

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

CASE NO. 12,660

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID BROOKS, Hearing Examiner

June 28th, 2001

Santa Fe, New Mexico

01 JUL 12 AM 7:55

OIL CONSERVATION DIV

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

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A P P E A R A N C E S

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ALSO PRESENT:

MICHAEL E. STOGNER
Hearing Examiner
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
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* * *

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 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.

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ROBERT A. HEFNER, IV,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

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

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

A. I have.

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

A. I have.

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

A. Yes, sir.

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

A. I have.

Q. In addition, are you not the geologist that's 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
25 the Department hearing of Case No. 12660
heard by me on June 28, 2001
David K. Berry, Examiner
Of Conservation Division

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