

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. 12,448

APPLICATION OF CHESAPEAKE OPERATING,)
 INC., FOR AN UNORTHODOX GAS WELL)
 LOCATION, LEA COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MARK ASHLEY, Hearing Examiner

July 13th, 2000

Santa Fe, New Mexico

OIL CONSERVATION DIV.
 00 JUL 27 AM 5:01

This matter came on for hearing before the New Mexico Oil Conservation Division, MARK ASHLEY, Hearing Examiner on Thursday, July 13th, 2000, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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July 13th, 2000
Examiner Hearing
CASE NO. 12,448

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A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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 By: W. THOMAS KELLAHIN

* * *

1 WHEREUPON, the following proceedings were had at
2 10:30 a.m.:

3 EXAMINER ASHLEY: The hearing will now come back
4 to order, and the Division calls Case 12,448, Application
5 of Chesapeake Operating, Inc., for an unorthodox gas well
6 location, Lea County, New Mexico.

7 Call for appearances.

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, and I have two witnesses to be
11 sworn.

12 EXAMINER ASHLEY: Additional appearances?

13 Will the witnesses please rise to be sworn in?

14 (Thereupon, the witnesses were sworn.)

15 LYNDA F. TOWNSEND,

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

18 DIRECT EXAMINATION

19 BY MR. KELLAHIN:

20 Q. Mrs. Townsend, for the record, ma'am, would you
21 please state your name and occupation?

22 A. Yes, Lynda Townsend, I'm a landman for Chesapeake
23 Operating, Inc., in Oklahoma City.

24 Q. And you reside in Oklahoma City?

25 A. I reside in Guthrie, Oklahoma.

1 Q. On prior occasions, have you testified before the
2 Division as a petroleum landman?

3 A. Yes, I have.

4 Q. Do your duties include the responsibility for
5 determining the ownership of a spacing unit, who your
6 working interest owners are and who are the offsetting
7 operators with regards to applications for unorthodox well
8 locations?

9 A. Yes, sir.

10 Q. Were you involved with those topics for the Boyce
11 15-3 well that's the subject of this hearing?

12 A. Yes, I was.

13 MR. KELLAHIN: We tender Mrs. Townsend as an
14 expert petroleum landman.

15 EXAMINER ASHLEY: Ms. Townsend is so qualified.

16 Q. (By Mr. Kellahin) Let's take a moment, Mrs.
17 Townsend, and explain to Mr. Ashley why we're here this
18 morning. I think that may be easily commenced by having
19 you turn through your package of exhibits, and let's look
20 at the index tab. You have indexed your exhibits in a
21 numerical fashion.

22 A. Yes.

23 Q. And let's start with the first display behind the
24 index, which is your survey plat and then the drilling
25 report. The first display is this C-102, correct?

1 A. Yes.

2 Q. And it was for what well?

3 A. It was for the Boyce 15-3 well.

4 Q. All right. This well was originally permitted
5 for what particular pool or formation?

6 A. It was permitted for the Strawn formation. It
7 was located in the Northwest Shoe Bar-Strawn field.

8 Q. Drilled as a Strawn oil well in this pool, would
9 this well have been at a standard location, had it been
10 successful in that pool?

11 A. Yes, sir.

12 Q. Was the well drilled deeper than the Strawn
13 formation?

14 A. Yes, it was.

15 Q. And as a consequence, was there an opportunity
16 for your company to see if this well will produce in any of
17 the deep gas zones?

18 A. Yes, sir.

19 Q. Is that opportunity available in the Morrow
20 formation?

21 A. Yes.

22 Q. To the best of your knowledge, what Morrow pool
23 will this well be in, if Mr. Ashley allows you to produce
24 it?

25 A. This would be in the Townsend-Morrow field.

1 Q. All right. Are there any special rules
2 associated with that pool?

3 A. 660s from the lease line.

4 Q. So it's standard well spacing patterns under the
5 Rule 104?

6 A. Yes.

7 Q. And that's what you're seeking to accomplish
8 then?

9 A. Yes, sir.

10 Q. All right. When we look at this location, then,
11 in Section 15, this well would be unorthodox to its eastern
12 boundary of the spacing unit, correct?

13 A. Yes, sir.

14 Q. The surface location is 341 feet from that
15 boundary, instead of 660 feet, correct?

16 A. Yes, it is.

17 Q. Okay. Let's flip past that locator map and
18 describe to Mr. Ashley the operators or parties upon whom
19 the well encroaches.

20 A. All right.

21 Q. If you'll turn to the foldout colored display.

22 A. It encroaches to an east boundary line, which
23 encroaches upon the west half of Section 14, which is a
24 specified gas unit for David Arrington Oil and Gas. He has
25 two wells in that unit that he operates, one in the

1 northeast quarter of the northwest quarter and one in the
2 southwest quarter.

3 Q. Okay, there's a complexity to the map that I
4 think takes a moment to digest.

5 A. Right.

6 Q. It's color-coded in such a way that you've
7 outlined the east half of 15 as your spacing unit for your
8 well?

9 A. Right.

10 Q. And then in the red bold print you've identified
11 the Chesapeake Boyce 3-15 well, correct?

12 A. Right.

13 Q. And just below the Number 15 is an open circle?

14 A. Uh-huh.

15 Q. That represents the approximate location of this
16 well?

17 A. Yes, it does.

18 Q. All right. It's encroachment, then, to the east
19 is upon the west half of 14?

20 A. Yes.

21 Q. And to your knowledge, the operator of that
22 spacing unit in the deep gas is Arrington?

23 A. David H. Arrington --

24 Q. Okay.

25 A. -- Oil and Gas.

1 Q. Have you had discussions with or negotiations
2 with Arrington about this well and its location?

3 A. Yes, sir, we have, the well located in the Morrow
4 formation.

5 The very last two pages, we have a waiver from
6 David H. Arrington Oil and Gas with a stipulation.

7 Q. All right, let's turn to the last two pages of
8 the exhibit package, and this is a June 14th letter --

9 A. Yes.

10 Q. -- using Mr. Arrington's letterhead, addressed to
11 Chesapeake and to your attention. The second page would
12 indicate Mr. Baker's signature, and then an acceptance and
13 approval by Chesapeake?

14 A. Yes, sir.

15 Q. Describe for us the terms and conditions of the
16 waiver.

17 A. All right. David H. Arrington has given us a
18 waiver under the condition that we accept a penalty that
19 equals the percentage the well's bottomhole encroaches on
20 the boundary, based on the 660 minimum setback. It will be
21 applied -- The penalty will be applied to the results of
22 semi-annual deliverability tests of the well.

23 For this waiver from Mr. Arrington, we will in
24 turn, should he drill a well in the west half of Section 14
25 at any unorthodox location, give him a waiver subject to

1 the same penalty.

2 Q. The penalty is calculated not on the surface
3 location but on the bottomhole location?

4 A. Yes, sir.

5 Q. Do you have calculations or measurements from
6 your company that will tell us how to do the penalty
7 calculation based upon a bottomhole location?

8 A. I do not. Mr. Hefner can expound on that. I can
9 give you --

10 Q. You have the number?

11 A. -- probably, the bottomhole number, yes.

12 Q. Give us the footages for the bottomhole location.

13 A. Yes, the bottomhole number is 430 foot from the
14 east line, 2382 feet from the north line.

15 Q. All right, so we're slightly west of the surface
16 location?

17 A. Yes.

18 Q. And slightly south of the north-south
19 dimension --

20 A. Right.

21 Q. -- of the surface?

22 A. Uh-huh.

23 Q. Okay. When we look at your foldout, color-coded
24 map of the wells and the ownership --

25 A. Uh-huh.

1 Q. -- this well also encroaches on the southeast
2 quarter of 15?

3 A. Yes, sir.

4 Q. It is closer to the southeast quarter than the
5 660-foot rule, correct?

6 A. Right.

7 Q. Is there any difference in ownership between the
8 northeast quarter and the southeast quarter?

9 A. In the Morrow formation there is not. Chesapeake
10 owns 100 percent of it.

11 Q. All right. So the only party that's adversely
12 affected is the operator in the west half of 14, and
13 there's a stipulated penalty and settlement with that
14 individual?

15 A. Yes, sir.

16 MR. KELLAHIN: That concludes my examination of
17 Mrs. Townsend, Mr. Examiner.

18 Excluding the geologic displays, we would move
19 the introduction of her exhibits. They are in this package
20 marked Exhibits 1, 2 and 7.

21 EXAMINER ASHLEY: Exhibits 1, 2 and 7 will be
22 admitted as evidence.

23 EXAMINATION

24 BY EXAMINER ASHLEY:

25 Q. Ms. Townsend, you said you did -- you had the

1 penalty calculated?

2 A. No, I don't have the penalty calculated. I only
3 have the bottomhole footages calculated.

4 Q. Okay.

5 MR. KELLAHIN: Mr. Examiner, this is similar to a
6 stipulated penalty that Mr. Arrington had in one of his
7 cases. It's Order Number R-11,403.

8 And with your permission I will follow this
9 format, do the calculation of penalty and submit you a
10 draft order.

11 EXAMINER ASHLEY: Okay.

12 Q. (By Examiner Ashley) And this well has already
13 been drilled?

14 A. Yes.

15 Q. You drilled to the Strawn and then you deepened
16 to the Morrow?

17 A. Yes.

18 Q. Has the acreage already been consolidated for the
19 320-acre unit?

20 A. Yes.

21 EXAMINER ASHLEY: I have nothing further. Thank
22 you.

23 THE WITNESS: Thank you.

24 MR. KELLAHIN: Mr. Examiner, our next witness is
25 Robert Hefner.

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. Mr. Hefner --

7 A. Good morning.

8 Q. -- for the record, sir, please state your name
9 and occupation.

10 A. I'm Robert Hefner, and I'm a geologist for
11 Chesapeake Operating, Inc., in Oklahoma City.

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

14 A. I have.

15 Q. And pursuant to your employment as a geologist by
16 Chesapeake, are you familiar with the technical facts and
17 circumstances around this well?

18 A. Yes, I am.

19 MR. KELLAHIN: We tender Mr. Hefner as an expert
20 petroleum geologist.

21 EXAMINER ASHLEY: Mr. Hefner is so qualified.

22 Q. (By Mr. Kellahin) Mr. Hefner, if you'll take
23 Mrs. Townsend's foldout locator plat -- it's the one that's
24 color-coded for the wells, shows the spacing unit -- there
25 are two wells I want to identify on that plat, and then I

1 want to direct your attention to the large color copy two-
2 well cross-section that is also in the exhibit package. So
3 if you'll take a moment and unfold your cross-section in
4 addition to your locator map, then I can ask you my
5 questions.

6 A. Okay.

7 Q. On the locator map in the east half of 15,
8 looking at the northeast quarter, we've already identified
9 the Boyce 3-15 well, which is the subject of the hearing.
10 I want you to find for me and show the Examiner where we
11 have the Chesapeake Boyce 1-15.

12 A. The Chesapeake Boyce is in the northeast-
13 northeast of Section 15 and is completed in the North Shoe
14 Bar-Atoka field.

15 Q. That is an Atoka gas well at that location?

16 A. That's right.

17 Q. All right. Let's turn now to the two-well cross-
18 section.

19 A. This is a cross-section showing the relationship
20 between the Boyce Number 1 and the Boyce Number 3.

21 Q. All right. Before we draw that relationship,
22 let's talk to the Examiner about the circumstances for the
23 Boyce 3-15. It's located, it's drilled, and you're
24 drilling down, and you get to the Strawn. This was
25 permitted as a Strawn oil well.

1 Describe for us the sequence of activity that
2 resulted in the well being drilled through the Morrow.

3 A. On all of our Strawn prospects that we drill, the
4 normal operating procedures are that once we get a
5 confirmation on the Atoka shale top, that we drill 150 feet
6 for rathole and then log. And in this particular case, had
7 some mudloggers on this well that failed to call the Atoka
8 shale top. And we continued drilling, looking for that
9 top, to call a TD, and next thing that I knew, that we got
10 into some limestone, which typically indicates that we've
11 gotten into the Morrow formation, at which time, then, we
12 called a TD and logged the well.

13 Q. After logging the well, did you see an
14 opportunity to produce this well as originally permitted,
15 being a Strawn oil well?

16 A. No.

17 Q. All right. In examining the opportunity, then,
18 to complete and produce this well, the Boyce 3-15, where do
19 you as a geologist see that opportunity?

20 A. There is a sand down in the Morrow formation
21 that, while we were drilling, gave us some mud gas shows,
22 and that would be where we would attempt completion.

23 Q. How do we find that on this display?

24 A. On the display, that particular sand would be --
25 It's highlighted in yellow at about 11,770.

1 Q. Okay. Then there are some codes and some
2 different color sequences. Show us where we would separate
3 the base of the Atoka from the top of the Morrow.

4 A. The base of the Atoka in this area typically is
5 after you get through what locally is referred to as the
6 Brunson member of the Atoka, which is usually at the base
7 of the Atoka section, and that's highlighted by that light-
8 green color, and you'll see then a brown line that then
9 indicates going into the Morrow limestone.

10 Q. All right. So if I get below the last green
11 color bar and find that brown line, that's going to be the
12 base of the Atoka and the corresponding top of the Morrow?

13 A. That's correct.

14 Q. So in this wellbore for this case, you are
15 seeking to produce below the brown line?

16 A. That's correct.

17 Q. Have you sent this cross-section to Paul Kautz,
18 the Division's District Geologist in Hobbs?

19 A. Yes, sir, I have.

20 Q. And have you asked his assistance to examine the
21 correlation and to satisfy himself that the Boyce 3-15 well
22 will be in a separate pool from what is currently being
23 produced in the Boyce 1-15?

24 A. Yes, I have.

25 Q. And what information did you receive from him as

1 to that question?

2 A. He was in concurrence with the correlations as to
3 the boundary between the Atoka and Morrow, and he also
4 concurred that what is producing from the Boyce Number 1 is
5 indeed from the North Shoe Bar-Atoka field, and that a
6 completion from that sand at 11,770 would put it into the
7 Townsend-Morrow field.

8 MR. KELLAHIN: All right, sir. As further
9 support for your presentation, Mr. Hefner, you've also
10 included in the exhibit package additional items. I'm not
11 going to ask you to review them at this point. There's the
12 drilling report, you've got some drilling prognoses, a
13 geologic prognosis, and then you have a written summary of
14 the circumstances surrounding what you've just described to
15 the Examiner.

16 At this point, Mr. Examiner, that concludes my
17 examination of Mr. Hefner. We would move the introduction
18 of his Exhibits 3 through 6.

19 EXAMINER ASHLEY: Exhibits 3 through 6 will be
20 admitted as evidence.

21 EXAMINATION

22 BY EXAMINER ASHLEY:

23 Q. Mr. Hefner, on the well-plat --

24 A. Yes, sir.

25 Q. -- diagram, the Chesapeake Boyce 1-15, is that

1 the well that's southwest of that other location, that has
2 "12470" on it, under it?

3 A. Of the 12470, yes, sir, that is it.

4 Q. Okay. Now, are the wells in there -- There's two
5 wells in 14 and a well in 23 that have some shading that
6 looks like they may be producing from the Morrow too?

7 A. Those are actually Atoka.

8 Q. Okay.

9 A. The -- kind of that lightish-brown color --

10 Q. Uh-huh.

11 A. -- so the well in 23 would be producing from the
12 Atoka. The well in the southwest producing from the Atoka,
13 that Monsanto State, and then the one in the northwest, the
14 Mayfly Number 1, would be producing from the Atoka.

15 Q. Are there any other wells close to this, besides
16 these two wells, or besides the Boyce 1-15, that are
17 producing in this same stringer?

18 A. In the Morrow?

19 Q. Yeah.

20 A. I don't believe there are any immediate offsets
21 that are producing from that interval.

22 Q. What kind of production have you had from the 1-
23 15?

24 A. We made a completion attempt from that same
25 member that's in the Boyce Number 3 that we're wanting to

1 make a completion attempt in, and the Boyce Number 1. And
2 when we made that completion attempt we also opened that,
3 as well as the Brunson member, and we got subeconomic flow
4 rates. And so we put a bridge plug in at 11,760 and then
5 perforated what's highlighted in yellow right below 11,500.
6 That is what is currently producing from the Boyce Number
7 1.

8 So those intervals in the Brunson and Morrow in
9 the Boyce Number 1 are below that bridge plug and are not
10 contributing to the production.

11 Q. Okay. Now, review for me again, when you're
12 drilling these wells, you're trying to --

13 A. Typically, when we're drilling a Strawn well, we
14 determine what total depth will be by getting a sample
15 confirmation on the Atoka shale and drilling an additional
16 hundred feet from that top, for rathole, for logging. So
17 that's typically what our TD is. And that top was felt to
18 be called correctly in the Boyce 3, which is why we ended
19 up where we were.

20 Q. How deep were you before you realized you had
21 passed up the shale marker?

22 A. Below 11,700 is when we got into the limestone.
23 What had happened is that we thought we were still in
24 Strawn clastics.

25 Typically below the Strawn, which is highlighted

1 in blue on that cross-section, you'll see some brown in the
2 Boyce 1 that was substantially thicker. At the time that
3 we were drilling the Boyce 3, we thought we were still in
4 these clastics and that we were still in the Strawn
5 formation.

6 There's a big, down to the east, fault that
7 separates those wells that are up on top of that structure,
8 more in the center of Section 15, and we thought at the
9 time, perhaps as a result of some of that faulting, that
10 the Strawn clastics had a little more accommodation room
11 and had thickened up here, and so that we were still in
12 Strawn clastics, we were still looking for that Atoka shale
13 to come in.

14 But when that limestone appeared, that signalled
15 to me that we were in Morrow and no longer in Strawn and
16 had gone beyond the Atoka. And so it wasn't until I got
17 the logs out of the hole that -- realized that they had
18 failed to call the Atoka shale properly.

19 EXAMINER ASHLEY: I have nothing further. Thank
20 you.

21 There being nothing further in this case --

22 MR. KELLAHIN: I have a notice of hearing, Mr.
23 Examiner, and present that to you. We would ask that you
24 admit Exhibit 8, which is a notice of hearing. And if
25 you'll admit Exhibit 8, then we are complete with this

1 case, Mr. Examiner.

2 EXAMINER ASHLEY: There being nothing further in
3 this case, then, Case 12,448 will be taken under
4 advisement.

5 (Thereupon, these proceedings were concluded at
6 10:56 a.m.)

7 * * *

13 I do hereby certify that the foregoing is
14 a complete record of the proceedings in
15 the Examiner hearing of Case No. 12448,
16 heard by me on 7-1-80 19.

17 Mark Ashley, Examiner
18 Of Conservation Division

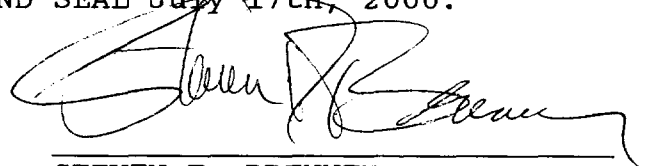
CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL July 17th, 2000.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002