

6 Q. -- of this year?

7 A. Yes, sir.

8 Q. Does that represent the first proposal made by  
9 Chesapeake to any of the interest owners?

10 A. It does.

11 Q. Did you attach to that letter a current AFE for  
12 the estimated cost of drilling and completing the well?

13 A. Yes, sir.

14 Q. Did you also identify for them the spacing unit  
15 that was to be the subject of the well?

16 A. Yes, we did.

17 Q. Subsequent to this letter -- and Exhibit 2  
18 contains the same letter with a number of different  
19 addressees?

20 A. Uh-huh.

21 Q. All right. How was the list compiled for the  
22 February 26th mailing?

23 A. From records from the courthouse, we did a title  
24 search.

25 Q. After February 26th, what is the next

1 correspondence?

2 A. The next correspondence is at March the 13th,  
3 which includes the remainder of the title, or it has been  
4 people that we've first contacted that have notified us or  
5 sent us recorded copies of instruments that title has  
6 changed hands.

7 Q. So as we go through these subsequent letters,  
8 it's an effort to do what?

9 A. To make sure that we have the current of-record  
10 owners in this unit.

11 Q. All right, so identify Exhibit 3 for me.

12 A. Exhibit 3 is the same. It was done on March the  
13 23rd.

14 Q. I'm sorry, Exhibit 3 I have as March 13th.

15 A. Oh, okay, March, 13th, that was Louis Dreyfus  
16 Natural Gas.

17 Q. Okay, Exhibit 4 --

18 A. Uh-huh.

19 Q. -- is what?

20 A. Exhibit 4 is March the 23rd. This was another  
21 set of letters that has gone out to other record title  
22 owners.

23 Q. Okay, Exhibit 5?

24 A. Exhibit 5 is correction letters.

25 Q. What does that mean?

1           A.    That means that it has gone out to other title  
2 people that we have gotten more correspondence back on, and  
3 more recorded copies, instruments.

4           Q.    Okay, Exhibit 6?

5           A.    Exhibit 6 is April the 25th, and this is merely  
6 follow-ups to other people. This is to Harkin Energy, as  
7 we don't have any record title, but we have tried to cover  
8 everything that anyone has ever told us about title. So  
9 we've covered everyone that may be an owner in this well --

10          Q.    All right.

11          A.    -- and is not of record.

12          Q.    The Application is filed on April 24th --

13          A.    Uh-huh.

14          Q.    -- and you've picked up Harkin Energy as a  
15 potential owner that doesn't have an interest of record?

16          A.    Exactly.

17          Q.    And so you've sent them a letter?

18          A.    Yes.

19          Q.    Exhibit 7, what does this represent?

20          A.    Exhibit 7 goes to WTG Exploration, which  
21 represents the same scenario.

22          Q.    Okay. All right, let's go back to Exhibit 1,  
23 now, and look at the very last page of Exhibit 1. There's  
24 an Exhibit B attached to that, and there's a tabulation.

25          A.    Yes.

1 Q. What does this represent?

2 A. This represents Chesapeake Operating. The first  
3 set of numbers are the mineral owners that we have leased  
4 in this unit. The remaining three -- and there's another  
5 one to be added to this, who's the Harris-Kerr interest --  
6 are the four individuals that have signed AFEs and are  
7 going to participate in the well.

8 Q. Other than the correspondence, have you and  
9 others under your control had phone conversations or other  
10 types of communications with any of the interest owners  
11 that would participate in the well?

12 A. Yes, sir, we have.

13 Q. And what has been the result?

14 A. The result has been that we have not been able to  
15 come to any agreement that is mutually acceptable to both  
16 parties.

17 Q. At this point, in your opinion, do you believe  
18 it's necessary for the Division to issue a compulsory  
19 pooling order consolidating the interests so that you may  
20 go forward with drilling the well?

21 A. Yes, sir.

22 Q. Do you have an estimated projection time to  
23 commence the well?

24 A. Yes, we'd like to commence in approximately 90  
25 days.

1 Q. All right. It's on a rig schedule of some type?

2 A. Yes.

3 Q. And is there a rig available for use for this  
4 well?

5 A. Yes, there is.

6 Q. Okay. As part of your efforts to consolidate the  
7 interest, you mentioned earlier that you had sent an  
8 estimated authority of expenditure for the well?

9 A. Yes, sir.

10 Q. Let me direct your attention to Exhibit 8 and ask  
11 you to identify Exhibit 8.

12 A. This is the AFE for the Nellie 1-21 well.

13 Q. And how was this AFE prepared?

14 A. This was prepared by the drilling department of  
15 Chesapeake Operating, Inc.

16 Q. Is it routinely your practice to use your  
17 company's AFEs as part of the well proposals to interest  
18 owners?

19 A. Yes, sir.

20 Q. Has any of the interest owners to whom you have  
21 proposed the well objected to the estimated well cost?

22 A. No, they have not.

23 Q. Have they objected to Chesapeake being the  
24 operator?

25 A. No, they have not.

1 Q. Have they objected to the well location?

2 A. No, they have not.

3 Q. Have they objected to the spacing unit?

4 A. No, sir.

5 Q. Do you have a recommendation to the Examiner for  
6 proposed overhead rates --

7 A. Yes --

8 Q. -- to be included in the compulsory pooling  
9 order?

10 A. Yes, sir.

11 Q. And ma'am, what are those rates?

12 A. According to the Ernst and Young -- and we have  
13 asked of the Division and received \$600 rate for a monthly  
14 producing rate and \$6000 for a drilling rate.

15 Q. And the Division in prior cases has approved that  
16 rate for Strawn oil wells?

17 A. Yes, sir.

18 Q. And you're asking for that rate again?

19 A. Yes.

20 Q. Okay. Finally, let me ask you to turn to Exhibit  
21 Number 9. Do you see Exhibit 9?

22 A. Yes.

23 Q. It's a certificate that I've executed for  
24 mailing?

25 A. Yes.



1 Q. Have you reviewed the attachments to that  
2 certificate to satisfy yourself that all the interest  
3 owners which were of record as of the date of the filing of  
4 the Application were sent notice?

5 A. Yes, sir.

6 Q. Sent notice of the hearing?

7 A. Yes, sir.

8 MR. KELLAHIN: Mr. Examiner, that concludes my  
9 examination of Ms. Townsend. We move the introduction of  
10 Exhibits 1 through 9.

11 EXAMINER BROOKS: Okay, Exhibits 1 through 9 will  
12 be admitted.

13 EXAMINATION

14 BY EXAMINER BROOKS:

15 Q. Ms. Townsend, going back to Exhibit Number 1, the  
16 interests are not, at least to me, identified as to whether  
17 they are working interests, unleased interests or royalty  
18 interests. I have trouble with three-letter acronyms, but  
19 HBP generally means to me -- in my experience usually means  
20 held by production.

21 A. Right.

22 Q. What does that indicate of these leases? Are  
23 these owners leasehold interests?

24 A. Yes, they are, and there's another well that is  
25 holding this lease, that happens to be included in this

1 unit.

2 Q. When you say this lease, all these HBPs are under  
3 the same lease or --

4 A. Well, they're under several different leases that  
5 have formed a unit for another well. And by combining  
6 those leases for the unit for the other well, this acreage  
7 was included on those leases, which makes this acreage  
8 HBP'd also.

9 Q. Right. But there's no well on this acreage?

10 A. No.

11 Q. Okay, the ones that you say "open", what does  
12 that mean?

13 A. That's open mineral owners that we have not been  
14 able to lease who've either --

15 Q. Unleased mineral owners?

16 A. Right. We've either not been able to find them,  
17 we've had their --

18 A. Right.

19 Q. -- proposals returned or...

20 Q. And the status of that would be shown by the  
21 other exhibits?

22 A. Yes.

23 Q. Okay. And are there any other -- Is this acreage  
24 in any other pools other than the Northeast Lovington-Upper  
25 Penn Pool?

1           A.   No, that's all we're striving for, is the Strawn  
2 location, in this well.

3           Q.   Okay. Is it within one mile of any other pools,  
4 that you know of?

5           A.   I'm not sure. I don't think so.

6           EXAMINER BROOKS: Okay. Any other questions, Mr.  
7 Stogner?

8                                   EXAMINATION

9   BY MR. STOGNER:

10          Q.   The percentage shown on Exhibit A, that would  
11 also be for 80 and 40 acres?

12          A.   Yes, uh-huh.

13          MR. STOGNER: No other questions.

14                                  FURTHER EXAMINATION

15   BY EXAMINER BROOKS:

16          Q.   Okay, following up on that, are there no  
17 differences in ownership within this 80 acres, is it all  
18 owned --

19          A.   No.

20          Q.   -- by the same people in the same proportions?

21          A.   The same proportions to the Strawn and below  
22 the -- and to the base of the Strawn unit, which is what  
23 we're trying to pool --

24          A.   Okay.

25          A.   -- is all owned by the same. It's not split up.

1 Q. Okay. So you're asking for a pooling from the  
2 surface to the base of the Strawn?

3 A. Yes.

4 EXAMINER BROOKS: Okay, very good. Thank you.

5 THE WITNESS: Thank you.

6 EXAMINER BROOKS: Mr. Examiner, for your  
7 information, the primary objective is the Strawn on 80  
8 acres.

9 The practice in the past has been to also issue a  
10 pooling order for a the shallower zones on 40 acres, in the  
11 unlikely event that there is some uphole potential.

12 EXAMINER BROOKS: Right.

13 MR. KELLAHIN: We will examine with the next  
14 witness, Mr. Robert Hefner, the geologist, whether there is  
15 an opportunity to do that.

16 EXAMINER BROOKS: Okay, I'm aware of that  
17 practice, so thank you.

18 You may proceed with your examination of the next  
19 witness.

20 MR. KELLAHIN: Mr. Examiner, Robert Hefner is a  
21 petroleum geologist appearing on behalf of Chesapeake.

22 You should have a set of exhibits in front of  
23 you.

24 EXAMINER BROOKS: Yeah.

25 MR. KELLAHIN: All right, sir.

1                   ROBERT A. HEFNER, IV,  
2     the witness herein, after having been first duly sworn upon  
3     his oath, was examined and testified as follows:

4                   DIRECT EXAMINATION

5     BY MR. KELLAHIN:

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

8           A.     My name is Robert Hefner, and I'm a geologist for  
9     Chesapeake.

10          Q.     On prior occasions, Mr. Hefner, have you  
11     testified before the Division as a petroleum geologist?

12          A.     I have.

13          Q.     And you've testified in compulsory pooling cases  
14     as well, have you not?

15          A.     I have.

16          Q.     In those prior cases you have reached geologic  
17     opinions and recommendations concerning the Division's  
18     risk-factor penalty associated with pooling orders?

19          A.     Yes, sir.

20          Q.     As part of your efforts in this case, have you  
21     made a similar assessment to reach a conclusion about a  
22     recommendation for a risk-factor penalty?

23          A.     I have.

24          Q.     In addition, are you not the geologist that's  
25     proposing to your company the drilling of this well at this

1 location?

2 A. That's correct.

3 Q. The geologic exhibits we're about to look at are  
4 your work product, are they not?

5 A. They are.

6 MR. KELLAHIN: We tender Mr. Hefner as an expert  
7 geologist.

8 EXAMINER BROOKS: His credentials will be  
9 accepted.

10 Q. (By Mr. Kellahin) Mr. Hefner, before we look at  
11 the displays, can you give us your conclusion concerning  
12 your recommendation as to an appropriate risk-factor  
13 penalty?

14 A. The maximum allowed would be the recommendation.

15 Q. All right. You understand the maximum, in  
16 Division nomenclature, is to allow you to recover out of  
17 future production, if you have any, the cost of the well,  
18 plus a penalty of up to two times, which is 200 percent?

19 A. That's your understanding?

20 A. That's my understanding.

21 Q. All right, sir. Let's turn to Exhibit 10. If  
22 you'll unfold the display, it's got lots of information on  
23 it, Mr. Hefner. First of all, let's take a moment and find  
24 your well. Where do you want to locate this?

25 A. The Section 21 of 16-37 is in the middle of this

1 plat, and the location of the proposed well is in the north  
2 half of the southeast quarter, and it's marked by a red rig  
3 symbol and denoted by a Chesapeake location above it.

4 Q. All right, it's a little hard to find. Do you  
5 see the word "Nellie 1-21"?

6 A. Yes.

7 Q. And just below that is an open circle?

8 A. That's correct.

9 Q. That is intended to be the approximate location?

10 A. That's right.

11 Q. All right. What type of wells have been  
12 tabulated on the display?

13 A. These are all the penetrations that have been  
14 made in this nine-section area. The production has been  
15 color-coded. The light blue represents Strawn production,  
16 the pink down at the bottom is some Drinkard production,  
17 the yellow is Abo, but it's predominantly Strawn. And  
18 denoted on the left side of each well symbol is the BCF  
19 equivalent to cumulative production, and on the right-hand  
20 side in red is the daily rate, current daily rate, and an  
21 MCF equivalent.

22 Q. All right. Within the nine-section display,  
23 let's focus on the Strawn wells. The Strawn is your  
24 primary objective for this well?

25 A. That's correct.

1           Q.   What has been the success of Strawn wells in the  
2   area?

3           A.   Well, the success as you move to the east in this  
4   area has not been very high.  You'll note as you move to  
5   the northeast, there's a lot of dry holes, and if you just  
6   look at the square mile around the proposed location,  
7   there's been five wells that have been drilled with two  
8   completions, which would yield a 40-percent probability of  
9   making a completion.

10          Q.   As part of your opinion about the maximum risk --

11          A.   Uh-huh.

12          Q.   Can you explain with this display and the  
13   subsequent display, Exhibit 11, reasons to support that  
14   opinion?

15          A.   Yes, with this --

16          Q.   Let's do that.

17          A.   Okay, with this display, you look at the well to  
18   the north, has made -- well, if you look at the two  
19   completions that have been made that are directly  
20   offsetting this producing unit, that has totaled 114,000  
21   barrels of oil equivalent, and if you divide that by two,  
22   you would get 57,000 barrels of oil equivalent per  
23   completion.

24                There's a dry hole to the south of you, a  
25   noneconomic completion that was attempted in the Strawn to



1 the southeast, and then really the only producer being the  
2 Mallon well to the north. And if you take that 40-percent  
3 probability of making a completion using that average  
4 number and compare that with what the AFE costs are of  
5 being a 60-percent probability of being a dry hole, just  
6 using those numbers you end up with a negative expected  
7 value.

8 So the risk is high.

9 Q. You don't have to go through it with me, but if  
10 you'll turn to Exhibit 11, you've actually done the  
11 calculation which provides the details of what you just  
12 summarized?

13 A. That's correct.

14 Q. All right. Substantial risk associated with the  
15 well?

16 A. Yes, there is.

17 Q. Well, let's look and see why you would want to do  
18 this at all. Do you have an exhibit that will display  
19 that?

20 A. I do.

21 Q. If you'll turn to Exhibit 12, first of all tell  
22 us what we're looking at.

23 A. All right, Exhibit 12 is a time-structure map  
24 from a 3-D seismic volume showing the relative structure on  
25 top of the Strawn, and --

1 Q. All right, don't go too quick for us, now here.

2 A. Okay.

3 Q. What's the color code mean?

4 A. The color code, the bar on the right shows that  
5 the cooler colors or the blues would be deeper  
6 structurally, and the lighter or hotter colors would be  
7 structurally higher. And if you look at -- and denoted on  
8 the map, that north half of the southeast quarter in  
9 Section 21 is the unit that we're dedicating to the well.

10 Q. All right, you've outlined the unit.

11 A. Yes.

12 Q. And let's look within the square, and tell us  
13 what you're trying to achieve with the Nellie well at this  
14 location.

15 A. If you look in that unit, you'll see some light  
16 greens with some whites kind of circling those green  
17 colors, and so that green being structurally higher than  
18 the white color, forming a unique closure right there in  
19 that unit.

20 Q. How far away do we have to go away from this  
21 location to find Strawn production?

22 A. There's Strawn production in the unit to the  
23 north, from that State 3-21 well.

24 Q. If it's a black dot, it represents Strawn  
25 production?

1           A.    That's correct.

2           Q.    Okay, and the other symbols would denote either a  
3   dry hole or --

4           A.    That's correct.

5           Q.    -- an abandoned wellbore?

6                   All right. Is there any other way to display the  
7   3-D seismic so that we can see what you're trying to  
8   achieve?

9           A.    You can display what we refer to as a vertical  
10   seismic section, representing -- going through this volume.

11          Q.    And do you have some of those?

12          A.    I've brought two.

13          Q.    All right, let's look at the first one. If  
14   you'll turn to Exhibit 13, first of all tell me on Exhibit  
15   12 which line we're looking at.

16          A.    Exhibit 13 is the east-west line going through  
17   the proposed locations.

18          Q.    Okay.

19          A.    And then about the middle of the vertical seismic  
20   section is the proposed location.

21          Q.    When we look at your Exhibit 13, then, there is a  
22   vertical red line. What is that intended to mean?

23          A.    That vertical red line is the intersection of the  
24   north-south line that's also part of the exhibit.

25          Q.    All right, so if we use the vertical red line,

1 would that approximate where you think this wellbore would  
2 be as we look through the vertical profile?

3 A. That's correct.

4 Q. When we look horizontally on the line traces, the  
5 data is displayed in increments or intervals?

6 A. Yes.

7 Q. What's the distance between the intervals?

8 A. In a horizontal direction there's 110 feet  
9 between each of the tick marks at the top.

10 Q. Okay, let's start at the top with the red line,  
11 going down the vertical red line, find us a point where it  
12 intersects with a horizontal color that matters to you.

13 A. In about the middle of the display, coming down  
14 that red line, there's a blue horizon which denotes the top  
15 of the Strawn, and I think it's annotated on the left side  
16 of the vertical section.

17 Q. That's what you're really trying to look for,  
18 right?

19 A. That's the top of the Strawn, the top of the  
20 objective.

21 Q. And why is that important?

22 A. That's our target, and that's the closure that  
23 we're looking for that's represented on the plan view.

24 Q. Is structural position associated with being  
25 successful in drilling a Strawn oil well?

1           A.    It is, and if you look at that horizon on top of  
2   the Strawn, you can see that there's dip to the east as  
3   well as dip to the west.  So that high is right here in the  
4   middle.

5           Q.    Is there a water risk associated with this well  
6   and its location?

7           A.    There is water risk.

8           Q.    Describe that for us.

9           A.    The well to the south of us, called the Montieth,  
10   actually drilled the Strawn and had porosity in the lower  
11   portion of the Strawn, and it was completely wet, and  
12   therefore a completion attempt was not made in that well.

13          Q.    Let's look at your structure in the other  
14   dimension or direction.  Let's look at the north-south  
15   line, which is Exhibit 14.  The display is constructed in a  
16   similar fashion as Exhibit 13?

17          A.    Yes, sir, it is.  The blue horizon represents the  
18   top of the Strawn, and again you can see that that  
19   structure dips to the north as well as to the south, and so  
20   you've got, again, closure, and the well located  
21   approximately in the middle of that structural feature.

22          Q.    The method of analysis, then, is to take the red  
23   line, take it down where it intersects the blue line, which  
24   is the top of the Strawn?

25          A.    That's correct.

1 Q. To achieve what purpose?

2 A. Both of these vertical seismic profiles are  
3 intersecting the well location to show you what the  
4 relative structure is in relation to the proposed well.

5 Q. Does the availability of 3-D seismic data  
6 diminish the risk for you to less than the maximum penalty  
7 allowed?

8 A. There's other circumstances that are existing in  
9 this area that you're not able to use the seismic to remove  
10 that risk.

11 Q. So it would still be the maximum risk, even if  
12 you have 3-D seismic?

13 A. Yes, sir.

14 Q. All right, let's look at your last display. If  
15 you'll turn to Exhibit 15, identify what we're looking at.

16 A. This is a structural cross-section that goes --  
17 It's a north-south cross-section that goes through the wet  
18 well and the Strawn that's on the left side. It's  
19 annotated as the C&K Petroleum Montieth.

20 The top of the Strawn in this cross-section is  
21 that blue horizon that's drawn across, and the base of the  
22 Strawn is that brown horizon. And then it's highlighted in  
23 light blue, representing the gross interval. And then  
24 highlighted in yellow is porosity development. And then  
25 this particular well, the Montieth, that porosity was

1 water-filled.

2 Then as you move to the north, is the proposed  
3 location of the Nellie. That's the second well on this  
4 structural cross-section.

5 And then going further north, the third well in  
6 the cross-section is the producer to the north. Again, the  
7 same color-coding. The porosity is a little bit higher in  
8 the Strawn in that particular well.

9 If you look at the log that's on the left side,  
10 that's the resistivity log, and right below the red marks  
11 you'll note that the resistivity makes a sharp deflection  
12 to the left, indicating where your movable water is. In  
13 this particular well, they made a completion attempt above  
14 that inflection and ended up producing over 100,000 barrels  
15 of water in this well also.

16 Q. How does the structural cross-section support  
17 your opinion about the risk associated with your location?

18 A. We have water on both sides of us, and our hope  
19 is that we'll be able to find porosity high in the Strawn,  
20 close to the top, and to be out of the water.

21 Q. Are there any shallower secondary objectives that  
22 might likely produce in this location?

23 A. Industry has made a few attempts in the Wolfcamp  
24 that have really been subeconomic or noneconomic, so the  
25 principal formation will be the Strawn.

1 Q. Is it your recommendation that the pooling order  
2 also include 40-acre oil at shallower depths?

3 A. Yeah, for outside attempts.

4 Q. All right, highly unlikely though?

5 A. Highly unlikely.

6 MR. KELLAHIN: That concludes my examination of  
7 Mr. Hefner. We move the introduction of his Exhibits 10  
8 through 15.

9 EXAMINER BROOKS: Okay, Exhibits 10 through 15  
10 will be admitted.

11 I have no questions for the witness. Do you, Mr.  
12 Stogner?

13 MR. STOGNER: Yes, I do.

14 EXAMINER BROOKS: Go ahead.

15 EXAMINATION

16 BY MR. STOGNER:

17 Q. Referring to Exhibit Number 10, again, what are  
18 the purple numbers?

19 A. On the left side of the well spots, that's the  
20 cumulative production represented in BCF-equivalents.

21 Q. Okay, and when I refer over to the southwest of  
22 the southwest of Section 22, there appears to be an  
23 injection well that had some production; is that correct?  
24 It's the Yates Freeman AC.

25 A. Oh, I think -- I don't think that's an injection



1 well. I think that may be a mi-spotted symbol. It's a  
2 well that a completion was made that has since been  
3 plugged, abandoned. So...

4 Q. Now, is this the classic algal reef mound that we  
5 see out there?

6 A. Yes, sir.

7 Q. What is the -- roughly the extent -- Does that  
8 show up on Exhibit Number 12, the extent of this particular  
9 algal reef?

10 A. Yeah, if you were to look at the 40 acres that  
11 represents the well spot itself, you can see those green  
12 colors. And if you go around that where the white tries to  
13 come all the way around, that's the particular unique  
14 buildup.

15 Q. I show that you -- In face, I see the Atoka  
16 referred to several times, and I also show on your --

17 A. Oh, on the base map?

18 Q. -- exhibits that you show to penetrate the Atoka.  
19 What's your plans on that?

20 A. Typically what we do is drill down to the -- If  
21 you look at the cross-section, what our plans would be,  
22 they're denoted at the base there, Atoka shale. And  
23 usually what we'll do is, we'll look for that as a marker  
24 and then drill 150 feet of rathole to know that we've gone  
25 through the complete Strawn.

1 Q. That's essentially your anchor point?

2 A. That's correct.

3 Q. And again on Exhibit Number 10 down in Section  
4 28, what's the yellow?

5 A. That would be -- That would represent Abo.

6 MR. STOGNER: Abo, okay. I have no other  
7 questions of this witness.

8 EXAMINATION

9 BY MR. BROOKS:

10 Q. What is the purple? I've forgotten. On Exhibit  
11 Number 10, the purple circles?

12 A. Oh, they're -- Like going through Section 29?

13 Q. Yeah.

14 A. Those are Drinkard, Drinkard production.

15 EXAMINER BROOKS: No further questions. Witness  
16 may stand down.

17 MR. KELLAHIN: That concludes our presentation,  
18 Mr. Examiner.

19 EXAMINER BROOKS: Very good, Case Number 12,660  
20 will be taken under advisement. Thank you.

21 (Thereupon, these proceedings were concluded at  
22 8:57 a.m.)

23 I do hereby certify that the foregoing is  
24 \* \* \* a complete record of the proceedings in  
the hearing of Case No. 12660  
heard by me on June 28, 2001  
25 *David K. Brooks*  
On Conservation Division Examiner

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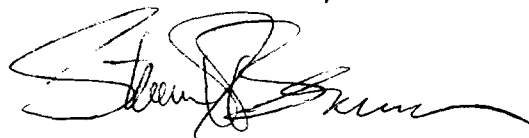
## CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter  
and Notary Public, HEREBY CERTIFY that the foregoing  
transcript of proceedings before the Oil Conservation  
Division was reported by me; that I transcribed my notes;  
and that the foregoing is a true and accurate record of the  
proceedings.

I FURTHER CERTIFY that I am not a relative or  
employee of any of the parties or attorneys involved in  
this matter and that I have no personal interest in the  
final disposition of this matter.

WITNESS MY HAND AND SEAL June 29th, 2001.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 2002