

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

4 IN THE MATTER OF THE HEARING CALLED
5 BY THE OIL CONSERVATION DIVISION FOR
6 THE PURPOSE OF CONSIDERING:

7 APPLICATION OF OGX OPERATING, LLC CASE NO. 15597
8 FOR A NONSTANDARD SPACING AND
9 PRORATION UNIT, COMPULSORY POOLING,
10 AND AN UNORTHODOX GAS WELL LOCATION,
11 EDDY COUNTY, NEW MEXICO.

12 APPLICATION OF OGX OPERATING, LLC CASE NO. 15603
13 FOR A NONSTANDARD SPACING AND
14 PRORATION UNIT, COMPULSORY POOLING,
15 AND AN UNORTHODOX GAS WELL LOCATION,
16 EDDY COUNTY, NEW MEXICO.

17 REPORTER'S TRANSCRIPT OF PROCEEDINGS

18 EXAMINER HEARING

19 December 1, 2016

20 Santa Fe, New Mexico

21 BEFORE: WILLIAM V. JONES, CHIEF EXAMINER
22 GABRIEL WADE, LEGAL EXAMINER

23 This matter came on for hearing before the
24 New Mexico Oil Conservation Division, William V. Jones,
25 Chief Examiner, and Gabriel Wade, Legal Examiner, on
26 Thursday, December 1, 2016, at the New Mexico Energy,
27 Minerals and Natural Resources Department, Wendell Chino
28 Building, 1220 South St. Francis Drive, Porter Hall,
29 Room 102, Santa Fe, New Mexico.

30 REPORTED BY: Mary C. Hankins, CCR, RPR
31 New Mexico CCR #20
32 Paul Baca Professional Court Reporters
33 500 4th Street, Northwest, Suite 105
34 Albuquerque, New Mexico 87102
35 (505) 843-9241

36

1 APPEARANCES
 2 FOR APPLICANT OF OGX OPERATING, LLC:
 3 JAMES G. BRUCE, ESQ.
 4 Post Office Box 1056
 5 Santa Fe, New Mexico 87504
 6 (505) 982-2043
 7 jamesbruc@aol.com
 8
 9

10	INDEX	
11		PAGE
12	Case Numbers 15597 and 15603 Called	4
13	OGX Operating, LLC's Case-in-Chief:	
14	Witnesses:	
15	Garland H. Lang III:	
16	Direct Examination by Mr. Bruce	5,11
17	Cross-Examination by Examiner Jones	9,15
18	William Hardie:	
19	Direct Examination by Mr. Bruce	16
20	Cross-Examination by Examiner Jones	23
21	Proceedings Conclude	28
22	Certificate of Court Reporter	29
23		
24		
25		

1	EXHIBITS OFFERED AND ADMITTED	
2		PAGE
3	Case Number 15597 and Case Number 15603:	
4	OGX Operating, LLC Exhibit Numbers 1 through 6	9
5	OGX Operating, LLC Exhibit Numbers 1 through 8	15
6	OGX Operating, LLC Exhibit Letters A through G	23
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

1 (9:46 a.m.)

2 EXAMINER JONES: Then we have Case Number
3 15597, application of OGX Operating, LLC for a
4 nonstandard spacing and proration unit, compulsory
5 pooling, and an unorthodox gas well location, Eddy
6 County, New Mexico, and also Case Number 15603,
7 application of OGX Operating, LLC for a nonstandard
8 spacing and proration unit, compulsory pooling, and an
9 unorthodox gas well location, Eddy County, New Mexico.

10 Call for appearances in each one of those
11 cases.

12 MR. BRUCE: Mr. Examiner, Jim Bruce of
13 Santa Fe representing the Applicant. I have two
14 witnesses.

15 EXAMINER JONES: Any other appearances in
16 these two cases?

17 Would the witnesses please stand and be
18 sworn by the court reporter?

19 (Mr. Lang and Mr. Hardie sworn.)

20 MR. BRUCE: Mr. Examiner, I've handed you
21 separate land exhibits for each case, and we'll run
22 through them pretty quickly. And then the geology is
23 the same for both cases.

24 GARLAND H. LANG III,
25 after having been previously sworn under oath, was

1 questioned and testified as follows:

2 DIRECT EXAMINATION

3 BY MR. BRUCE:

4 Q. Would you please state your name and city of
5 residence for the record.

6 A. Garland H. Lang III, L-A-N-G, Midland, Texas.

7 Q. Who do you work for and in what capacity?

8 A. OGX Operating, LLC. I'm land manager.

9 Q. Have you previously testified before the
10 Division?

11 A. I have.

12 Q. And were your credentials as an expert
13 petroleum landman accepted as a matter of record?

14 A. They were.

15 Q. And does your area of responsibility at OGX
16 include this portion of southeast New Mexico?

17 A. It does.

18 Q. And are you familiar with the land matters in
19 both applications?

20 A. I am.

21 MR. BRUCE: Mr. Examiner, I tender
22 Mr. Lang as an expert petroleum landman.

23 EXAMINER JONES: He is so qualified.

24 Q. (BY MR. BRUCE) Mr. Lang, just looking at Case
25 15597, could you identify Exhibit 1 for the Examiner?

1 A. Exhibit 1 is a Midland Map Company plat showing
2 the producing area for the well that we're producing,
3 the Littlefield 34 Fed Com #1H. It embraces the west
4 half of Section 27 and the northwest quarter of Section
5 34 of Township 26 South, Range 29 East in Eddy County.

6 Q. And this is a Wolfcamp gas well?

7 A. Correct.

8 Q. What are the -- could you name the two parties
9 being pooled in this application?

10 A. Occidental Permian, LP and Khody Land &
11 Minerals Company.

12 Q. Let's just go to Exhibit 2 and run through that
13 quickly. What is contained in Exhibit 2?

14 A. It was a proposal -- well proposal to each
15 company describing the surface location and bottom-hole
16 location of the Littlefield Fed Com #1H telling them
17 what they owned in the leasehold and what their working
18 interest would be in the well.

19 Q. Is this federal leasehold in this well unit?

20 A. It is. It's all federal leasehold.

21 Q. So these are uncommitted leasehold working
22 interest owners?

23 A. Correct.

24 Q. Okay. And they did -- you included the green
25 card for the company, so they did receive your well

1 proposal?

2 A. They did.

3 Q. And have you had any additional contacts with
4 them other than the proposal letter?

5 A. Yes. They've -- I've sent them joint operating
6 agreements covering this well and the next well we're
7 going to discuss and have not heard back from them after
8 that.

9 Q. And Exhibit -- Exhibit 2 is your letter to
10 Occidental, and Exhibit 3 is a letter to Khody Land; is
11 that correct?

12 A. Correct. Yes.

13 Q. And does the well proposal contain the C-102
14 for the well?

15 A. Yes.

16 Q. And do they also contain the AFE for the well?

17 A. Correct. It does.

18 Q. Could you just briefly discuss the cost of the
19 proposed 1H well?

20 A. The proposed drilling and completed cost is --
21 let's see -- 6,358,855.

22 Q. And is this cost reasonable and in line with
23 the cost of the other Wolfcamp wells drilled in this
24 area of New Mexico?

25 A. It is for this length lateral.

1 Q. For this length.

2 And do you request that any uncommitted
3 interest owner be assessed a cost plus 200 percent risk
4 penalty charge?

5 A. Yes, we do.

6 Q. And what overhead rates do you request?

7 A. \$7,500 for the drilling rate and 750 a month
8 for the overhead rate.

9 Q. And are these rates reasonable and in line with
10 the amounts that are charged by other operators for
11 wells of this depth?

12 A. They are.

13 Q. And do you -- in your opinion, have you made a
14 good-faith effort to obtain the voluntary joinder of the
15 uncommitted parties in this well?

16 A. I have.

17 MR. BRUCE: Mr. Examiner, Exhibit 4 is
18 simply my Affidavit of Notice regarding the hearing, and
19 both companies did receive actual notice.

20 Q. (BY MR. BRUCE) And, Mr. Lang, does Exhibit 5
21 adequately reflect the offset operators or interest
22 owners to both proposed wells?

23 A. Yes.

24 MR. BRUCE: And, Mr. Examiner, Exhibit 6 is
25 merely an Affidavit of Notice to the offsets, and they

1 did all receive actual notice of the hearing for once.

2 EXAMINER JONES: Okay.

3 Q. (BY MR. BRUCE) Mr. Lang, with respect to this
4 case, were Exhibits 1 through 6 prepared by you or
5 compiled from company business records?

6 A. They were.

7 Q. And is the granting of the application in Case
8 15597 in the interest of conservation and the prevention
9 of waste?

10 A. It is.

11 MR. BRUCE: Mr. Examiner, I'd move the
12 admission of Exhibits 1 through 6.

13 EXAMINER JONES: Exhibits 1 through 6 are
14 admitted in Case 15597.

15 MR. BRUCE: And if you have any questions
16 of Mr. Lang.

17 (OGX Operating, LLC Exhibit Numbers 1
18 through 6 are offered and admitted into
19 evidence.)

20 CROSS-EXAMINATION

21 BY EXAMINER JONES:

22 Q. Actually, it's right on the Pecos River, but
23 your surface-hole location is -- is pretty close. It's
24 on the west side of the river; is that correct?

25 A. Well, it's on the east side of the river.

1 Q. Okay.

2 A. It's 2,390 feet from the west line, and the Red
3 Bluff Reservoir runs to the west. But we're more than
4 legal distance from that, and the Feds have approved the
5 location. It's basically on -- the location's close to
6 a shallow well that we already have there, our BL
7 Littlefield #6, so part of our location is one of the
8 old well pads for that well. So it's -- and we're going
9 to drill both wells from the same well pad. These two
10 wells will be drilled from the same well pad.

11 Q. Okay. No APIs yet?

12 A. No. We haven't -- we haven't filed the APDs on
13 those two wells yet.

14 Q. Okay. Which ones do you intend to drill first?

15 A. The #1H, the one on the west side.

16 Q. Okay. Okay. Well, this is all federal land, I
17 understand.

18 A. Correct.

19 Q. Even the state land here is OGR, is that
20 correct, oil and gas reserves, the state lands that were
21 listed?

22 A. Well, there's not any state lands here. It's
23 all Fed. There are three different federal leases
24 involved in this tract.

25 Q. Okay. Our system shows some fee, but that

1 would be for everything but oil and gas. I mean, it
2 shows some state lands in the north -- portions of the
3 north side of Section 27, but it's oil and gas reserves,
4 so it's all federal --

5 MR. BRUCE: Federal minerals.

6 EXAMINER JONES: -- federal minerals.

7 I don't have any more questions.

8 EXAMINER WADE: I don't have any questions.

9 EXAMINER JONES: Thank you very much.

10 THE WITNESS: Okay.

11 MR. BRUCE: If we can run through the land
12 exhibits on 15603.

13 DIRECT EXAMINATION

14 BY MR. BRUCE:

15 Q. Mr. Lang, referring to the land exhibits for
16 Case 15603, what is Exhibit 1?

17 A. Exhibit 1 is a Midland land map showing the
18 proposed unit for the Littlefield 34 Fed Com #3H
19 comprising the east half of Section 27 and the northeast
20 quarter of Section 34 of Township 26 South, Range 29
21 East, Eddy County, New Mexico.

22 Q. There are a few more people to force pool in
23 this application; are there not?

24 A. Correct.

25 Q. Could you -- let's just go to Exhibit 2. What

1 is contained in Exhibit 2?

2 A. Exhibit 2 is a proposal to Occidental Permian,
3 LP proposing the 34 #3H, describing the surface location
4 and bottom-hole location and their interest in this
5 proposed unit, showing their working interest of 45.278,
6 and also included was an AFE for the estimated cost of
7 drilling the well and also a C-102 plat that was filed.

8 Q. And that shows that the surface location is
9 actually over in the west half of the section?

10 A. Correct. And we'll be kicking it off to the
11 southeast.

12 Q. And as in the 1H well, the first take point and
13 the last take point will be 330 feet out from the line
14 of the well unit?

15 A. Correct. Correct.

16 Q. Just very briefly as we're running through
17 these, Exhibit 3 is the notice letter to OXY-Y1 Company.
18 This has a later date, Mr. Lang, in November. But
19 OXY-Y1 Company is owned by Occidental, correct?

20 A. Correct.

21 Q. So they were aware of their interest in their
22 well?

23 A. Yes. They just covered -- they just have a
24 small interest in another federal lease, Lot 12, that is
25 down in the southeast corner of the unit.

1 Q. And Exhibits 4 through 7 contain the same
2 information but were sent to Abo Petroleum, MYCO
3 Industries, Yates Petroleum and Khody Land & Minerals?

4 A. Correct.

5 Q. And those are all of the parties you seek to
6 force pool?

7 A. Yes, it is.

8 Q. Looking at -- let's go to the last exhibit,
9 Exhibit 7. What is the cost of the proposed well?

10 A. It's estimated drilling and completion costs of
11 \$6,358,855.

12 Q. And is that cost reasonable and in line with
13 the cost of other horizontal Wolfcamp wells drilled in
14 this area of New Mexico?

15 A. It is.

16 Q. And what overhead rates do you request in this
17 case?

18 A. A drilling overhead rate of \$7,500 a month and
19 a monthly overhead operating of \$750 a month.

20 Q. And are those rates fair and reasonable?

21 A. They were.

22 Q. And do you request that those rates be adjusted
23 periodically as provided by the COPAS accounting
24 procedure?

25 A. We do.

1 Q. And do you request a cost plus 200 percent risk
2 charge be assessed against those nonconsenting interest
3 owners?

4 A. Yes.

5 Q. Do you anticipate any of the parties in this
6 well to join in the well eventually?

7 A. They might. Once they get their final notice
8 of this hearing, they might.

9 Q. And in your opinion, have you made a good-faith
10 effort to obtain a voluntary joinder?

11 A. We have.

12 MR. BRUCE: Mr. Examiner, Exhibit 8 is my
13 Affidavit of Notice. Although I sent -- I sent Yates'
14 notice to EOG Resources, and I have not received that
15 back. That's shown on the last page of the exhibit.
16 Although Yates did receive notice, I also had to send
17 notice to OXY-Y1 Company. So the case has to be
18 continued for two weeks to complete notice.

19 And the offset notification contained in
20 Case Number 15597 was for both applications, so offsets
21 did receive notice.

22 EXAMINER JONES: Okay.

23 Q. (BY MR. BRUCE) Mr. Lang, were Exhibits 1
24 through 8 prepared by you or compiled from company
25 business records?

1 A. They were.

2 Q. And in your opinion, is the granting of this
3 application in the interest of conservation and the
4 prevention of waste?

5 A. It is.

6 MR. BRUCE: Mr. Examiner, I move the
7 admission of Exhibits 1 through 8.

8 EXAMINER JONES: Exhibits 1 through 8 are
9 admitted.

10 (OGX Operating, LLC Exhibit Numbers 1
11 through 8 are offered and admitted into
12 evidence.)

13 MR. BRUCE: And I have no further questions
14 for the witness.

15 CROSS-EXAMINATION

16 BY EXAMINER JONES:

17 Q. Abo Petroleum, are they being --

18 A. Abo, MYCO and Yates Petroleum, all going into
19 EOG.

20 Q. Okay. Okay. And Khody, you say, is a
21 subsidiary of RKI?

22 A. RKI, WPX.

23 Q. Which is WPX?

24 A. Yeah. So they still operate under RKI, WPX.
25 But Khody is owned by RKI. They just haven't changed

1 the title. Khody owns quite a bit of leaseholds. So --

2 Q. Okay. And how did -- how did your company
3 obtain -- OGX has been in this area a long time, haven't
4 they --

5 A. Uh-huh.

6 Q. -- this whole general area?

7 So how did you obtain your interest in this
8 proposed -- these proposed --

9 A. We bought -- we bought a couple of assignments
10 from GP II Energy, George Mitchell, about three years
11 ago --

12 Q. Oh, yeah.

13 A. -- and acquired this acreage.

14 Q. Okay. Okay. I don't have any more questions.

15 EXAMINER WADE: I have no questions.

16 EXAMINER JONES: Thank you, Mr. Lang.

17 THE WITNESS: Thank you.

18 WILLIAM HARDIE,

19 after having been previously sworn under oath, was
20 questioned and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. BRUCE:

23 Q. Would you please state your name and city of
24 residence?

25 A. William Hardie. I live in Midland, Texas.

1 Q. Who do you work for and in what capacity?

2 A. I work for OGX Operating as an exploration
3 manager and geologist.

4 Q. Have you previously testified before the
5 Division?

6 A. I have.

7 Q. And were your credentials as an expert
8 petroleum geologist accepted as a matter of record?

9 A. They were.

10 Q. And are you familiar with the geology involved
11 in both of these cases?

12 A. I am.

13 MR. BRUCE: Mr. Examiner, I tender
14 Mr. Hardie as an expert petroleum geologist.

15 EXAMINER JONES: He is so qualified.

16 MR. BRUCE: Mr. Examiner, the first five
17 exhibits, which I've marked Exhibits A through E, I
18 think Mr. Hardie is going to go through them in a little
19 different order. And so I'll just set Mr. Hardie loose
20 and let him describe the exhibits.

21 EXAMINER JONES: Okay.

22 THE WITNESS: All right. I'd like to start
23 with Exhibit E, which is a basic plat of the area
24 showing in yellow the acreage that OGX operates. Also
25 shown are the horizontal wells that have been drilled in

1 this area, and they're labeled with the formations that
2 the lateral is in.

3 If you studied this for a while, you'd
4 realize that most of these laterals in this area were
5 drilled in the Upper Bone Spring, the Avalon Formation.
6 That was probably the first target for this area. Then
7 came the 2nd Bone Spring Sand as a deeper unit that was
8 a popular target for the area. And it's only recently
9 that wells have been getting drilled in the Wolfcamp
10 Formation, which is the deepest target of all.

11 There are not as many Wolfcamp wells in
12 this area, as you see to the farther south and farther
13 west, and that's primarily because of the Ramsey Gas
14 Plant explosion that occurred last year, and just
15 nowhere for the gas to go. So operators held off
16 drilling or they drilled their wells and did not
17 complete them. So we're kind of catching up with
18 activity in other parts of New Mexico and Texas.

19 The locations for our wells are shown on
20 the map, the Littlefield 34 Fed Com #1 and #3, and
21 they're drilled in the north-south direction across
22 Sections 34 and 27.

23 Next I'd like to go to Exhibit D. I'm
24 going backwards, by the way, sort of. Exhibit D is a
25 structure map on the top of the Wolfcamp Formation. It

1 has a 50-foot contour interval, and it shows that there
2 is regional dip that moves from west to east at about
3 100 feet per mile. There are no geological hazards or
4 structures apparent in the Wolfcamp Formation, so we
5 don't anticipate any problems drilling a horizontal in
6 the zone.

7 Our target for these wells is in what we
8 call the Wolfcamp A zone, which is about 350 feet below
9 this mapped surface. And in this case, that TVD would
10 be about 10,000 feet for each of the wells.

11 Also shown on here is the location of the
12 cross section A, A prime, in red, and that'll be on
13 Exhibit C. This cross section runs through the proposed
14 locations. It is probably the upper two-thirds of the
15 Wolfcamp Formation. I've labeled the different zones
16 that are popular targets in the area. The Wolfcamp X-Y,
17 the Wolfcamp A, B, C and D zones are all being exploited
18 within probably a 15-mile radius of these wells.

19 I've highlighted on the cross section the
20 location that we're proposing to drill, the horizontal
21 target we're proposing to drill with our Littlefield
22 wells. And as you see, it's in pretty much the middle
23 of the Wolfcamp A zone.

24 The colors on the cross section, the browns
25 represent organic-rich shales and siltstones, and the

1 blues represent carbonate detrital zones. So they would
2 be mostly limestone. And as you can see across this
3 area, the zones are continuous and similar based on not
4 only lithology but also thickness, which is important
5 when we're designing a horizontal lateral to make sure
6 we can stay in zone.

7 Next I'm going to go to Exhibit B. This is
8 a diagram that shows the maximum principal stress in
9 this area. The data was obtained from a well that we
10 drilled about six miles south of the Littlefield wells.
11 And an example of that, it's a sonic-waveform analysis
12 done with a dipole sonic run by Halliburton. It
13 measures compressive and sonic waves in two different
14 directions, and from that, you can determine the maximum
15 principal stress. We want to be perpendicular to that
16 maximum stress, which dictates that our wells should be
17 approximately north-south.

18 We'll also run the same tool in Section 34.
19 On the initial test, there will be a pilot well, and
20 we'll run that well. And Exhibit A shows what we
21 typically like to do for each section that we drill in
22 terms of open-hole logging. It's an example, again, of
23 that well six miles to the south, that we have an
24 evaluation of the pilot hole done. And from that, we're
25 able to determine the brittleness, organic content, and,

1 of course, we look at the mud-log gases and shows. And
2 from that, we determine the best zones for horizontal
3 development. And in the case of this well six miles to
4 the south, there are at least four different zones that
5 are potential horizontal targets in the area. The most
6 commonly drilled one in this area is in the Wolfcamp A,
7 and that's our current target as well.

8 Q. (BY MR. BRUCE) Based on your mapping, is the
9 Wolfcamp present across each of the proposed well units?

10 A. It is.

11 Q. And would you expect each quarter section in
12 each well unit to contribute more or less equally?

13 A. I would expect that.

14 Q. You're asking for unorthodox locations,
15 correct?

16 A. That is correct.

17 Q. To further extend the productive interval of
18 the wellbore?

19 A. Right. The initial -- the initial vertical
20 portion of the well will travel to the position that's
21 optimized for then going horizontal across the maximum
22 mile of acreage that we can.

23 Q. And will that make the wells more economic?

24 A. Yes. Any extension of lateral length is always
25 a good thing for draining a reservoir.

1 Q. And the well locations are unorthodox. Do you
2 anticipate any adverse effect to the offset interest
3 owners?

4 A. I do not.

5 Q. Very briefly, what is shown on Exhibits F and
6 G?

7 A. F and G are the well plan diagrams for each of
8 the Littlefield wells that we're proposing. They're
9 pretty similar. The only difference between the two is
10 that more vertical part of the well to get into position
11 to drill horizontally. That differs, obviously, on each
12 one, but the horizontal lateral itself in each of these
13 plans involves a kick-off for the lateral being at about
14 9,400 feet, a 400-foot radius on average, and then a TVD
15 that's at approximately 10,000 feet of depth. And that
16 TVD will be maintained across the entire length of the
17 lateral. The lateral length is going to be just under
18 7,000 feet for each of those wells.

19 Q. And in mile-and-a-half well units, how many
20 frac stages will you use?

21 A. Typically, these -- this is subject to change
22 because we always base our number of stages on a
23 recommendation that we receive from Halliburton after
24 they've examined all the open-hole logs and the
25 information that they have to them. But I would

1 anticipate perhaps 30 different stages on a wellbore
2 that length.

3 Q. Were Exhibits A through G either prepared by
4 you or compiled from company business records?

5 A. They were.

6 Q. And in your opinion, is the granting of both
7 applications in the interest of conservation and the
8 prevention of waste?

9 A. It is.

10 MR. BRUCE: Mr. Examiner, I'd move the
11 admission of Exhibits A through G.

12 EXAMINER JONES: Exhibits A through G are
13 admitted.

14 (OGX Operating, LLC Exhibit Letters A
15 through G are offered and admitted into
16 evidence.)

17 MR. BRUCE: I have no further questions.

18 CROSS-EXAMINATION

19 BY EXAMINER JONES:

20 Q. I enjoyed your presentation last time, and I'm
21 enjoying it this time, too.

22 On your Exhibits F and also G, on the well
23 trajectory over on the right-hand side, they have little
24 circles. Is that where they're picking to --

25 A. I think those are waypoints along the area that

1 are described in the digital data. There is another
2 part of this display that would include, you know,
3 distance from the surface location and position, and I
4 suspect that's what those circles are.

5 Q. Okay. Okay. On your -- on your dipole data,
6 on Exhibit B, that's generally considered to be -- in
7 other words, nobody's doing any open-hole stress testing
8 with open-hole packers or anything like that, are they,
9 to try to see how this would be calibrated?

10 A. I'm more familiar with two different techniques
11 for determining maximum principal stress. This is
12 probably the most common, which is the dipole sonic.
13 Another form that you can use is the image log --

14 Q. Yeah.

15 A. -- where you can actually see the
16 drilling-induced fractures on that image log. And that
17 tells you what the maximum principal stress is as well.

18 Q. Yeah.

19 A. I'm not -- I'm not familiar with any other
20 techniques for doing that.

21 Q. Okay. These red arrows, are they -- the length
22 of those arrows, is that an indication of -- does that
23 indicate anything?

24 A. I think the length of the arrows on this
25 diagram is indicative of how many fractures would be

1 anticipated at that orientation. So when they -- when
2 they take a reading on the stress orientation, the
3 number of those readings would lengthen the little arrow
4 on the diagram.

5 Q. Okay. What I'm seeing, the Wolfcamp, as far as
6 the actual -- it seems to be a little bit maybe even
7 better than the Bone Spring as far as expected
8 recoveries. Is that what you're --

9 A. It is. The Wolfcamp has been easily the best
10 of the formations drilled in the area even though it is
11 deeper and perhaps a little more difficult to drill, and
12 the results have just been spectacular. It's truly
13 amazing the difference between vertical development in
14 this area. This was originally a vertical Wolfcamp
15 field. And these horizontal wells -- we were leaving
16 incredible amounts of oil and gas in the ground with the
17 vertical wells.

18 Q. And you've done a lot of work as far as this
19 Exhibit C where you -- where you -- you say the brown is
20 the organic-rich, and that's implied from the -- is
21 there a rate -- I mean, is there a gamma ray that
22 actually arrives at that, or is that --

23 A. This diagram is strictly color-coded off of the
24 gamma ray. And we know from sidewall testing and things
25 like that in the Wolfcamp that these are organic-rich

1 shales and siltstones. They're not true shales.

2 Q. Okay. So there's actually the source, also?

3 A. They are.

4 Q. You're the exploration manager; is that
5 correct?

6 A. That's correct.

7 Q. So there might be even multiple targets within
8 the Wolfcamp?

9 A. There are multiple targets in the Wolfcamp.
10 Currently, there are -- I think within a 15-mile radius,
11 virtually every zone I've labeled on this cross section
12 has been tested horizontally. As you go deeper, they
13 tend to get gassier in this part of the Wolfcamp. The
14 oiliest zone is the A zone, which is probably why it's
15 the one that is most popular right now.

16 Q. Okay. Is the gas recovery from the Wolfcamp,
17 is that actually helping your fracs clean up, or is
18 that -- in other words, is that -- is that an actual --
19 that would be a positive, I take it, as long as the oil
20 keeps coming.

21 A. It is the main drive mechanism for bringing oil
22 to the surface. And as a result of the gas production,
23 I don't know of a single Wolfcamp well that is on pump.
24 They're all being flowed. And I suspect eventually
25 they'll have to be put on pump, but that hasn't happened

1 yet. And some of them are two to three years old.

2 Q. I think we've had some requests -- the
3 districts, we do not see everything that they do, but we
4 got one the other day where they requested it remain
5 flowing up the casing, you know, until things settle
6 down, was before they saw tubing. So if you're flowing
7 up the casing, that's pretty good.

8 A. That's pretty stout. This is slightly
9 overpressured. So --

10 Q. Okay. As part of your frac jobs, are they
11 still working on the design of them, or have they pretty
12 much settled into a certain type of -- mainly kind of a
13 slick-water type of frac?

14 A. We have settled in on a type of frac that we
15 like, and, actually, the results have been quite
16 superior to some of the other operators in the area.
17 And it's a hybrid frac that involves both slick water
18 and gelled water --

19 Q. Okay.

20 A. -- with a pretty drastic increase in the amount
21 of proppant that's being carried towards the end of the
22 job.

23 Q. Toward the end.

24 A. Right.

25 Q. Okay. Well, thank you very much.

1 A. You're welcome.

2 Q. Appreciate it.

3 MR. BRUCE: Mr. Examiner, I'd ask that Case
4 15597 be taken under advisement and Case 15603 be
5 continued for two weeks.

6 EXAMINER JONES: Case Number 15597 is taken
7 under advisement, and Case 15603 has been heard and is
8 continued until December the 15th.

9 (Case Numbers 15597 and 15603 conclude,
10 10:19 a.m.)

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 STATE OF NEW MEXICO
2 COUNTY OF BERNALILLO

3

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

21

22 MARY C. HANKINS, CCR, RPR
23 Certified Court Reporter
24 New Mexico CCR No. 20
25 Date of CCR Expiration: 12/31/2016
Paul Baca Professional Court Reporters

24

25