

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 MARATHON OIL PERMIAN, CASE NO. 20129
LLC FOR A SPACING UNIT AND COMPULSORY
POOLING, LEA COUNTY, NEW MEXICO.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

January 10, 2019

Santa Fe, New Mexico

BEFORE: WILLIAM V. JONES, CHIEF EXAMINER
KATHLEEN MURPHY, TECHNICAL EXAMINER
LEONARD LOWE, TECHNICAL EXAMINER
DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, William V. Jones, Chief Examiner; Kathleen Murphy and Leonard Lowe, Technical Examiners; and David K. Brooks, Legal Examiner, on Thursday, January 10, 2019, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

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1 (9:09 a.m.)

2 EXAMINER JONES: Let's call 20129.

3 Call for appearances and a summary of the
4 case.

5 MS. LEES: Zoe Lees on behalf of Marathon
6 Oil Permian, LLC. The case is in the application of
7 Marathon Oil Permian, LLC for approval of a spacing unit
8 and compulsory pooling, Lea County, New Mexico, Case
9 Number 20129.

10 EXAMINER JONES: Any other appearances in
11 this case?

12 MS. LEES: And I'd like to call Travis
13 Prewett back to the stand.

14 EXAMINER JONES: Let the record show
15 Mr. Prewett has already been sworn and qualified.

16 That's okay, David?

17 EXAMINER BROOKS: That's fine.

18 MS. LEES: And before I get started, I
19 would like to point out that on the cover sheet for your
20 hearing packets it says "September 20th, 2018." That is
21 a mistake obviously. It should say "January 10th,
22 2019," and this is the only one that has that issue.

23 EXAMINER JONES: No problem.

24 MS. LEES: We can correct -- send you a
25 corrected one.

1 EXAMINER JONES: Well, you don't -- as long
2 as you send --

3 Go ahead.

4 MS. LEES: I can send you a corrected one.

5 EXAMINER MURPHY: It would help if all the
6 lawyers kept a list and, after hearings, they would send
7 me the digital copy.

8 MS. LEES: Absolutely.

9 TRAVIS H. PREWETT,
10 after having been previously sworn under oath, was
11 questioned and testified as follows:

12 DIRECT EXAMINATION

13 BY MS. LEES:

14 Q. And, Mr. Prewett, does your responsibility with
15 Marathon include the area of Lea County, New Mexico?

16 A. Yes.

17 Q. And you're familiar with the application filed
18 Case Number 20129?

19 A. Yes.

20 Q. And the status of the lands that are subject to
21 this application?

22 A. Yes.

23 Q. Can you please turn to Exhibit 1, and can you
24 identify this exhibit?

25 A. This is the amended application for Case 20129.

1 Q. And is this for the Battle 34 AV Fee 17H and
2 Battle 34 AV Fee 25H wells?

3 A. Yes.

4 Q. And can you please explain what Marathon seeks
5 under this application?

6 A. Yes. Marathon seeks to pool the uncommitted
7 mineral interests from the top of the Bone Spring
8 Formation to 9,850 feet below the surface of the
9 underlying spacing unit covering the east half-east half
10 of Section 34 and Township 21 South, Range 33 East, Lea
11 County, New Mexico.

12 Q. And this is an amended application. Can you
13 please explain the change from the prior application
14 that was initially filed?

15 A. Yes. There is a new naming protocol, and it
16 added the 25H well and added the depth severance.

17 Q. And did you send out proposal letters and AFEs
18 for all the given amendments of this application?

19 A. Yes, on December 21st, 2018.

20 Q. And we'll discuss the proposals and letters
21 later in your testimony.

22 Can you please turn to Exhibit 2 and
23 identify what this exhibit is for the hearing examiners?

24 A. Yes. This is the C-102 plat.

25 Q. And for which well is the C-102 plat that

1 **you're looking at?**

2 A. Oh, excuse me. This is the 17H C-102 plat.

3 **Q. And can you turn to the next page of the**
4 **exhibit and identify that?**

5 A. This is the 25H C-102 plat.

6 **Q. Okay. And has the Division identified a pool**
7 **and pool code for these wells?**

8 A. Yes. Both wells have the same pool and pool
9 code being WC-025 G-06 S213326D, Bone Spring, with a
10 pool code of 97929.

11 **Q. And is this pool governed by a specific order?**

12 A. No.

13 **Q. And will the completed intervals for the 17H**
14 **well comply with the setback requirement for this pool?**

15 A. Yes.

16 **Q. Will the completed intervals for the 25H well**
17 **comply with the setback requirements for this pool?**

18 A. No. The 25H will be unorthodox, and Marathon
19 has applied separately for an administrative approval of
20 the unorthodox location.

21 **Q. Can you please turn to what has been marked as**
22 **Exhibit 3, and can you identify and explain this exhibit**
23 **for the hearing examiners?**

24 A. Yes. This is the lease tract map for the 17
25 and the 25H being the east half-east half of Section 34.

1 Q. And if you turn -- please turn to Exhibit 4.

2 And does Exhibit 4 list the parties you are seeking to
3 pool?

4 A. It does.

5 Q. And what type of interests do you seek to pool?

6 A. All uncommitted mineral interests in the Bone
7 Spring underlying this spacing unit from -- from the top
8 of the Bone Spring down to the 9,850 feet, bottom --
9 base of the Avalon.

10 Q. Did you notify all mineral interests underlying
11 the spacing unit at issue in this case whether or not
12 they are interests of the depths the well is producing?

13 A. Yes.

14 Q. Can you summarize for the examiners the other
15 efforts Marathon has made to obtain voluntary pooling
16 interests?

17 A. Yes. We -- we used the last known addresses
18 that we've obtained from our title research, and for the
19 mailings that have been returned to us, we use different
20 online programs like LexisNexis and Accurint. And we
21 update those addresses. And we've used emails and
22 phone-call conversations and correspondence. Yes.

23 Q. In your opinion, has Marathon made a good-faith
24 effort to obtain voluntary joinder in the well?

25 A. Yes.

1 **Q. And can you please identify and explain this**
2 **exhibit for the hearing examiners?**

3 A. Yes. This is a diagram of the different
4 formations that's depicting the depth severances. And
5 it also has language from the leases that show at least
6 part of Marathon's interest that was created in the
7 spacing unit.

8 **Q. Does this language on the right-hand side of**
9 **the exhibit explain the depth severances located within**
10 **this acreage?**

11 A. Yes.

12 **Q. And can you please explain the depth severance,**
13 **what that language says?**

14 A. Right. There's -- there's three different
15 languages here, and the top one is for 100 feet below
16 the deepest depth drilled in each proration unit, so
17 that's different than what we've been seeing in the past
18 within the lease. So this is 100 feet below the deepest
19 well drilled in that unit. There is also one that's at
20 100 feet below the stratigraphic equivalent of the
21 deepest depth capable of producing in paying quantities
22 in each well which is included within the boundaries of
23 a producing porosity. Another one says, "100 feet below
24 the base of the deepest producing formulations within
25 the producing proration units."

1 Q. And when you designated the group's ownership,
2 you looked at title, of course, that had prepared for
3 the acreage, correct?

4 A. Yes.

5 Q. And there were five different groups of owners
6 based on the title records that you reviewed?

7 A. That's correct.

8 Q. At issue in this application are the Bone
9 Spring depths to the top of the Bone Spring, which is
10 approximately 9,850 feet subsurface, correct?

11 A. Yes.

12 Q. As I asked you earlier, you sent out a
13 well-proposal letter on December 21st, 2018, correct?

14 A. Yes.

15 Q. Did you send the working interest owners a well
16 proposal for these wells?

17 A. I did.

18 Q. Does the well-proposal letter identify the
19 first and last take point and approximately the TVD for
20 these wells?

21 A. Yes.

22 Q. And did the well-proposal letter include an AFE
23 for these wells?

24 A. Yes.

25 Q. Did Marathon provide the cost for drilling the

1 wells and completion costs to the parties it seeks to
2 pool?

3 A. Yes.

4 Q. Can you please turn to Exhibit 6 and identify
5 this exhibit for the hearing examiners?

6 A. Yes. This is the AFE.

7 Q. And can you please identify what the costs are
8 for these wells, for drilling, completing and equipping
9 the wells?

10 A. Yes. This is for \$7,254,968.

11 Q. And that was for the 17H, correct?

12 A. That is correct. That's the 17H.

13 Q. And that's the first AFE on this exhibit?

14 A. Yes.

15 Q. And if you turn to the second AFE, is that AFE
16 for the 25H?

17 A. Yes, it is.

18 Q. And what is the cost for drilling, completing
19 and equipping the 25H well?

20 A. It's the same, but that is \$7,254,968.

21 Q. And are those costs in line with the costs of
22 other horizontal wells drilled to this length and this
23 depth in this area of New Mexico?

24 A. Yes.

25 Q. And who should be appointed operator of these

1 wells?

2 A. Marathon Oil Permian, LLC.

3 Q. Do you have a recommendation for the amounts
4 that Marathon should be paid for supervision and
5 administrative expenses?

6 A. Yes, that \$7,000 per month be allowed for a
7 drilling well and \$700 per month be allowed for a
8 producing well.

9 Q. And are these amounts equivalent to those
10 normally charged by Marathon and other operators in this
11 area for horizontal wells of this length and depth?

12 A. Yes.

13 Q. Do you request that these rates be adjusted
14 periodically as provided by the COPAS accounting
15 procedure?

16 A. Yes.

17 Q. Does Marathon request the maximum cost plus 200
18 percent risk if any pooled working interest owner fails
19 to pay its share of the cost for drilling, completing
20 and equipping the well?

21 A. Yes.

22 Q. Were the parties you are seeking to pool
23 notified of this hearing?

24 A. They were.

25 Q. Can you please turn to Exhibit 7 and just

1 **identify this exhibit for the hearing examiners?**

2 A. This is the Affidavit of Notice that was
3 prepared by Marathon's counsel.

4 MS. LEES: And as I stated earlier in Case
5 Number 20128, we didn't realize yesterday that the
6 overriding royalty interests were not pooled for this
7 application, so we'll request a continuation for notice
8 purposes only to the February 21st docket.

9 EXAMINER JONES: Okay.

10 Q. **(BY MS. LEES) Does Marathon request that it be**
11 **allowed a period of one year between when these wells**
12 **are drilled and when the first well is completed under**
13 **the order?**

14 A. Yes.

15 Q. **Were Exhibits 1 through 7 prepared by you,**
16 **under your supervision or compiled from company business**
17 **records?**

18 A. Yes.

19 Q. **And is the granting of this application in the**
20 **interest of conservation and the prevention of waste?**

21 A. Yes.

22 MS. LEES: I'd like to move to have
23 Exhibits 1 through 7 admitted into the record.

24 EXAMINER JONES: Exhibits 1 through 7 are
25 admitted into the record.

1 (Marathon Oil Permian, LLC Exhibit Numbers
2 1 through 7 are offered and admitted into
3 evidence.)

4 MS. LEES: I tender the witness.

5 EXAMINER JONES: Mr. Brooks?

6 CROSS-EXAMINATION

7 BY EXAMINER BROOKS:

8 Q. Are all the leases -- you've got a lot of
9 leases in this case, right?

10 A. Yes, sir.

11 Q. Do all of them cover the entire proposed pooled
12 unit, or are there leases that cover specific tracts?

13 A. Right. So it's common ownership in the pooled
14 unit being -- being the top of the Bone Spring to 9,850
15 feet.

16 Q. So there are no -- there is no difference
17 between ownership if you're moving from one part of the
18 tract to another?

19 A. Right.

20 Q. You have no separate tracts being pooled --

21 A. That's right.

22 Q. -- in this case?

23 A. Yes, that's correct.

24 Q. It's the same as the last one?

25 A. It is. There is actually -- all these leases

1 cover like the entire east half. So the units are east
2 half-east half and the west half-east half.

3 Q. Well, is that -- does that reflect -- the
4 ownership is all an undivided interest --

5 A. Yes.

6 Q. -- or is it relying on it being a community
7 lease -- being community leases?

8 A. Undivided interest.

9 Q. Okay. So the tract is actually owned -- the
10 entire east half is actually owned in undivided
11 interests? There are no separate tract ownership?

12 A. Right. There are no separate tracts.

13 Q. Okay. So your depth-severance issues are
14 different only because the depth-severance language on
15 the leases is different?

16 A. Yes, that is correct.

17 Q. Now, what did you say about the depth severance
18 in this lease?

19 A. So the depth severance here is below the
20 existing 1H well, which is why we are pooling down to
21 the 9,850 feet or 40 feet. Sorry.

22 MS. LEES: 50.

23 THE WITNESS: 50 feet. Excuse me.

24 So yeah. It's -- we ensured we had common
25 ownership in our pool.

1 Q. (BY EXAMINER BROOKS) It's 9,840 feet. That's
2 300 feet below the -- below the total vertical depth
3 drilled.

4 A. It's 9,850 feet.

5 Q. 9,850 feet.

6 A. Yes, sir.

7 Q. Okay. That's what you're requesting, is down
8 to 9,850 feet?

9 A. Yes, sir.

10 Q. And you have a depth severance at 9,540?

11 A. No, sir. The depth severance is below the 1H,
12 which is -- which is at 11,116 and 6 inches -- feet --
13 excuse me. Right. So if you look -- on Exhibit 5 --
14 let me be a little more clear.

15 Q. Yes. Exhibit 5 is confusing to me because I
16 first thought it was a tract map, and it's not a tract
17 map.

18 A. Right. This is depicting the formations and
19 the depth severance and also the frac barrier. But also
20 in bold, you'll see the 25H and the 17H listed and the
21 depths those are being TVD'd at, which is 9,540 feet.
22 And below that is your -- in red is your frac barrier.
23 So what we're pooling is from the top of the Bone Spring
24 down to that frac barrier, which is the base of the
25 Avalon. And then we included the depth severance just

1 so that you can see why we had -- why we had to pool
2 down to that frac barrier, because there is a depth
3 severance down there in the Bone Spring.

4 Q. Yeah. For future planning of your exhibits, I
5 would recommend that in preparing exhibits to show
6 depths only, that you don't put the east half and the
7 west half on the same exhibit because that confuses the
8 depth whether it's a vertical or a horizontal map.

9 A. Yes, sir.

10 Q. But that's just -- I understand now. This is a
11 vertical map. The horizontal -- the apparent horizontal
12 dimension of it is irrelevant to this case.

13 A. Yes, sir.

14 Q. Okay. So your only depth severance from the
15 title occurs down at 11,000-something?

16 A. Yes, sir.

17 Q. And that would be down in the Wolfcamp?

18 A. No. The 11,000 will still be in the Bone
19 Spring.

20 Q. Okay. It's still in the Bone Spring. Okay.

21 Now, you're relying on the frac barrier,
22 then, to establish the depth severance at 9,850 feet; is
23 that right?

24 A. Yes, sir.

25 Q. And why is it 10 feet below the frac barrier?

1 **That's a question for the geologist?**

2 A. Yeah. And it's possible that that was -- that
3 should have been 9,850 feet, and it says 9,840 feet on
4 this slide.

5 Q. So what you're requesting us to do is to pool
6 down to 9,850 feet, Bone Spring --

7 A. Yes, sir.

8 Q. -- from the top of the Bone Spring to the
9 stratigraphic -- is that a stratigraphic equivalent, or
10 is it a firm fixed depth?

11 A. The frac barrier? The 9,850 feet?

12 Q. Yes -- well, no. The frac barrier is, of
13 course, going to be a stratigraphic equivalent. But
14 you're relying on the frac barrier to justify the depth
15 severance, right?

16 A. Yes, sir.

17 MS. LEES: Our geologist, Matt Baker, can
18 testify more to that.

19 EXAMINER BROOKS: Well, I know. I'm not
20 going to ask the landman to say why -- why that
21 particular location is a correct barrier.

22 CROSS-EXAMINATION

23 BY EXAMINER JONES:

24 Q. This schematic [sic] on Exhibit 5, just so I
25 know, is this intended to be the whole section?

1 A. Right. The intention of this is so that you
2 can see -- you get a depth and horizontal pretty much.
3 So like if you were to look at a bird's eye view, you
4 could see the 25H being -- that would be the section
5 line -- or the quarter-section line going down the
6 middle here. And you could see the 25H would be drilled
7 at this point (indicating). The 17H would be drilled at
8 this point (indicating). But -- right. But then it
9 also provides a depth, so you can kind of see in both
10 ways. In the future, I assure you that I will not -- I
11 will not attempt to combine it all into one.

12 EXAMINER BROOKS: That's what I recommend
13 because it's very difficult to get a three-dimensional
14 diagram on a two-dimensional surface.

15 **Q. (BY EXAMINER JONES) The last case that we**
16 **heard, is that depicted on here at all? In other**
17 **words -- because you've got a depth severance here, and**
18 **I thought talking about the same sections.**

19 A. It is -- so the last -- the last one we did was
20 the 15H, which is on the west half of the east half.

21 **Q. West half-east half?**

22 A. Yes, sir.

23 And so you actually see that 15H on here.

24 **Q. Okay. So this is just the east half of that**
25 **section?**

1 A. Yes, sir, the east half-east half of that -- of
2 that half section.

3 **Q. Yes. This is the east half-east half?**

4 A. Yes, sir.

5 **Q. And on the left is the west half-east half?**

6 A. And the difference was the west half of the
7 east half has a different depth. It's down there below
8 the Bone Spring in the Wolfcamp, and, you know, so in
9 the east half-east half, different depth severance.

10 **Q. And the leases that establish those depth**
11 **severances, they're not showing the outline of those**
12 **leases here anywhere, are they, or did you show those on**
13 **another exhibit? In other words, the Roy Barton lease**
14 **and the other --**

15 A. Right. So we're going to see -- on our next
16 presentation, we have the 20H down here (indicating),
17 and that's going to bring up some more depth severances
18 that we're going to explore. And it's going to be a
19 little more complicated. But in this particular --

20 **Q. It'll show those leases?**

21 A. This is the only depth severance that we need
22 to be concerned with for this particular unit because
23 that just shows you that -- it gives you an explanation
24 of why we're pooling down to that frac barrier.

25 **Q. But this whole unit, east half-east half, is**

1 **one tract?**

2 A. Yes.

3 **Q. And the depth severance somewhere in there**
4 **influences that tract. Okay.**

5 **RE CROSS EXAMINATION**

6 BY EXAMINER BROOKS:

7 **Q. All the leases cover the entire tract?**

8 A. Yes, sir.

9 EXAMINER JONES: Okay. That's the answer
10 right there. I don't need to see the lease if you say
11 that.

12 Okay. Thanks. I think we're fine now. I
13 guess you have worked with the geologist about --
14 anyway, let's just talk to the geologist.

15 Thank you very much, Mr. Prewett.

16 THE WITNESS: Thank you.

17 MS. LEES: I'd like to call Matt Baker to
18 the stand.

19 EXAMINER JONES: Let the record show he's
20 been sworn and qualified.

21 MATT BAKER,
22 after having been previously sworn under oath, was
23 questioned and testified as follows:

24

25

1 DIRECT EXAMINATION

2 BY MS. LEES:

3 Q. And are you familiar, Mr. Baker, with the
4 drilling plans for the 17H and the 25H wells?

5 A. Yes.

6 Q. And have you conducted a geologic study for the
7 area embracing the proposed spacing unit for these
8 wells?

9 A. Yes.

10 Q. And what is the targeted intervals for these
11 wells?

12 A. This is the Avalon Shale.

13 Q. And can you please turn to what has been marked
14 as Exhibit 8, and can you identify this document and
15 explain it to the hearing examiners?

16 A. This is a structure map of the top of the
17 Avalon Shale. Marathon's acreage is shown in yellow.
18 Our proposed well locations are the red sticks on the
19 maps. These two wells are number one and number three.
20 The structure map at the top of the Avalon Shale shows
21 that the formation is mostly dipping to the south along
22 our planned wellbore trajectories.

23 Q. Is there anything structurally that would
24 interfere with the contribution of acreage to these
25 proposed wells?

1 A. No.

2 Q. Did you prepare a cross section of logs to
3 determine the relative thickness and porosity of the
4 Bone Spring Formation in this area?

5 A. Yes.

6 Q. Is that cross section contained in Exhibit 9?

7 A. Yes.

8 Q. And are the wells that you have selected to
9 include in this cross section representative of the Bone
10 Spring Formation in the area?

11 A. Yes.

12 Q. Can you please walk through Exhibit 9 and
13 explain it to the hearing examiners?

14 A. Yes. These are the three wells that are
15 circled on the structure map moving from A to A prime or
16 west to east, once again across the unit. The top of
17 this cross section is the top of the Bone Spring going
18 down all way to the base of the 1st Bone Spring Sand.

19 Looking at our producing zone is the Avalon
20 Shale here or the Upper Avalon Shale. The cross section
21 shows here that thicknesses should stay relatively
22 confident along our planned wellbore trajectories. It
23 does thicken a little bit moving from west to east. And
24 noted here by the blue are the multiple frac barriers
25 below our proposed target formation.

1 Q. And does this exhibit show that the acreage is
2 relatively uniform across the formation?

3 A. Yes.

4 Q. Can you please turn to what's been marked as
5 Exhibit 10, and can you identify this document and
6 explain it to the hearing examiners?

7 A. Yes. This is an isochore map of the gross
8 Avalon Shale thickness across our unit. We can see here
9 that the thickness -- the gross formation thickness does
10 increase moving from west to east, but it should remain
11 relatively constant thickness along the wellbore path.

12 Q. I'd like to discuss the depth severance for
13 this well. Can you please turn to Exhibit 11, and can
14 you identify this document and explain it to the hearing
15 examiners?

16 A. Yes. This is an exhibit I put together from
17 the Witherspoon vertical well here showing basically the
18 same interval as the cross section from the Bone Spring
19 down to the 1st Bone Spring. Our drilling target zone
20 is in the Avalon Shale indicated by the red box here, as
21 well as our frac barriers below us indicated by the blue
22 boxes.

23 Now, that 9,850, which is the base of the
24 requested pool, is essentially the base of the Avalon
25 Shale in this area, and below that is large blocky

1 limestones before you get to the 1st Bone Spring Sand.

2 On the right, I have kind of a blown-up
3 image of the Avalon Shale that we are targeting. It's a
4 little avocado-shaped diagram here kind of indicating
5 somewhat of a frac model. In blue is our, basically,
6 maximum hydraulic fracture height. And then in the
7 orange-dashed lines is the propped SRV of the same frac,
8 which essentially defines the producing zone within
9 that -- within that frac.

10 Looking at the shape of this, we know that
11 fractures prefer to grow in the upward direction. And
12 in this instance, our induced hydraulic fractures will
13 not go below the Avalon Shale or the base of the
14 requested pool.

15 **Q. And just to clarify, why did you choose the**
16 **Witherspoon well for this --**

17 A. This well was -- vertical well was chosen to
18 represent the full section. It's the closest vertical
19 well to our surface-hole locations that covers the
20 entire section from the top of the Bone Spring all the
21 way to the Wolfcamp D.

22 **Q. Because of the frac barriers identified in this**
23 **exhibit, do you anticipate that these wells will produce**
24 **hydrocarbons from any other formations?**

25 A. No.

1 Q. And what is the preferred well organization for
2 this well?

3 A. Our SHmax in this area, once again, is
4 east-west, so north to south will be the preferred
5 orientation.

6 Q. And are there any impediments to this
7 horizontal well?

8 A. No.

9 Q. And do you anticipate that each quarter-quarter
10 section will be productive in the Bone Spring Formation?

11 A. Yes.

12 Q. Do you anticipate that each quarter-quarter
13 section will contribute approximately equally to the
14 production from this well?

15 A. Yes.

16 Q. In your opinion, would the granting of
17 Marathon's application be in the best interest of
18 conservation, the prevention of waste and the protection
19 of correlative rights?

20 A. Yes.

21 Q. Were Exhibits 8 through 11 prepared by you or
22 compiled under your direction and supervision?

23 A. Yes.

24 MS. LEES: I'd like to move for the
25 admission of Exhibits 8 through 11 into the record.

1 EXAMINER JONES: Exhibits 8 through 11 are
2 admitted.

3 (Marathon Oil Permian, LLC Exhibit Numbers
4 8 through 11 are offered and admitted into
5 evidence.)

6 MS. LEES: And I tender this witness.

7 CROSS-EXAMINATION

8 BY EXAMINER JONES:

9 Q. Avalon Sand is --

10 A. Shale.

11 Q. Okay. You're targeting a shale? Are you
12 calling it a shale?

13 A. Uh-huh.

14 Q. Okay. But it's in the pink in Exhibit 11?

15 A. Yeah. That's kind of the planned drilling
16 target zone within the Avalon Shale.

17 Q. Okay. So it's got some porosity to it.

18 Otherwise --

19 A. Uh-huh.

20 Q. -- you wouldn't be targeting it?

21 A. Yes, and higher TOC, as shown on the logs.

22 Q. Okay. Your mud log on the Witherspoon, was
23 that -- did that show you any potential drilling target,
24 or are you just basing it on the less shaley zone of the
25 Upper Avalon Shale? In other words, did your mud log

1 **help you at all on the Witherspoon?**

2 A. Yes. Yeah. Essentially, you know, there's
3 been Avalon production by other operators to the south
4 of us kind of targeting the same shaley or more
5 organic-rich section, so that's kind of what we based
6 these targets off of.

7 Q. **Is there any CO2 production on this? We've**
8 **heard of some CO2 production from the Avalon.**

9 A. That, I do not know at this time.

10 Q. **That's okay.**

11 Your frac model was supplied by -- this is
12 a -- this is an unmatched -- just a predictive frac
13 model; is that correct? You don't know the model that
14 was used?

15 A. I do not know. No.

16 Q. **Do you know the service company?**

17 A. No. This is kind of -- just kind of a cartoon
18 best-case-scenario drawing for these particular wells.
19 We don't have a ton of Avalon data at this time to have
20 conducted like a full-scale model.

21 Q. **Okay. That's fine. It's just that -- did you**
22 **draw this, or did your engineer help you with this?**

23 A. Yes. It was kind of a team effort. Yes.

24 Q. **Okay. Sounds good.**

25 But you're convinced that this 9,850 begins

1 **an area of higher-stress rock; is that correct?**

2 A. It's -- I don't know if I would use the term
3 "higher stress," but it's -- I can't --

4 **Q. It's a different --**

5 A. Yes. It's a blocky limestone, so it's much
6 more resistant.

7 **Q. Oh, it's a limestone?**

8 A. Yes. It's a very thick blocky limestone. I
9 mean, the immediate frac barrier is approximately, you
10 know, slightly less than 100 feet, but just below that
11 is a large, 200-plus feet of limestone that will serve
12 as a significant frac barrier.

13 **Q. Okay. That's -- but I think we already had**
14 **testimony that everybody in the whole Bone Spring has**
15 **been notified here.**

16 EXAMINER JONES: Did we have that,
17 Mr. Brooks?

18 EXAMINER BROOKS: I don't remember if we
19 had that. I think they said there was no -- well, no.

20 EXAMINER JONES: It's one --

21 EXAMINER BROOKS: I don't remember if we
22 had that testimony.

23 EXAMINER JONES: Mr. Prewett, can you
24 answer that question.

25 MR. PREWETT: Right. Everybody has been

1 notified. We do need to send out the notifications for
2 the overriding royalty interests, though.

3 EXAMINER BROOKS: Now, when you say
4 everybody's been notified, you're saying that working
5 interest owners who own the working interest below the
6 frac barrier at 11,000 whatever it is --

7 EXAMINER JONES: No. 9,850.

8 MR. PREWETT: Yeah. Below the frac
9 barrier. Everyone --

10 EXAMINER BROOKS: Well, I said below the
11 frac barrier. I mean below the title depth severance --
12 the people who own the working interest below the title
13 depth severance.

14 MR. PREWETT: They would have been notified
15 of this hearing. Everybody was notified of this hearing
16 as far as -- let's see.

17 EXAMINER BROOKS: Specifically, though, was
18 notice sent to the people who own working interests
19 below -- I've got to go back to the exhibits, Exhibit 5.

20 MR. PREWETT: 11,116 feet.

21 EXAMINER BROOKS: Yeah. Were they given
22 notice of this application and of this hearing.

23 MR. PREWETT: Yes.

24 EXAMINER JONES: Okay. Thank you.

25 Any other questions from the panel?

1 Okay. Thank you very much.

2 MS. LEES: I'd like to continue this case
3 for notice purposes.

4 EXAMINER JONES: You got it. We'll
5 continue to February 21st.

6 And one more case?

7 MS. LEES: Yes, 20H, 20131.

8 (Case Number 20129 concludes, 9:40 a.m.)

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1 STATE OF NEW MEXICO
2 COUNTY OF BERNALILLO

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4 CERTIFICATE OF COURT REPORTER

5 I, MARY C. HANKINS, Certified Court
6 Reporter, New Mexico Certified Court Reporter No. 20,
7 and Registered Professional Reporter, do hereby certify
8 that I reported the foregoing proceedings in
9 stenographic shorthand and that the foregoing pages are
10 a true and correct transcript of those proceedings that
11 were reduced to printed form by me to the best of my
12 ability.

13 I FURTHER CERTIFY that the Reporter's
14 Record of the proceedings truly and accurately reflects
15 the exhibits, if any, offered by the respective parties.

16 I FURTHER CERTIFY that I am neither
17 employed by nor related to any of the parties or
18 attorneys in this case and that I have no interest in
19 the final disposition of this case.

20 DATED THIS 31st day of January 2019.

21

22

23 MARY C. HANKINS, CCR, RPR
24 Certified Court Reporter
25 New Mexico CCR No. 20
Date of CCR Expiration: 12/31/2019
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