

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. 12,595
)
APPLICATION OF CHESAPEAKE OPERATING,)
INC., FOR AN UNORTHODOX OIL WELL) ORIGINAL
LOCATION, LEA COUNTY, NEW MEXICO)
)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

February 22nd, 2001

Santa Fe, New Mexico

OIL CONSERVATION DIV
01 MAR - 8 AM 9:12

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, February 22nd, 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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 Examiner Hearing
 CASE NO. 12,595

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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

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* * *

1 WHEREUPON, the following proceedings were had at
2 10:31 a.m.:

3 EXAMINER CATANACH: At this time we'll call Case
4 12,595, the Application of Chesapeake Operating,
5 Incorporated, for an unorthodox oil well location, Lea
6 County, New Mexico.

7 Call for appearances in this case.

8 MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of
9 the Santa Fe law firm of Kellahin and Kellahin, appearing
10 on behalf of the Applicant. I have two witnesses to be
11 sworn.

12 MR. FELDEWERT: Mr. Examiner, my name is Michael
13 Feldewert. I'm with the Santa Fe law firm of Holland and
14 Hart and Campbell and Carr, appearing on behalf of W.B.
15 Osborne Oil and Gas Operations.

16 I have no witnesses, and we did not file a
17 prehearing statement, because I was called late last night
18 by Mr. Rex Borland with that company, asked to enter an
19 appearance here today. W.B. Osborne is apparently a
20 working interest owner in the northeast quarter, which is
21 the subject of Chesapeake's Application.

22 Mr. Borland represented to me that there have
23 been no discussions about this well with his company, he
24 found out only yesterday about the Application and this
25 hearing. I don't know whether he's an affected party or

1 not by the unorthodox location, but I think there probably
2 needs to be some communication between Chesapeake and W.B.
3 Osborne about this matter.

4 MR. KELLAHIN: Mr. Examiner, I take it -- to Mr.
5 Osborne, Mr. Borland's appearance on behalf of Osborne. I
6 will describe for you the circumstances.

7 Osborne is not an affected party, pursuant to the
8 Division rules concerning an unorthodox well location. The
9 subject of this case is a well that moved to the south and
10 to the east. Within the section, the northeast quarter,
11 the south half of the northeast quarter is the proposed
12 spacing unit.

13 The well moves to the south of Unit Letter G.
14 It's 275 feet from the south line. We're in the Shipp-
15 Strawn Pool, 80-acre spacing. Wells are to be within the
16 center, within 150 feet of the center of the quarter
17 quarter. So we move to the south. The encroachment would
18 be on the southeast quarter, then, and move slightly to the
19 east, which would be an internal encroachment to the
20 spacing unit.

21 And so we notified everyone in the southeast
22 quarter. The Osborne interest is in the east half of the
23 northwest and in the west half of the northeast. The
24 Osborne interest will have a small, very small, working
25 interest in the Chesapeake well.

1 Lynda Townsend, Chesapeake's landman for this
2 property, has been in conversations with Osborne's interest
3 about this well, and they will have their choices about
4 participating in the wellbore. However, the subject of
5 this case is the location exception, and there's no notice
6 obligation for us to satisfy concerning that interest.

7 So we take exception to their appearance in this
8 matter, because they're not an affected party.

9 With that, we would be like to go ahead with our
10 presentation.

11 EXAMINER CATANACH: Please proceed.

12 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,
13 entering an appearance on behalf of Amerind Oil Company. I
14 have no witnesses.

15 EXAMINER CATANACH: Will the witnesses please
16 stand to be sworn in?

17 (Thereupon, the witnesses were sworn.)

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

21 DIRECT EXAMINATION

22 BY MR. KELLAHIN:

23 Q. All right, sir, would you please state your name
24 and occupation?

25 A. My name is Donnie Michael, I'm a petroleum

1 landman.

2 Q. Mr. Michael, on prior occasions have you
3 testified before the Division?

4 A. I have not.

5 Q. Summarize for us your experience as a petroleum
6 landman.

7 A. I have about 21 years of experience in various
8 aspects.

9 Q. Have you been retained as a land consultant for
10 Chesapeake?

11 A. Yes, I have.

12 Q. And pursuant to that employment, was it your
13 responsibility to search the public records to determine
14 the various interest owners in the southeast quarter of
15 Section 5?

16 A. It was.

17 Q. And did you do that?

18 A. Yes, I did.

19 Q. When we turn to Exhibit Number 1 and look behind
20 the plat, there's a tabulation of various unleased mineral
21 owners, working interest owners --

22 A. Yes.

23 Q. -- that are shown?

24 A. Uh-huh.

25 Q. All right, sir. Does this represent work that

1 was performed by you or under your direction and control?

2 A. Under my direction and control, yes.

3 MR. KELLAHIN: We tender Mr. Michael as an expert
4 petroleum landman.

5 EXAMINER CATANACH: He is so qualified.

6 Q. (By Mr. Kellahin) When we look at the southeast
7 quarter of Section 5, what did you determine to be the
8 ownership and the configuration of those leases?

9 A. The ownership as illustrated in the exhibits.

10 Q. Did you find that there was any Strawn oil
11 production in the southeast quarter?

12 A. Yes, there is.

13 Q. And where is the well and who is the operator of
14 the well?

15 A. It is the Midway 5 Number 1. They're in the west
16 half of the southeast quarter.

17 Q. Yeah, it's shown on --

18 A. Right.

19 Q. -- the first page of Exhibit 1?

20 A. Correct, sir.

21 Q. And the spacing unit for that well is the west
22 half of the southeast quarter?

23 A. Correct.

24 Q. So when Mr. Catanach looks at the tabulation of
25 owners on the attached pages --

1 A. Yes, sir.

2 Q. -- that will reflect not only the owners in the
3 producing Strawn well but the owners in the undrilled
4 spacing unit in the east half of the southeast quarter?

5 A. Correct.

6 Q. Have you compared your tabulation of ownership
7 with Exhibit 2, which is the certificate of notification
8 for hearing?

9 A. I have.

10 Q. Are they consistent with each other?

11 A. They are.

12 Q. To the best of your knowledge, Mr. Michael, have
13 all the appropriate parties in the southeast quarter been
14 sent notice of this hearing?

15 A. Yes, they have.

16 MR. KELLAHIN: That concludes my examination. We
17 move the introduction of Exhibits 1 and 2.

18 EXAMINER CATANACH: Exhibits 1 and 2 will be
19 admitted as evidence.

20 Mr. Feldewert, do you have any questions?

21 MR. FELDEWERT: No, I do not.

22 EXAMINATION

23 BY EXAMINER CATANACH:

24 Q. Mr. Michael, who's the operator of that well in
25 the southeast quarter? Do you know?

1 A. Northport Production.

2 Q. And so the remaining mineral and working interest
3 owners, I assume, are interest owners in the east half of
4 that quarter section; is that correct?

5 A. In the east half, or they had a participating
6 royalty interest in the west half.

7 Q. So you notified all the working interest owners
8 and the royalty interest owners in the west half of that
9 southeast quarter?

10 A. Yes.

11 Q. Okay, so virtually all of the interest -- anybody
12 that --

13 A. Any interest in the southeast quarter, yes.

14 Q. Okay. To your knowledge, has anybody expressed
15 any objection or concern to your location?

16 A. No, not to my knowledge.

17 EXAMINER CATANACH: That's all I have.

18 MR. KELLAHIN: Mr. Examiner, I'd like to take
19 Exhibit 6 out of sequence. It's a letter on my letterhead
20 from me to Mr. Bruce.

21 Mr. Bruce represents Amerind Oil Company, and he
22 and I have executed this waiver on behalf of our client.
23 It simply indicates that Amerind is waiving any objection.
24 In exchange, Chesapeake will waive any objection of a
25 mirror location for Amerind or interest owners in the

1 southeast quarter. The Amerind interest is in the
2 southeast quarter.

3 ROBERT A. HEFNER, IV,

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

6 DIRECT EXAMINATION

7 BY MR. KELLAHIN:

8 Q. All right, sir. Mr. Hefner, would you please
9 state your name and occupation?

10 A. My name is Robert Hefner, and I'm a geologist for
11 Chesapeake Energy in Oklahoma City.

12 Q. On prior occasions, Mr. Hefner, have you
13 testified as a geologist in compulsory pooling cases?

14 A. I have.

15 Q. And pursuant to this Application, are we looking
16 at a well that you're proposing to your management?

17 A. Yes, sir.

18 Q. And this represents your work product that we're
19 about to examine?

20 A. It does.

21 MR. KELLAHIN: We tender Mr. Hefner as an expert
22 petroleum geologist.

23 EXAMINER CATANACH: He is so qualified.

24 Q. (By Mr. Kellahin) The subject of your
25 presentation for this case, Mr. Hefner, is to examine the

1 necessity of having the well at an unorthodox well
2 location?

3 A. That's correct.

4 Q. I'm going to give you a copy of the C-102, just
5 to orient you as to specifically where this well is
6 located. You can see that the well will be located in Unit
7 Letter G and that it will be 275 feet from the south line
8 of the 40 acres and 321 feet from the east line, correct?

9 A. That's correct.

10 Q. All right. Under the Shipp-Strawn Pool rules,
11 the standard location would be in either one of the 240s,
12 and you would have to be within 150 feet of the center of
13 either one of those 240s, correct?

14 A. That's correct.

15 Q. When we look at your work product, is there an
16 available standard location in either 40-acre tract that
17 satisfies your objectives of encountering this potential
18 Strawn reservoir?

19 A. No, there's not.

20 Q. And why not?

21 A. The geological feature that's been interpreted
22 that we're going to drill is to the south of either one of
23 those legal locations.

24 Q. Let's look at your work product. Let's turn to
25 Exhibit 3. Identify for us what we're looking at.

1 A. This is a structure map that's been generated
2 from a 3-D seismic volume. It represents almost all of
3 Section 5 and portions of some of the offsetting sections.
4 The clipping to the south and to the west is the extent of
5 the 3-D survey itself, and therefore it was clipped, and it
6 has been generated based on top of the Strawn and then
7 converted to depth using apparent velocities and is in
8 reference to the seismic datum of 3900 feet.

9 Q. Okay. Let's look at Section 5. You've taken the
10 northeast quarter of 5 and marked out the four 40-acre
11 tracts, correct?

12 A. Yes, I have.

13 Q. When we look at the southwest of the northeast,
14 Unit Letter G, I see the word "Buchanan", and then below
15 "Buchanan" is the number "11200", correct?

16 A. That's correct.

17 Q. Where is the proposed well location in
18 relationship to those numbers and that name?

19 A. The surface location is represented by that small
20 circle that's on that red line that goes through. The red
21 line is a vertical seismic section, arbitrary section, that
22 goes through the proposed location, as well as the well to
23 the north that tested the Strawn and was found
24 unproductive.

25 Q. Okay. Within that location, or just around that

1 location, there is a black line shape. Do you see that?

2 A. Yes.

3 Q. What does that represent?

4 A. That's a contour interval represented by 11,000
5 feet. It actually closes in that south half, south half of
6 the northeast quarter, and that would represent a subsea
7 value of minus 7100 feet.

8 You'll also notice by the wellspots that have
9 penetrated the Strawn, there's a blue subsea number, the
10 control point that we're using, that's in the northwest of
11 the northeast, known as the Batton 1-5. The Strawn was
12 found at a subsurface elevation of minus 7161, therefore
13 this contour interval would represent about 61 feet of
14 additional structure in relation to that well.

15 Q. If we look at the structural feature that's
16 outlined around that well location by the black line,
17 within that black line, then, is your proposed target,
18 right?

19 A. Yes, it is.

20 Q. If you're outside that line, what happens?

21 A. You're back into regional Strawn. The geological
22 model for finding productive Strawn reservoir is algal
23 mounding, and the reasoning or mounding will grow against
24 regional and can be expressed by a structural feature that
25 is higher than what the regional would normally be, and

1 that's represented by the closure on that 11,000-foot
2 contour.

3 Q. Do you have a reasonable opportunity to access
4 this Strawn structural feature at a standard location in
5 the northeast quarter?

6 A. No, you do not.

7 Q. Talk to me about the orientation. You have two
8 choices about which way to turn the 80 acres. You could
9 either stand up the east half or lay down and make a south
10 half. Why have you chosen this orientation?

11 A. Because it represents the orientation of the
12 structural closure of the Strawn mounding as an east-west
13 closure and therefore represents the geology the best. And
14 the well that was drilled in the northwest of the northeast
15 was dry in the Strawn, and therefore a standup would not
16 represent the geology very well.

17 Q. All right. The Batton 1-5, in the northwest-
18 northeast, did penetrate the Strawn?

19 A. Yes, it did.

20 Q. And did it produce in the Strawn?

21 A. No, it did not.

22 Q. Okay. And so you've oriented the south half of
23 the northeast as the best fit to the potential reservoir
24 shape and size?

25 A. That's correct.

1 Q. Okay. There are two lines that you've drawn.
2 Let's look first at the north-south line. Is there an
3 exhibit that will show us that line?

4 A. Yeah, it's marked as Exhibit 4 --

5 Q. Let's look at that.

6 A. -- and is denoted on the structure map as that
7 arbitrary line A-A'. And Exhibit 4 would be that vertical
8 seismic section along that entire line that's in red on the
9 structure map.

10 Q. All right, let's take Exhibit 4 and read across
11 the top, and let's find the Buchanan 1-5, which is our
12 proposed well, and there is a vertical blue line. What
13 does that represent?

14 A. That represents the proposed location.

15 Q. Follow down the vertical blue line till it
16 intersects the first horizontal blue line. What does that
17 point represent?

18 A. That point represents the top of the Strawn. And
19 then there's a green line at the bottom that it also
20 intersects, and that would represent the Atoka shale.

21 Q. All right.

22 A. So that would be your entire Strawn.

23 Q. The objective of the Buchanan well, then, is to
24 intersect that structural feature at a point that gives you
25 the opportunity for maximizing the height or penetrating

1 the structure at its highest point?

2 A. That's correct.

3 Q. Let's compare that to what happens on this
4 display at the Batton 1-5 well. Go back to that well, and
5 I know there's not a vertical line, but just read down, and
6 you see where that wellbore would intersect the horizontal
7 blue line?

8 A. Uh-huh. You'll notice the -- the color code on
9 here would be the -- that very dark blue would represent
10 the thinnest or regional Strawn, and as that dark blue goes
11 towards the greens and yellows and reds, it represents the
12 thickening of the Strawn or the amplitude being reduced.

13 And underneath the Batton location you can see
14 there was some slight thickening in the Strawn. However,
15 they found the Strawn to be nonproductive. But if you
16 compare that thickening with the proposal at the Buchanan,
17 it's substantially different. As a matter of fact, it's
18 gotten thick enough to where the seismic is exhibiting a
19 peak and a trough and a peak, suggesting that it's
20 substantially thicker than regional, and possibly
21 productive.

22 Q. I ask you to find a line in the database that
23 would give us an east-west direction through what would be
24 standard locations for each of the 440s.

25 A. Yes.

1 Q. Or each of the 240s.

2 A. Yes, this is -- Exhibit Number 5 would be an
3 east-west vertical seismic section.

4 Q. All right, let's look at Exhibit 5 for a minute,
5 and let's get oriented as to what we're seeing.

6 A. It's represented on the structure map by
7 arbitrary line B-B' and goes through the center of each of
8 those quarter-quarters that would represent a legal
9 location, and you'll see on the exhibit denoted at the top
10 of that vertical section, each of those legal locations,
11 and a blue line drawn down to where that would penetrate
12 the Strawn.

13 Q. Okay, how do those two legal or standard
14 locations compare to your proposed location?

15 A. They actually are thinner than what the Batton
16 tested.

17 Q. Substantially inferior, then?

18 A. Yes.

19 Q. It would not be possible, in your opinion, to
20 drill at standard locations, then, to test for the
21 opportunity to produce Strawn oil out of this particular
22 pod?

23 A. No.

24 MR. KELLAHIN: That concludes my examination of
25 Mr. Hefner. We move the introduction of his Exhibits 3, 4

1 and 5.

2 EXAMINER CATANACH: Exhibits 3, 4 and 5 will be
3 admitted as evidence.

4 EXAMINATION

5 BY EXAMINER CATANACH:

6 Q. Mr. Hefner, the thickening of that Strawn section
7 at the proposed location, that generally indicates a
8 buildup and possibly being productive; is that correct?

9 A. Yeah, it would be a standard analogy that you
10 would look for, for production in the Strawn.

11 Q. But this data doesn't tell you whether or not
12 that thickening has porosity or permeability?

13 A. No, it doesn't. There's a phenomenon known as
14 tuning, to where, when you get to a certain thickness, you
15 could have this same representation by the wavelet that
16 would look similar to productive Strawn but would not be
17 productive.

18 Q. Do you anticipate that the bottomhole location of
19 this well will be close to what the surface location is, or
20 do you have any idea about that?

21 A. It should be. There shouldn't be much drift at
22 all. The structure here is fairly flat. So if anything,
23 there might be a little drift actually away from -- to the
24 northwest, from where we've located. But with normal drift
25 a location like this, I think we should be all right.

1 EXAMINER CATANACH: I have nothing further, Mr.
2 Kellahin.

3 MR. KELLAHIN: We'd ask that you introduce
4 Exhibit Number 6, which is waiver agreement with Amerind
5 Oil Company.

6 EXAMINER CATANACH: Exhibit Number 6 will be
7 admitted as evidence.

8 MR. KELLAHIN: That concludes our presentation,
9 Mr. Examiner.

10 EXAMINER CATANACH: Okay, Mr. Feldewert, from the
11 evidence presented it appears that W.B. Osborne was not
12 entitled to notice in this case pursuant to Division rules.
13 So I appreciate your entry of appearance in this case, but
14 it appears again that he wasn't due notice, so...

15 MR. FELDEWERT: I understand. Thank you.

16 EXAMINER CATANACH: There being nothing further
17 in this case, Case 12,595 will be taken under advisement.

18 (Thereupon, these proceedings were concluded at
19 10:54 a.m.)

20 * * *

21
22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
the Examiner hearing of Case No. 12595,
heard by me on February 22 192001.

24 David Catanach, Examiner
25 Off Conservation Division

