

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

ORIGINAL

5 APPLICATION OF CHEVRON USA, INC. CASE NO. 15074
6 FOR A NONSTANDARD SPACING AND
7 PRORATION UNIT AND COMPULSORY
8 POOLING, LEA COUNTY, NEW MEXICO.

7 APPLICATION OF ENDURANCE RESOURCES, CASE NO. 15084
8 LLC FOR COMPULSORY POOLING AND
9 NONSTANDARD SPACING AND PRORATION
UNIT, LEA COUNTY, NEW MEXICO.

10 REPORTER'S TRANSCRIPT OF PROCEEDINGS

11 EXAMINER HEARING

12 Volume 2 of 2

13 February 21, 2014

14 Santa Fe, New Mexico

15
16 BEFORE: RICHARD EZEANYIM, CHIEF EXAMINER

RECEIVED OGD
2014 MAR -7 P 3:46

17
18 This matter came on for hearing before the
19 New Mexico Oil Conservation Division, Richard Ezeanyim,
20 Chief Examiner, on Thursday, February 20 and Friday,
21 February 21, 2014, 2014, at the New Mexico Energy,
Minerals and Natural Resources Department, 1220 South
St. Francis Drive, Porter Hall, Room 102, Santa Fe,
New Mexico.

22 REPORTED BY: Mary C. Hankins, CCR, RPR
23 New Mexico CCR #20
24 Paul Baca Professional Court Reporters
500 4th Street, Northwest, Suite 105
Albuquerque, New Mexico 87102
25 (505) 843-9241

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

APPEARANCES

FOR APPLICANT CHEVRON USA, INC.:

MICHAEL H. FELDEWERT, ESQ.
HOLLAND & HART
110 North Guadalupe, Suite 1
Santa Fe, New Mexico 87501
(505) 988-4421
mfeldewert@hollandhart.com

FOR APPLICANT ENDURANCE RESOURCES, LLP:

ERNEST L. PADILLA, ESQ.
PADILLA LAW FIRM, P.A.
1512 South St. Francis Drive
Post Office Box 2523
Santa Fe, New Mexico 87504
(505) 988-7577
epadillaplf@qwestoffice.net

1	INDEX	
2		PAGE
3	Endurance Resources, LLC's Case-in-Chief (Cont'd):	
4	Witnesses:	
5	Donald Ritter:	
6	Direct Examination by Mr. Padilla	243,251,279
	Voir Dire Examination by Mr. Feldewert	247
7	Cross-Examination by Examiner Ezeanyim	248
	Cross-Examination by Mr. Feldewert	278,305
8	Redirect Examination by Mr. Padilla	339
	Recross Examination by Examiner Ezeanyim	339
9		
10	Chevron USA, Inc.'s Case-in-Chief (Cont'd):	
11	Witnesses:	
12	Ken Schwartz (Recalled):	
13	Direct Examination by Mr. Feldewert	344,350,352
	Cross-Examination by Examiner Ezeanyim	348
14	Recross Examination by Examiner Ezeanyim	351,356
	Cross-Examination by Mr. Padilla	357
15	Redirect Examination by Mr. Feldewert	368
16	Endurance Resources, LLC's Case-in-Chief (Cont'd):	
17	Witnesses:	
18	Randall Harris (Recalled):	
19	Direct Examination by Mr. Padilla	375
	Cross-Examination by Mr. Feldewert	393
20	Cross-Examination by Examiner Ezeanyim	404
	Redirect Examination by Mr. Padilla	408
21	Recross Examination by Mr. Feldewert	408
22	Jason South:	
23	Direct Examination by Mr. Padilla	409
	Cross-Examination by Mr. Feldewert	431
24	Redirect Examination by Mr. Padilla	447
25		

1	INDEX (Cont'd)	
2		PAGE
3	Endurance Resources, LLC's Case-in-Chief (Cont'd):	
4	Witnesses:	
5	Jason South (Cont'd):	
6	Recross Examination by Mr. Feldewert	450
7	Cross-Examination by Examiner Ezeanyim	452
8	Proceedings Conclude	459
9	Certificate of Court Reporter	460
10		
11		
12	EXHIBITS OFFERED AND ADMITTED	
13	Chevron USA, Inc. Exhibit Numbers 34 and 35	338
14	Chevron USA, Inc. Exhibit Number 36	447
15		
16	Endurance Resources, LLC Exhibit Numbers 1, 1A, 2 and 3	431
17	Endurance Resources, LLC Exhibit Numbers 10 and 11	302
18	Endurance Resources, LLC Exhibit Numbers 13 and 14	432
19	Endurance Resources, LLC Exhibit Number 17	302
20		
21		
22		
23		
24		
25		

1 (9:09 a.m.)

2 EXAMINER EZEANYIM: Good morning,
3 everybody. We are going to continue the cases we
4 started yesterday, and this is Case Numbers 15074 and
5 15084. We are continuing the testimony of the
6 Applicant, Endurance. I think we finished the testimony
7 from Chevron, if I may be right on that one. And I know
8 we have sworn all the witnesses. We will continue with
9 the witnesses of Endurance, where we stopped yesterday.

10 Call your next witness.

11 MR. PADILLA: Okay. We'll call Don Ritter,
12 to start with.

13 EXAMINER EZEANYIM: Don Ritter, you were
14 sworn under oath. You are still under oath.

15 THE WITNESS: Yes, sir.

16 EXAMINER EZEANYIM: Mr. Padilla, you may
17 proceed.

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

21 DIRECT EXAMINATION

22 BY MR. PADILLA:

23 Q. State your name for the record.

24 A. Donald Ritter.

25 Q. Mr. Ritter, where do you live?

1 A. I live in Dallas, Texas.

2 Q. What is your connection with Endurance
3 Resources, LLC?

4 A. I'm the CEO and founder of Endurance Resources.

5 Q. And can you tell the Examiner the relationship
6 between Tritex Energy and Endurance Resources, the
7 Applicant here today?

8 A. Yes. Tritex is a limited partnership that is
9 owned by Tritex Resources.

10 Q. Mr. Ritter, have you previously testified
11 before the Oil Conservation Division?

12 A. Yes, I have.

13 Q. And in what capacity have you done so?

14 A. As a petroleum engineer.

15 Q. And what is your work experience in the oil and
16 gas industry?

17 A. I'm a petroleum engineer from Marietta College
18 in 1981. I spent almost 20 years with Mobil Oil, about
19 eight years in the field, operations, drilling and
20 completions of wells. Then several years in reservoir
21 engineering. Then several more years in drilling and
22 completions engineering, and then into management with
23 Mobil. I left as the drilling manager for all the joint
24 venture projects worldwide.

25 At that point, I went back to school and

1 received an MBA from Southern Methodist University and
2 then joined -- at the Mobil-Exxon merger, I decided that
3 Exxon was not my company to go to, and I went to work
4 for a small start-up company called Geomechanics
5 International.

6 And I was at that company for seven years
7 and then built a start-up company, based out of Stanford
8 California, with a number of PhDs, taking their science
9 and commercializing that into the oil and gas industry.
10 And we built that company into about 55 employees, 30 of
11 which were PhDs, offices in five countries. And
12 eventually the company was sold to BakerHughes.

13 After that, I left -- or I started Tritex
14 Energy with a former partner from Marietta College. And
15 then that was -- that was started with a GE Capital
16 partnership, and then we took that GE partnership and
17 recapitalized it with Lime Rock Partners just last year
18 and formally brought everything under Endurance
19 Resources.

20 So we've, since then, built a team, opened
21 an office in Midland. Our team has expanded to several
22 more petroleum engineers, and the field team -- the man
23 team we have in place has drilled over 90 horizontal
24 Bone Spring wells. In fact, our company is solely
25 focused on drilling horizontal Bone Spring wells in the

1 Delaware Basin. That's our only challenge.

2 Q. In terms of geomechanics, tell us briefly what
3 geomechanics is.

4 A. Geomechanics --

5 EXAMINER EZEANYIM: Excuse me. Before you
6 go there, let's qualify the witness, because I think you
7 want to start the witness -- what do you want to qualify
8 him as?

9 MR. PADILLA: As a petroleum engineer and
10 as an expert in stress orientation.

11 EXAMINER EZEANYIM: Okay.

12 Do you have any objection?

13 MR. FELDEWERT: I've heard his background
14 in terms of a petroleum engineer. I haven't heard
15 anything on stress orientation, what experience he has
16 there.

17 Perhaps that's what you're going into.

18 THE WITNESS: I can answer that.

19 I do have a patent in the area, which is
20 the optimal -- System for Selecting the Optimal
21 Completion for a Hydrocarbon Well, and the basis of that
22 patent is using a geomechanical model, and the stress
23 directions and orientations to line up a completion
24 where there would be an area that would keep the zone
25 from having sand collapse, or, conversely, orienting it

1 so that you have transverse fractures for a horizontal
2 well versus longitudinal fractures, and also looking at
3 depletion pressure over time to be sure that you don't
4 create a crush of your formation sand. So that's the
5 basis of the patent.

6 That was developed in conjunction with
7 others at Geomechanics International. And during that
8 time, we took the technology from, essentially, Stanford
9 Labs to the oil industry and developed all of the
10 technology that was used to orient the Barnett shales,
11 the Bakken shales.

12 VOIR DIRE EXAMINATION

13 BY MR. FELDEWERT:

14 Q. Who is the "we"?

15 A. Geomechanics.

16 Q. Geomechanics International?

17 A. Yes.

18 Q. What is your relationship with Geomechanics?

19 A. I was -- I was more of a founder and the vice
20 president of engineering.

21 Q. And how long were you with them?

22 A. Seven years.

23 Q. Why did you leave?

24 A. I left to start an oil and gas company. We
25 sold the company just within six months of that.

1 MR. PADILLA: Mr. Examiner, I'd ask that he
2 be qualified as a petroleum engineer and
3 stress-orientation expert.

4 EXAMINER EZEANYIM: I will do that.

5 CROSS-EXAMINATION

6 BY EXAMINER EZEANYIM:

7 Q. Let me ask you a question. You talked about
8 Tritex and Endurance. Since we're here -- you are very
9 well qualified, but since you are here, tell me, did you
10 start Tritex, or did you start Endurance? I want to
11 know the relationship between Tritex and Endurance.

12 A. Sure. Sure. I actually started Tritex as the
13 first company, Tritex Energy. And then we created a
14 limited partnership with General Electric. That was
15 called Tritex Energy A, LP, and that particular
16 relationship purchased all properties from Ray Westall.
17 So that's the beginning of the limited partnership as
18 Tritex and under GE's umbrella.

19 And then a year ago, we recapitalized.
20 Essentially, my partner and I purchased the limited
21 partnership from GE Capital, with the assistance of Lime
22 Rock Partners. We recapitalized the company, brought in
23 a hundred-million-dollar commitment for equity of
24 \$150 million -- debt so that we could drill these
25 particular wells.

1 With the GE Capital situation, they were
2 not interested in drilling, and we had some really good
3 opportunities, as we're talking about, all of this area
4 that we're developing around Sections 20, 19, 18. They
5 were all areas that were owned by Westall, and we had
6 the shallow production, and now we're developing the
7 deep rights.

8 Q. Yeah. I want to hear Endurance.

9 A. Oh, I'm sorry. Endurance -- Endurance was
10 formed at the connection between Lime Rock Partners.
11 And when we recapitalized Lime Rock Partners, we put
12 everything under Endurance. So the limited partnership
13 is underneath Endurance Resources. But I'm the CEO
14 of -- still the limited partnership, Tritex, exists.
15 I'm the CEO of that, and I'm the CEO of Endurance
16 Resources

17 Q. So what does Tritex do? Is Endurance the
18 operating arm of Tritex?

19 A. Yes. Yes.

20 Q. I'm trying to understand the relationship.

21 A. Yes. Well, there are two pieces. One piece,
22 Endurance owns Endurance Resources LLC, which is the
23 operating arm. And then all of the assets are in Tritex
24 Energy A, LP, and we kept the limited structure --
25 limited partnership structure in place.

1 Q. You see, this is important, you know, for the
2 benefit of this, because when I looked at this last
3 night, I didn't see any Endurance, but I saw Tritex. So
4 that's why, you know --

5 A. Yes.

6 Q. Can you explain this to me, because I'm not
7 there. I don't work for you.

8 A. You're absolutely right.

9 Q. So I need to understand the relationship
10 between Tritex --

11 A. Sure.

12 Q. -- and that is clear now.

13 EXAMINER EZEANYIM: So without any further
14 objection, he's going to be qualified. Really, very
15 good expertise in petroleum engineering and --

16 What is that other one?

17 MR. PADILLA: Stress orientation.

18 EXAMINER EZEANYIM: -- stress orientation.
19 You say you've done it for seven years?

20 THE WITNESS: Uh-huh.

21 EXAMINER EZEANYIM: So I believe you are
22 qualified for that, too.

23 So you may proceed.

24

25

CONTINUED DIRECT EXAMINATION

1

2 BY MR. PADILLA:

3 Q. Mr. Ritter, let's go to Exhibit 11-1.

4 A. Yes. I'm looking for my copy. Yes.

5 Q. Can you tell us what that is?

6 A. Yes. This is a geomechanical modeling project
7 for the Bone Springs Completion Program.

8 Q. Where is that?

9 A. It is specifically for the area adjacent to
10 Section 18. We used the wells from Section 30, from
11 Section 20, our Stratocaster and Telecaster wells, that
12 we've been discussing, that are within a mile or two
13 miles of Section 18.14 Q. Did you use the study to help you determine how
15 to orient the wells, north-south or east west?16 A. Yes, we did use it for that. Actually, we've
17 used this study for a number of different things. And
18 maybe I'll give you a little bit of history with the
19 study.20 We actually contracted and began the
21 discussions with BakerHughes to put this study together
22 last September, and this study was to be put in place
23 for confirming the orientation. But more importantly,
24 we built the geomechanical model so that we would have
25 very good, robust inputs into our frack model. You

1 heard Lyle Lehman talk about the mechanical earth model
2 and the process they use that just had the inputs from
3 the geomechanical model. These are the inputs that help
4 define that model even better. So this is a
5 comprehensive project that is primarily for hydraulic
6 fracturing, but it does include orientation and
7 confirmation.

8 Q. So Endurance ordered this study before any of
9 this --

10 A. Oh, yes. Yes. This was ordered before, as
11 part of our normal fracture initiation and hydraulic
12 fracture study.

13 EXAMINER EZEANYIM: What are we trying to
14 say? This study was done before any of this application
15 was --

16 THE WITNESS: It was started. It was
17 finished over the last couple of months, but it was
18 started prior to any of that.

19 EXAMINER EZEANYIM: And the reason for
20 doing this geomechanical study was to see where the
21 orientation would be if you started drilling?

22 THE WITNESS: Where the orientation and,
23 more specifically, what types of pressures it would
24 require to initiate natural fracturing if natural
25 fractures were already closed and under pressure. It

1 also will give you the direction that you can drill into
2 the fracture system that you create, and you create the
3 fracture system in a certain angle and deviation at
4 different pressures. It takes different pressures to
5 get more fractures.

6 EXAMINER EZEANYIM: Yeah. So what are the
7 objectives? What are the objectives? I'm asking this
8 question because I want to understand.

9 THE WITNESS: Sure. The objectives are to
10 confirm what the geomechanical stress is in current day
11 in the area, to have further verification of the
12 drilling direction and to be sure that we have all of
13 the rock physics modeled correctly for our fracture
14 program.

15 EXAMINER EZEANYIM: And this is taken from
16 information or data from two miles from Section 18.

17 THE WITNESS: Right. It's taken from the
18 wells in that area.

19 EXAMINER EZEANYIM: You may go ahead.

20 Q. (BY MR. PADILLA) Let's go to the second page,
21 11-2, and I'll have you discuss the summary of results
22 of this geomechanical study.

23 A. Sure. So the main conclusion is the stress
24 regime is most likely a strike-slip faulting, where both
25 the SHmax, or the maximum horizontal stress, is greater

1 than the vertical stress, and it's greater than the
2 minimum horizontal stress.

3 Q. Explain to me what you mean by strike-slip
4 faulting.

5 A. So in that condition, on a more regional basis,
6 the faults are shifting. Instead of shifting up and
7 down, which is the normal faulting regime, it would be
8 shifting sideways. So the basin movement and such are
9 creating a side-to-side shift versus an up-to-down shift
10 in any existing faulting.

11 Q. Let me understand this. You're doing this to
12 be able to stimulate the wells?

13 A. Yes. By knowing what those -- knowing the
14 regime first and then the specific values for each one
15 of these stresses, you can -- and with additional data,
16 you can determine the direction of stress, and you can
17 determine its magnitude.

18 And those magnitudes -- for instance, the
19 SHmin -- the magnitudes of SHmin are maybe more -- more
20 commonly known as frack gradient, although it's not
21 exactly frack gradient, but it's close to the
22 nomenclature for frack gradient, which, of course, is
23 very important for designing hydro-fracks, knowing what
24 those pressures are, knowing how much pressure that you
25 can push above that. And then deeper into the model,

1 during the fracturing process, it's how much more
2 pressure are you actually in a net pressure standpoint
3 getting out into the formation that would reopen and
4 reactivate existing nature fractures.

5 Q. What are the conclusions that you draw from
6 this?

7 A. So the conclusions from the study that we had
8 SHmin estimated from the wells that we had done our
9 frack experience with, the SHmax azimuth, or the
10 direction of maximum stress, is approximately 80
11 degrees, which is near the east-west. So that is
12 assumed from regional experience in this particular area
13 of New Mexico from BakerHughes.

14 The model then goes in to look at how the
15 well is drilled, if the caliper of the well exhibits
16 some breakouts, and that's based on what the actual
17 pressure and strength of the rock is. So if the rock is
18 under stress, it has a compressive strength. If the
19 stresses -- the two horizontal stresses are enough that
20 they can create a compressional failure of the rock in
21 weaker zones, then you will have those zones fall into
22 the well, and you can record those with your caliper.
23 And by doing some math modeling with the software that
24 Geomechanics International created during the time I was
25 there, you can history match the caliper logs to get a

1 verification of the SHmax magnitudes.

2 Q. In this study, were you using actual data from
3 the four wells that you mentioned here?

4 A. Yes. We were using data from the wells that we
5 had in the vertical sense. There were several vertical
6 wells in the area, primarily a well in Section 30, which
7 would be just south of Section 18, two sections farther
8 south.

9 Q. Now, you heard Mr. Schwartz talk yesterday
10 about the anticline, which Mr. Harris disagrees with.
11 How does that play into the mechanical study results?

12 A. Well, if that was indeed true, then the maximum
13 horizontal stress would actually be north-south versus
14 east-west to be able to create the fractures that were
15 indicated in the textbook model.

16 EXAMINER EZEANYIM: If what were true? If
17 it's that way. What is that? You said if that were
18 true. What was the question?

19 THE WITNESS: If the anticline model he
20 presented were true.

21 EXAMINER EZEANYIM: Then?

22 THE WITNESS: Then the maximum horizontal
23 stress would have to be north-south, not east-west.

24 EXAMINER EZEANYIM: But right now your
25 study --

1 THE WITNESS: My study shows it's
2 east-west. And so based on that, the correct direction
3 to drill would be north-south, and that would set up the
4 most ideal situation to generate transverse fractures,
5 which, if you're drilling the horizontal in this way
6 (indicating), your fractures would be like this
7 (indicating).

8 EXAMINER EZEANYIM: So you like to drill
9 the orientation of the maximum stress, because maximum
10 stress is east-west, right?

11 THE WITNESS: Yes, perpendicular. Yes.
12 And that would create the most transverse fracks.

13 EXAMINER EZEANYIM: In your study, just out
14 of curiosity -- and SHmin, what is the relationship with
15 the closure pressure of where you are fracking? That's
16 a different question. Do you see a relation between
17 SHmin and --

18 THE WITNESS: Yes. In fact, the actual
19 number -- you know, when you shut a well in, you have
20 the ISIP, and it comes in a very fast curve. If you
21 take the tangent of the curve back to the pressure, that
22 is the SHmin pressure.

23 EXAMINER EZEANYIM: Okay.

24 THE WITNESS: So ideally, then, we would be
25 wanting to drill north-south wells so that we could

1 create the natural number of fracture wings.

2 EXAMINER EZEANYIM: Okay. Now, we have to
3 explore this, Mr. Ritter, because when you are
4 drilling -- not in the industry how well we do. We want
5 to drill against the natural fractures.

6 THE WITNESS: Right.

7 EXAMINER EZEANYIM: But then the question
8 begins from your study: Are we going to get the most
9 hydrocarbons, because that's where I'm coming from.
10 Because there is a confidence in drilling. I don't want
11 to drill something and produce nothing. I want to
12 drill -- of course, you know, as I told you, in the
13 industry, we have to drill something good, but would
14 that produce the maximum recovery? So that's another
15 issue.

16 THE WITNESS: Right, and I will address
17 that. I'll start quickly by saying that if we have the
18 polygons, or the boxes, we have a cylinder that's 160
19 acres in one direction and 40 in another, and we want to
20 fill that cylinder with the most sand possible, then we
21 would want to get the orientation as close as we could
22 to perpendicular to the stress so that those
23 fractures -- we could put as many of those in place as
24 we could. So if we have 36 frack wings -- independent
25 frack wings in that section, that is the way you contact

1 the most conductivity and permeability, especially with
2 these rocks where the permeability is .5 or less. This
3 is how you get the most drainage.

4 Now, the converse of that would be drilling
5 in the other direction. If you have a longitudinal
6 frack, then the fracture is just following the well path
7 (indicating). So you're not contacting all of this 40
8 acres of rock with hydro-fracks. They are lining up.
9 They're interfering with each other, and that ways you
10 get very poor recovery.

11 EXAMINER EZEANYIM: I don't like -- of
12 course, I don't like that.

13 THE WITNESS: Right. So that is why we're
14 interested in this. That is why we look at it.

15 The last conclusion is based on natural
16 fractures. And they are -- they are part of the
17 equation in the Bone Spring, but they are not the whole
18 equation. And, in fact, with the magnitudes that we
19 have shown in this model, in nature, as you're drilling
20 the well, there really are no natural fractures that are
21 propped open and permeable while you're drilling. And
22 if you just completed the well without a hydro-frack,
23 then you really wouldn't have any benefit even if you
24 drilled in the right direction from the natural
25 fractures.

1 The only way that you're really going to
2 encounter natural fractures and help bring those natural
3 fractures into the recovery of oil and gas is that
4 you're going to activate them during the fracturing
5 operation, and then hopefully prop them with something
6 that won't crush so that you can get some additional
7 recovery from the natural fracture system.

8 And the natural fractures will also line up
9 perpendicular -- or the natural fractures are in
10 parallel with the maximum stress, so if we're drilling
11 north-south, we have east-west maximum stress. Then we
12 will encounter the most possible natural fractures by
13 doing that, but it doesn't guarantee that we open it.
14 That, we have to look at what pressures are used. And I
15 can get to that in just a minute.

16 I did want to show the stress profile,
17 which is on page 11-3, again, showing the strike-slip
18 faulting regime. The pressures -- this curve over here
19 (indicating) is -- this is in psi per foot.

20 Q. (BY MR. PADILLA) Where are you pointing at,
21 Mr. Ritter?

22 A. I'm pointing at 11-3, the left-hand side of the
23 graph.

24 Q. The left-hand side of the graph?

25 A. Yeah. And so that is in psi per patio.

1 EXAMINER EZEANYIM: On the x-axis?

2 THE WITNESS: Yes, on the x-axis.

3 And so what we're seeing here in this kind
4 of what I'll call jiggly line -- no better word for
5 it -- that is the SHmin. Yes. Okay. That is the
6 SHmin, and it's calibrated with various points of --

7 EXAMINER EZEANYIM: Which one is SHmin?
8 The green line?

9 THE WITNESS: The green line, yes.

10 And then the red line --

11 EXAMINER EZEANYIM: Is SHmax.

12 THE WITNESS: -- is the SH -- I'm sorry.
13 Yes. This one is SHmin. This is the lowest pressure.

14 Q. (BY MR. PADILLA) The green line?

15 A. Yes. And it's calibrated with actual leak-off
16 tests or mini fracture [sic] data.

17 And next is the vertical stress, which is
18 just an integration of a density log. So that's the
19 overburden stress. That's the vertical stress.

20 And then the other horizontal stress is
21 higher than that, about 1.15 or so.

22 EXAMINER EZEANYIM: The dotted line?

23 THE WITNESS: The dotted line.

24 So those are the three stresses, and they
25 show how the regime lines up.

1 EXAMINER EZEANYIM: So that is 1.05?

2 THE WITNESS: Yeah. Yes.

3 We have pore pressure assumed at .45 psi
4 per foot or 8.6 pound per gallon, which is normal
5 pressure. The SHmin is .75 for the sand and limestone
6 and a little bit higher for the shale, estimated from
7 frack data and our experience. And then the SHmax
8 magnitude is estimated from regional experience and its
9 relationship to these others.

10 EXAMINER EZEANYIM: Okay. Now, tell me,
11 what are the input in this model? What do you input to
12 get all these results?

13 THE WITNESS: You input core pressure. You
14 input density logs. You calibrate a caliper log with a
15 breakout model that's created from some of the software.
16 The leak-off tests are input. That's the main body of
17 the data that's used to build the geomechanical model.

18 EXAMINER EZEANYIM: So you put into that
19 the model?

20 THE WITNESS: Yes.

21 EXAMINER EZEANYIM: It's called
22 geomechanical model?

23 THE WITNESS: Yes, it's called
24 geomechanical model.

25 If we go to the next page, 11-4, this is an

1 illustration of exactly what we were speaking of with a
2 single fracture, if you look at the SHmax direction. So
3 in our model, this would be drilling a well east to
4 west. We would have longitudinal frack, just one frack
5 wing along the well.

6 Q. (BY MR. PADILLA) And you're pointing to the
7 bottom left side?

8 A. This one here, yeah (indicating).

9 EXAMINER EZEANYIM: That's when you're
10 drilling east-west?

11 THE WITNESS: Yes. That is when you're
12 drilling east-west in our model.

13 Then as we move from east-west to due
14 north, we would have variations of angle. And this
15 near-wellbore geometry, where all these fracks are
16 colliding, the farther away you get -- or the closer you
17 get out to vertical -- or I'm sorry -- to due north, so
18 you are now starting to get fracks that are going
19 sideways in the box; not just straight up, but sideways
20 in the box.

21 And then you finally get to the most
22 desired direction, which is the direction of SHmin, and
23 there you will have frack wings as we set all these
24 stages and clusters in our typical program. And those
25 would be perpendicular to the stress. Those, or angles

1 very close to this, would give you the most hydrocarbon
2 recovery. And I will also tie that to the discussion
3 that Lyle Lehman had yesterday in relation to the
4 permeability and to his simulations and things that he
5 talked about in that program.

6 Q. (BY MR. PADILLA) Do you want to refer to his --

7 A. Yeah. This is probably a good place, so I can
8 make that tie over to the --

9 EXAMINER EZEANYIM: Before you go to that,
10 let's go back to that SHmin. That's the preferred
11 orientation in this model?

12 THE WITNESS: Yes. That is the preferred
13 orientation.

14 EXAMINER EZEANYIM: Because there is
15 minimum stress.

16 THE WITNESS: That's because, in this
17 model, you create the most perpendicular transverse
18 fracks. Therefore, you can put the most number of
19 stages into a particular polygon and put the most sand
20 away.

21 EXAMINER EZEANYIM: Okay.

22 THE WITNESS: Now I'll take you back to
23 what Lyle Lehman presented yesterday of this study. And
24 if we go to the first page --

25 EXAMINER EZEANYIM: Which one?

1 THE WITNESS: This page here (indicating)
2 and the Telecaster study, which is just to your left.
3 There you are.

4 EXAMINER EZEANYIM: That's the same well.

5 THE WITNESS: Yes. So all of what we're
6 working on is very local, specific to this area. There
7 is some regional data that is used to develop model, but
8 it's all calibrated with the data we have.

9 So if we go to this page here (indicating),
10 you'll see across the bottom: Vertical, Vertical
11 Fracked, Horizontal, Horizontal Axis Frack, Horizontal
12 Transverse Fracks and Horizontal -- 5 fracks and with 11
13 fracks.

14 So to orient you to this diagram here
15 (indicating), so vertical would mean a vertical well
16 with no frack. The vertical fracked would be a vertical
17 well with a frack in it. Then we get to a horizontal
18 well with no frack at all. We get to a horizontal frack
19 with an axial frack, and that axial frack is this single
20 fracture, longitudinal fracture. Okay? And then we
21 move to horizontal transverse frack, which is this frack
22 here (indicating) in the SHmin direction, with only five
23 frack wings. And the last one is a horizontal
24 transverse frack with 11 frack wings. So it is just
25 showing you the difference in recovery as you go through

1 the different stress regimen and combine that with a
2 hydro -- or a fracture treatment.

3 EXAMINER EZEANYIM: And it also depends on
4 your permeability, right.

5 THE WITNESS: It does. So the permeability
6 is running on this axis, from .05 to -- from .005 to .05
7 to .5 to 5 millidarcy.

8 EXAMINER EZEANYIM: Now, let's go through
9 that.

10 THE WITNESS: Sure.

11 EXAMINER EZEANYIM: I don't know. I'm very
12 color -- so this color here, what do you call it? Gray.

13 THE WITNESS: Yeah, the gray color.

14 EXAMINER EZEANYIM: The gray is what you do
15 with what is around the -- you put it on the z-axis?
16 Okay. Now, the most recoverable on that is the
17 horizontal 11 transverse, right?

18 THE WITNESS: Yes.

19 EXAMINER EZEANYIM: Okay. What is that
20 color (indicating)? What is this color (indicating)?

21 THE WITNESS: Cream.

22 EXAMINER EZEANYIM: Okay. Explain the
23 cream and the red and the blue.

24 THE WITNESS: Sure. Sure. So the cream
25 color would be .05 millidarcy, which is approximately

1 the millidarcy that we have in the permeability of the
2 rock that we're fracking. Okay? As you increase the
3 permeability to half millidarcy and then 5
4 millidarcies -- what I would to point out here is, as
5 you increase the permeability of the rock, the direction
6 is not as important because the permeability is going
7 up. And so you could even get, in this transverse axial
8 frack, say with .5 millidarcies of .5 or above, you
9 would have a well that could be east-west, in our case,
10 and a higher recovery than a .05, while drilled in the
11 correct direction. But it depends on the permeability.

12 EXAMINER EZEANYIM: Yes. It depends on
13 permeability. So even the permeability, it doesn't
14 matter whether you go east-west or north-south.

15 THE WITNESS: Permeability is permeability.

16 EXAMINER EZEANYIM: Yes. See what I mean?

17 THE WITNESS: Yes.

18 EXAMINER EZEANYIM: Okay. Now, if you look
19 at this permeability -- this is very important. How
20 did -- how did you come about -- or did you just assume
21 this permeability?

22 THE WITNESS: Yes. Yeah. These were
23 assumptions, and this was a 24-well simulation that just
24 looks at the differences in permeability versus the
25 angles of these fracks.

1 EXAMINER EZEANYIM: Okay. Now, what is
2 your typical permeability? I know it's very hard to
3 measure, but what is typical permeability.

4 THE WITNESS: We have our core data that is
5 between .05 -- between .005 and .05.

6 EXAMINER EZEANYIM: .005?

7 THE WITNESS: It is between there. Okay?
8 Between that and -- between the gray and the cream is
9 what we estimate the permeability to be in the sand pile
10 that we're in. So this would be the permeability that
11 would be in Section 18. This would be the permeability
12 that would be in Section 20. It would be the
13 permeability we see in Section 29 with possibly a little
14 variation. I'll give a little variation to that, but
15 it's going to be within that bandwidth.

16 EXAMINER EZEANYIM: So if I -- if I may --
17 if I might, because it's interesting. If permeability
18 is .5 on that BOE [sic], it doesn't really matter
19 what your --

20 THE WITNESS: Exactly.

21 EXAMINER EZEANYIM: Because that wasn't
22 showing on this model.

23 THE WITNESS: That's what this is showing
24 (indicating), and it's still consistent with this
25 (indicating).

1 EXAMINER EZEANYIM: So if I said, then,
2 that the permeability in this area we're talking about
3 is .005, it's a whole new ball game, or it's .05, right?

4 THE WITNESS: But it is --

5 EXAMINER EZEANYIM: Because I expected
6 that -- with my mobility ratio.

7 THE WITNESS: Exactly.

8 EXAMINER EZEANYIM: So this is very
9 important. Your study is very important for me to
10 understand what is going on here.

11 THE WITNESS: Right.

12 EXAMINER EZEANYIM: Because it depends on
13 this permeability issue. If we know what the
14 permeability, it determines your intention.

15 And I want to make a point here. I think
16 everybody want to get the most hydrocarbon here. We
17 don't want to leave them underground. My profession
18 doesn't allow me to leave a barrel of oil in the ground.

19 THE WITNESS: Exactly.

20 EXAMINER EZEANYIM: I know you guys don't
21 want that. We have the same goal, right?

22 THE WITNESS: Right.

23 EXAMINER EZEANYIM: But Chevron and Tritex,
24 Endurance, everybody wants us to get it out. The more
25 we get out, the better, right?

1 I take you to your word that above .5
2 doesn't really matter in those sections what direction
3 you go.

4 THE WITNESS: Yes.

5 EXAMINER EZEANYIM: Is that what you're
6 saying?

7 THE WITNESS: That's what I'm saying.

8 EXAMINER EZEANYIM: Okay. Very good.

9 THE WITNESS: And I do want to point out
10 that we do have core data from our Section 29 well,
11 which is two sections south. Or is it three? But in
12 the same sand pile, we do have actual core data and
13 permeabilities that are in that range. Okay?

14 EXAMINER EZEANYIM: Okay.

15 THE WITNESS: Now, the other piece -- so if
16 you assume that our permeability is in here, then you
17 would assume that we are somewhere on the cream bar or
18 maybe slightly less. Okay?

19 EXAMINER EZEANYIM: Okay.

20 THE WITNESS: And then if we look at the
21 axis over here (indicating), on the x-axis, we get the
22 oil recovery as a function of OOIP.

23 So now I'll take you back to the
24 calculations that Mr. Sirgo made, where he laid out
25 polygon. He calculated the volumetric, volume of oil,

1 in that polygon. And then he worked with four wells
2 that we have, existing wells -- you'll remember his
3 study.

4 EXAMINER EZEANYIM: Yeah.

5 THE WITNESS: -- in the area, and from that
6 early data, we estimated our recovery would be
7 approximately 13-and-a-half percent or so.

8 If you look at this axis, this is very
9 close to the recovery that we are saying. So we're
10 having somewhat of a matchup with --

11 EXAMINER EZEANYIM: Yesterday I think it
12 was .71.

13 THE WITNESS: Right. So if you believe the
14 permeability was this (indicating) and the recovery
15 factor was approximately 13, 14 percent, which
16 is -- which is on par for a conventional tight sand.
17 That's a reasonable recovery factor for primary. If it
18 had more permeability, you would be hoping for 20, 30,
19 but that's what -- that's what is traditionally in this
20 Basin.

21 EXAMINER EZEANYIM: Yeah. Mr. Ritter, I
22 don't want to classify this as unconventional.

23 THE WITNESS: No, it's not. It's
24 conventional. It's some tight rock, but it's not
25 millidarcy.

1 EXAMINER EZEANYIM: Yeah. It's not
2 millidarcy.

3 THE WITNESS: Right.

4 So the cream bar here (indicating) would be
5 approximately what we're experiencing in our north-south
6 wells. Okay? We are drilling north-south. And I'm
7 also going to show you some additional exhibits today.
8 Mr. Lehman said yesterday that he had other data that
9 showed that the post-frack modeling that we've done on
10 our fracks are showing that there is no longitudinal
11 fracks, that they have to be transverse from the post
12 modeling. So I'll share that with you in just a minute.

13 But those factors together are also
14 supporting the idea that the east-west maximum direction
15 for conversely drilling north-south is the best for
16 hydrocarbon recovery. Because if we went down to the
17 horizontal axial frack on this and stayed with the same
18 permeability, our recovery factor would be six to eight
19 percent.

20 EXAMINER EZEANYIM: If you do what?

21 THE WITNESS: If we oriented the well in
22 the wrong direction. In our opinion, east-west is the
23 wrong direction. From this study, we would expect that
24 the frack would only recover -- or the well would only
25 recover six to eight percent of the OOIP.

1 EXAMINER EZEANYIM: Is that shown here?

2 THE WITNESS: The horizontal axial frack is
3 here, if you just follow the cream bars down to there
4 (indicating), keeping the permeability constant. So
5 that is the difference that you see. In fact, it's over
6 twice, right, that bar versus the other bar with -- at
7 the end with 11 transverse fracks. Roughly twice the
8 difference in recovery.

9 EXAMINER EZEANYIM: I like to work with
10 numbers. That's good. Okay. Go ahead.

11 THE WITNESS: And then the remaining part
12 of Mr. Lehman's study was actually tying that back to
13 the actual Telecaster well. So simulating what a
14 transverse -- or what a transverse frack -- or what an
15 actual frack would look like. And so we've been
16 concluding that north to south, in our opinion, is more
17 than twice as good than east to west.

18 EXAMINER EZEANYIM: Okay. Go ahead.

19 THE WITNESS: We have some new exhibits.
20 While we're right here, I'll try to get the technical
21 piece of this finished up.

22 EXAMINER EZEANYIM: You are done with
23 these?

24 THE WITNESS: I'm done with that.

25 MR. FELDEWERT: So what is this exhibit?

1 MR. PADILLA: 16.

2 THE WITNESS: Since it's in Exhibit 16 --
3 if you go to the --

4 EXAMINER EZEANYIM: Is it marked? I don't
5 see it marked. You have to mark it, so we know what it
6 is. Can I write "Exhibit 16"?

7 MR. FELDEWERT: Well, I wrote "Endurance
8 Exhibit 16" on mine.

9 (Discussion off the record.)

10 MR. FELDEWERT: It was up for discussion
11 yesterday that the red-Bullseye map -- did you guys
12 change it again?

13 THE WITNESS: We did change it just for
14 you. We only -- we only changed the arrow so that there
15 is now a data point that wasn't shown that helped us
16 establish -- a blob in Section 19 is added there with
17 100, I believe, is the sand. And we actually added
18 the --

19 That's the old one (indicating). Go one
20 more page. I think it's -- there, that one
21 (indicating). I'm sorry.

22 So that -- that blob in the middle now has
23 the data point and the additional log you asked for.

24 MR. FELDEWERT: Well, I didn't ask for
25 anything. So you-all have changed your maps again?

1 THE WITNESS: We have added the data point
2 that you asked for yesterday. We have changed nothing
3 else on the map.

4 MR. FELDEWERT: Which map are we supposed
5 so use?

6 THE WITNESS: This is the current map
7 (indicating). It has no other changes.

8 MR. FELDEWERT: That would be the fourth
9 page into Exhibit 16? That's the map that you guys
10 finally settled on?

11 THE WITNESS: Yes, it is.

12 Q. (BY MR. PADILLA) You just moved the arrow back?

13 A. We just moved it so he could see the data
14 point.

15 I have no further discussion on that map.

16 EXAMINER EZEANYIM: Are you going to go
17 through this?

18 THE WITNESS: Yes. I have one more.

19 Now, as far as the rest of this particular
20 exhibit --

21 EXAMINER EZEANYIM: Which one?

22 THE WITNESS: -- 16, if you can go to the
23 StrataGen report, which would be about four pages in or
24 so --

25 Q. (BY MR. PADILLA) Mr. Ritter, is this the report

1 that Mr. Lehman said was confidential yesterday?

2 A. Yes.

3 Q. And you're not making that confidential today?

4 A. I have removed the confidential part. The
5 confidential part of this report, although we could
6 consider it all -- but the confidential report was
7 new -- new design changes for our continuing frack
8 design. But I'm sharing our current frack design for
9 the Telecaster 30-3H primarily to show, first of all,
10 the type of work that Mr. Lehman does for us, but
11 specifically on page 5 of that report --

12 EXAMINER EZEANYIM: Before you go to that,
13 Mr. Ritter, you were arguing with counsel about changing
14 which, page 1 or page 2? Where is the arrow that was
15 changed, because I need to get --

16 THE WITNESS: It's on the --

17 EXAMINER EZEANYIM: The second page?

18 THE WITNESS: No. It's a map. The second
19 page that has the red blob in the middle.

20 EXAMINER EZEANYIM: This one?

21 THE WITNESS: The next page. The page
22 after that.

23 That page. That was the one that was
24 changed.

25 EXAMINER EZEANYIM: What was it yesterday?

1 THE WITNESS: The map before it was the map
2 from yesterday, the previous page.

3 EXAMINER EZEANYIM: And this is not what
4 you had yesterday?

5 THE WITNESS: No. The previous page is.

6 EXAMINER EZEANYIM: Is what you had?

7 THE WITNESS: Right. There was a lot of
8 discussion from counsel about not having the data point
9 on Section 19. It was just covered, so we provided it.

10 EXAMINER EZEANYIM: You provided those data
11 points?

12 THE WITNESS: Just the data points.

13 EXAMINER EZEANYIM: In this new one?

14 THE WITNESS: Yes. But we didn't change
15 the map. We just put the label on it.

16 Q. (BY MR. PADILLA) You moved the arrow back, is
17 what you did, right?

18 MR. FELDEWERT: Hold on a second. Can I
19 ask questions about this, Mr. Examiner?

20 EXAMINER EZEANYIM: Can we wait until we're
21 finished, or you want to -- if it's -- I don't want you
22 to forget the question. Yeah, go ahead.

23 MR. FELDEWERT: Well, I'm just trying to
24 figure something out.

25

CROSS-EXAMINATION

1

2 BY MR. FELDEWERT:

3 Q. You said you moved some arrow back to display
4 this new data point?

5 A. The data point was not displayed, not with the
6 arrow. It was hidden. It was just not printed.

7 Q. Okay. So you didn't move any arrow that was
8 covering up the data point. You just didn't have it on
9 your map?

10 A. That's correct, the point itself. The well was
11 there, but the point itself was not labeled as the other
12 points, as you mentioned the 54 points.

13 Q. And you didn't have it on any of your other
14 prior maps, correct?

15 A. That particular point, probably not.

16 Q. On any of the maps that you presented to
17 Chevron at the November 20th meeting, you didn't have
18 any data point on there, did you?

19 A. What's that?

20 Q. I said that data point wasn't on any of the
21 maps you presented at the November 20th meeting?

22 A. Oh, no.

23 Q. And it wasn't on the map that you initially
24 prepared for the hearing here today, correct?

25 A. That's correct. However, it's exactly the same

1 map that we're talking from yesterday. You complained
2 that it didn't have a point 19. We provided it for you.

3 Q. Looks like you changed your contouring, didn't
4 you?

5 A. No. It doesn't change the contouring. We just
6 labeled it 100. No change in the contouring.

7 I would like to go to page 5.

8 EXAMINER EZEANYIM: And you brought in the
9 101?

10 THE WITNESS: Yes. It was just -- it was
11 just adding the label for the data point.

12 EXAMINER EZEANYIM: Okay. Go ahead.

13 Are you done with your questions,
14 Mr. Feldewert? Can we proceed?

15 MR. FELDEWERT: Yes.

16 THE WITNESS: All right. I would like to
17 skip over to page 5 of this report.

18 CONTINUED DIRECT EXAMINATION

19 BY MR. PADILLA:

20 Q. What does that page 5 contain?

21 A. Page 5 contains a table, and this table is the
22 output of the post-frack modeling from the program
23 Fracpro.

24 EXAMINER EZEANYIM: I can't find anything.

25 THE WITNESS: Page 5 of the StrataGen

1 report.

2 EXAMINER EZEANYIM: So what are we doing
3 here?

4 THE WITNESS: We're looking at this table,
5 and the table is the output of the frack modeling --
6 The post-frack modeling of the actual frack design and
7 job that we pumped on the Telecaster 3H. And what that
8 is showing is that it was -- they were able to match, in
9 their modeling, all of these specific frack lengths and
10 frack heights for each perforation cluster. And the
11 keynote here is that each cluster appears to have
12 generated one single planar fracture.

13 And what that means is that these fractures
14 are being generated perpendicular to the wellbore. If
15 they were not, then they would be generating multiple
16 fractures. They would be tilted. There would be
17 differences in the pressures, et cetera.

18 It's further evidenced that the stress
19 regime that we are in is consistent with the east-west
20 maximum stress direction and a drilling direction of
21 north to south.

22 On the following page, we also have --

23 EXAMINER EZEANYIM: Before you go to that
24 following page, explain the last column of that.

25 THE WITNESS: The last column is the

1 conductivity that is delivered for the fracture wing.

2 EXAMINER EZEANYIM: You call it Fcd because
3 it's abbreviated? What is Fcd?

4 THE WITNESS: This is the fracture
5 conductivity.

6 EXAMINER EZEANYIM: Oh, okay.

7 THE WITNESS: And it's a parameter that's
8 used to look at the efficiency of the fracture
9 treatment.

10 Q. (BY MR. PADILLA) Mr. Ritter, let me understand
11 that. What you've just explained is that the model maps
12 the actual data that you -- the post frack?

13 A. Yes. And that this modeling is also consistent
14 with the other modeling that was done by Lyle Lehman,
15 and it is consistent with our stress model. So I'm just
16 pointing out that those are all consistent.

17 So further on the next page, if you want to
18 turn there --

19 Q. This is a page with the Telecaster 30-3H post
20 frack?

21 A. Yes.

22 Q. What does that say?

23 A. So these are the initial shut-in pressures that
24 you asked about, the ISIPs, for each one of the stages.
25 Okay? And then the calculated frack gradients. And so

1 you can see a fairly consistent fracture gradient,
2 fairly consistent ISIP across the stages, and that also
3 indicates that we are not running into other fractures
4 or the last frack treatment, the last stage. We're not
5 crashing into it. All these are consistent with that.

6 Q. So how does that relate north-south, east-west?

7 A. This is just further evidence that in our
8 north-south-oriented well, our fractures that we're
9 generating are going east and west.

10 And then we've added some additional data
11 on frack stages just to show how fairly consistent they
12 look in their pressure-pumping scenarios, which would
13 also be indicative of what I've just described.

14 Q. So let's take the Stage 6, on the next page.

15 A. Right. The main -- the main line that you want
16 to look at in any of these fracture treatment lines is
17 the green line, and that is the treating pressure line.
18 So we're watching that as we go across, and the shape of
19 that line and its character, the pressure responses are
20 very similar for these three stages.

21 Q. What does that mean?

22 A. It means that they're consistent. They're not
23 running into each other. They're not creating this
24 geometry that is making it harder to frack the well.

25 Q. So if the natural fracture was running

1 east-west, then you wouldn't have this --

2 A. No. No. You would have a big problem.

3 Q. What would the green line look like?

4 A. Fracture pressures would be much higher.

5 EXAMINER EZEANYIM: What is your y-axis,
6 the unit Y?

7 THE WITNESS: On the left or the right?

8 EXAMINER EZEANYIM: What are the units on
9 this (indicating).

10 THE WITNESS: The main axis that we're
11 interested in here is pressure.

12 So, again, since we cut Lyle's testimony
13 short yesterday afternoon, I just wanted to present the
14 information that supported what his last statement was.
15 And really that's the only reason for these exhibits.

16 Q. (BY MR. PADILLA) What was his last statement?

17 A. His last statement was that the modeling was
18 showing that we were not creating a longitudinal frack.
19 We are creating transverse fracks.

20 EXAMINER EZEANYIM: Explain your blue dots.

21 THE WITNESS: Sure. That means open the
22 wellhead. So these are the different pressure events in
23 the well as we're bringing on -- getting ready to frack.
24 And then 30 is the ISIP at the end of the job.

25 EXAMINER EZEANYIM: Yeah.

1 THE WITNESS: Okay?

2 The next exhibit is the Telecaster 30-3H
3 frack design, and we just provided it for information.

4 Q. (BY MR. PADILLA) That's past the three graphs?

5 A. Yeah. That's past the three graphs.

6 And then I wanted to, last, put in the
7 Endurance Telecaster 3H production history. So this is
8 the result of that frack.

9 EXAMINER EZEANYIM: Which page?

10 THE WITNESS: We're on the last page.

11 Q. (BY MR. PADILLA) Let's go to the
12 second-to-the-last page, and explain that.

13 A. I'll say one thing about this page. So this is
14 the way we do our frack jobs. And we put -- when we see
15 this word, "EconoProp," EconoProp is a trade term for
16 ceramic propping. And when we get further in my
17 testimony today about AFE costs, et cetera, I will point
18 out that our completion costs are approximately
19 \$1 million higher than Chevron's completion costs. Even
20 though our total well cost is 7 million, our completion
21 cost is additional million on top of that due to this
22 ceramic frack proppant.

23 Q. Why ceramic prop matter?

24 A. Because ceramic is a stronger proppant. When
25 you produce these wells that are low permeability, you

1 create a very high pressure drop across the formation
2 very quickly, in light of the well, and then the
3 vertical stress, which we have measured, will begin to
4 crush the sand that is in the fracture.

5 And so we know what the pressures are. We
6 know that the sand crushes relatively close to 6,000 psi
7 or so. And when we back out our hydrostatic and look at
8 what is happening in the early life of the well and the
9 later life of the well, when you're approximately deeper
10 than 10,000 feet in this part of Lea County, then you're
11 in an area where ceramic is stronger than the sand and
12 prevents that crushing from occurring.

13 Q. So that goes to the life of the well?

14 A. Life of the well. This type of completion
15 design will recover more oil because it has -- the
16 proppants will hold up better.

17 The main reason, though, is that the
18 proppants are much rounder. The EconoProp, and another
19 product called Carbolite which is even rounder than
20 EconoProp, is much, much rounder than sand. So if you
21 can imagine pouring a cupful of marbles into a glass
22 jar, they stack up. And that porosity that's created is
23 39.8 percent or so, the ultimate porosity that you can
24 have with spheres. So the EconoProp and the Carbolite
25 stimulate more of a jar of marbles than an angular sand

1 that can be mashed together. And so this, overall,
2 gives you much more higher permeability in the frack,
3 and, therefore, you can distribute your pressure drop
4 across the frack wings much easier. This all leads to
5 more production.

6 In fact, you mentioned yesterday, Richard,
7 that some of these wells can be quite prolific. And the
8 production, if you look at the last page here for this
9 particular well, a 55-day cum is 36,400 barrels, 85 mcf.

10 EXAMINER EZEANYIM: This is for that 3H?

11 THE WITNESS: Yes. This is for the 3H.

12 And I can tell you, as of this morning, the
13 4H, which has only been on production for about seven
14 days, has already cumed over 8,000 barrels. It's even
15 better than this well.

16 EXAMINER EZEANYIM: Who owns the well?

17 You?

18 THE WITNESS: Huh?

19 EXAMINER EZEANYIM: You own the well? Is
20 that your well?

21 THE WITNESS: Yes. And these are 100
22 percent wells. So we're putting all of our money into
23 our technology.

24 EXAMINER EZEANYIM: This is your well, too?

25 THE WITNESS: Huh?

1 EXAMINER EZEANYIM: This is your well, too?

2 THE WITNESS: Yes.

3 EXAMINER EZEANYIM: Okay. Good.

4 THE WITNESS: And this well is on the crest
5 of the same structure that we're been talking about,
6 just due south of Section 18.

7 EXAMINER EZEANYIM: Yeah, I know. It's in
8 Section 30.

9 And they're all north-south wells?

10 THE WITNESS: Yes, they're all north-south
11 wells.

12 So the production history, the way the
13 fracture is at, the stress orientations that we're
14 getting, everything leads us to believe that north-south
15 in this particular area is the correct stress and not
16 east-west. Or I'm sorry. North-south is the best
17 drilling direction. East-west is the stress.

18 And I'll just say, I find it very, very
19 hard to believe that in one half section of the same
20 sand pile, that a regional stress that's in current-day
21 strikes-slip mode can change 180 degrees. I find that
22 very difficult in my experience, with over seven years
23 with Geomechanics, looking at wells all over the world.

24 EXAMINER EZEANYIM: You are talking about
25 Section 18?

1 THE WITNESS: Yes. I'm talking about
2 Section 18.

3 EXAMINER EZEANYIM: Yeah, I know.

4 THE WITNESS: So this is further evidence
5 that we see it as a draped anticline. Actually, it's
6 not. It's a draped feature. It's not an anticline at
7 all. It's just a draped feature. And then we would
8 have the same stress regime in that feature going into
9 Section 18, which is why we have so vigorously opposed
10 an east-west direction. If we thought the permeability
11 or we thought it didn't matter, then we would obviously
12 not have been so strong in our response.

13 EXAMINER EZEANYIM: Okay. Go ahead.

14 Q. (BY MR. PADILLA) Are you done with Exhibit 16,
15 Mr. Ritter?

16 A. Yes. I think I'm ready to go to the AFEs.

17 Q. Let's go on to what we have marked as Exhibit
18 Number 2. In Exhibit 2, the AFE is on the third page.

19 A. Oh. You're going to the actual AFE.

20 Q. Right.

21 A. We can go and look at, line by line, each of
22 the AFEs. If we want to do that, we can, but --

23 EXAMINER EZEANYIM: We don't want to do
24 that.

25 THE WITNESS: I didn't think so.

1 So I have summarized the main components of
2 the AFE for the Endurance Starcaster well, for the
3 Chevron Bell Lake well. And then I've also included, by
4 the same sections, what the last two Stratocaster --
5 last two Telecaster wells actual costs are, and I've
6 included, on the back of that, those two final drilling
7 report days to verify that these are the costs that we
8 are drilling and completing wells for with ceramic
9 fracks in the area.

10 So if I go to that first page, it just has
11 a table. I think we heard testimony from the facilities
12 engineer that there is a marked difference in facilities
13 cost versus our well, and we understand that. We
14 understand that Chevron is designing that to a different
15 standard than we and also anyone else in the area is
16 doing. We are designing ours to the same standards that
17 Concho, Cimarex and Devon are using for their tank
18 batteries. So we're very comparable in that regard.

19 I think the only other comment I want to
20 make is the discussion about fiberglass versus steel,
21 yesterday, seemed to be interesting. Those fiberglass
22 tanks are only water tanks in our battery. So I think
23 he misinterpreted that we actually had water --
24 fiberglass tanks with oil in it. That is not the case.

25 All of our oil tanks are steel and only

1 water tanks are fiberglass, which is common with all the
2 other operators in the area.

3 EXAMINER EZEANYIM: But you don't use a
4 LACT unit?

5 THE WITNESS: No. We do not use a LACT
6 unit. And, quite frankly, I struggle with the -- with
7 the use of a LACT unit unless I'm injecting into a
8 pipeline. Then it takes the place of gauging and also
9 of transfer of the oil into a pipeline. So in that
10 respect, we don't use that in our design, nor does
11 Concho, Cimarex or Devon.

12 Q. (BY MR. PADILLA) Mr. Ritter, before we move on,
13 were you referring to Exhibit 10?

14 A. Yeah. I think I was referring to Exhibit 10-1.
15 I'm sorry.

16 So the one thing I wanted to point out here
17 is we've already talked about the differences in
18 facilities design, and that is the major difference.

19 We do see that we have a difference in the
20 drilling cost that is substantial between the Chevron
21 well and the Endurance well. We're not quite sure why
22 there is such a difference there, but there is a
23 difference.

24 I will take you down to where we looked at
25 completion costs, and our fracture costs and fracture

1 treatment is roughly double the cost of the Chevron
2 well. So I did want to point that out. The reason for
3 that is the ceramic proppant. However, even with a
4 facility cost in place, we see that our overall well
5 costs are about \$7 million. And I will grant the
6 Chevron folks their adjustment to yesterday's number and
7 just call it 8.5 million. We actually have received
8 some of the same benefit that he talked about.

9 You'll notice the difference in tank
10 batteries between Telecaster and Starcaster. We are
11 starting to see drops in price of approximately
12 \$200,000, as we bid out our batteries coming up.

13 So I can confirm that the presentation that
14 Chevron made is real, and we believe those numbers, and
15 we're fine with their representation.

16 EXAMINER EZEANYIM: Okay. Hold on to that,
17 Exhibit Number 10, 10-1. I see four wells here on the
18 left-hand side. Are those the ones in question?

19 THE WITNESS: Yeah. Those are the ones in
20 question. These are the proposed ones.

21 EXAMINER EZEANYIM: The Starcaster 4H is
22 Endurance, and then the Bell Lake is Chevron?

23 THE WITNESS: Chevron.

24 EXAMINER EZEANYIM: For those, I have the
25 total?

1 THE WITNESS: And you can mark through the
2 total AFE costs and call that 8.5 million, if you wish.

3 EXAMINER EZEANYIM: Which one?

4 THE WITNESS: On the Chevron Bell Lake.

5 EXAMINER EZEANYIM: Why?

6 THE WITNESS: Because they testified
7 yesterday that they had reduced their AFE since they
8 sent the AFE out for participation questions.

9 EXAMINER EZEANYIM: Okay. On the
10 right-hand side, I have the Telecaster 3H.

11 THE WITNESS: Yes.

12 EXAMINER EZEANYIM: Who owns those?

13 THE WITNESS: These are Endurance wells.
14 They're 100 percent Endurance wells. These wells are
15 just two miles south of the Starcaster, or the Section
16 18 well, and these are the wells that we are presenting
17 that are IPing. The 3H was over 1,100 barrels per day,
18 30-day IP. Its maximum IP was 1,300 -- no. 1,750
19 barrels, I believe.

20 EXAMINER EZEANYIM: Mr. Ritter, what is the
21 sense of providing those two wells?

22 THE WITNESS: I just wanted to show the OCD
23 and Chevron that we are not providing an AFE that is low
24 for any artificial reasons, that these are our real
25 numbers. And that is the reason.

1 EXAMINER EZEANYIM: Okay.

2 THE WITNESS: So we can go to the economic
3 projection of these.

4 EXAMINER EZEANYIM: What exhibit is that?

5 THE WITNESS: That is 10-2.

6 EXAMINER EZEANYIM: Oh. 10-2? Okay.

7 THE WITNESS: Yeah. It's attached.

8 Q. (BY MR. PADILLA) What conclusions do you draw
9 from that, 10-2 and 10-3?

10 A. So you'll remember that Mr. Sirgo, yesterday,
11 calculated the exact OOIP -- or I shouldn't say exact,
12 but he calculated the OOIP in those two different
13 polygons and then applied a recovery factor to those
14 OOIPs to get the recoverable oil regardless of
15 direction. Okay? And we had those numbers, and I
16 believe they were 365 NPO in the north-south direction,
17 and 280-odd barrels in the east-west direction. So they
18 were already markedly different because we believe there
19 is more sand going north-south than east-west.

20 But then we also applied the factor very
21 similar to what we looked at in Mr. Lehman's -- I'll
22 refer back to it, where if we're drilling the well in
23 the wrong direction, we go from this cream bar
24 (indicating) down to this cream bar in recovery
25 (indicating). And so we use that difference in recovery

1 to handicap the east-west wells.

2 And then we used the actual capital of
3 Chevron the well with the east-west calculation and the
4 actual capital for our well with the north-south
5 calculation.

6 EXAMINER EZEANYIM: Which one is east-west?
7 The first table?

8 THE WITNESS: No. The 10-3 is the
9 east-west.

10 EXAMINER EZEANYIM: The 10-3 is the
11 north-south, right?

12 THE WITNESS: No. 10-2 is north-south.

13 EXAMINER EZEANYIM: And 10-3 is east-west?

14 THE WITNESS: Yes.

15 EXAMINER EZEANYIM: These are wells from
16 Section 30-19? Where did you get these wells from?

17 THE WITNESS: These are the reserves that
18 were calculated by Mr. Sirgo in his deposition.

19 EXAMINER EZEANYIM: Okay. I can take a
20 look at those.

21 THE WITNESS: Okay.

22 So I'll point out two things on the first
23 set of economics. One, the internal rate of return is
24 about 35 percent, which is really right at the lower end
25 of the wells that we drill.

1 EXAMINER EZEANYIM: That percent you're
2 using, going which direction?

3 THE WITNESS: North-south.

4 EXAMINER EZEANYIM: And if you go
5 east-west?

6 THE WITNESS: It's a negative internal rate
7 of return.

8 EXAMINER EZEANYIM: Negative?

9 THE WITNESS: Yes.

10 Q. (BY MR. PADILLA) Where do you show the
11 negative?

12 A. At the bottom of each one of these pages.

13 Now, I'm sure Chevron might think, well,
14 we've handicapped the well too much. We could actually
15 put the full 281 barrels of -- 81,000 barrels in there,
16 and we would still have a PV 10 of zero.

17 EXAMINER EZEANYIM: You are talking about
18 present net worth?

19 THE WITNESS: Yeah, there is present worth
20 as well.

21 So, really, any way we look at the
22 north-south versus east-west well, it's undesirable
23 economically, in our view. And we firmly believe that
24 we will see a detriment to an east-west well because of
25 the stress direction, because of the effects of

1 longitudinal fractures, and we would not recover as much
2 reserves that are actually in the box, in the OOIP box.
3 And so that is the presentation there.

4 Another reason why we have been opposed to
5 this well, even before running this particular set of
6 numbers, we also discussed, I think, this key point in
7 our November 20th discussion with Mr. Schwartz, where I
8 mentioned that we could not get any rate of return out
9 of the well they proposed, and that was our main reason
10 for opposing the east-west, is that we were potentially
11 being force pooled into a well that had a no chance of
12 any recovery of economic funds.

13 EXAMINER EZEANYIM: Excuse me. You
14 mentioned something that I needed to address. You
15 mentioned Mr. Schwartz' name, and you mentioned a
16 meeting. Were you at that meeting?

17 THE WITNESS: I was at that the meeting.

18 EXAMINER EZEANYIM: I mean, you are looking
19 at me like I don't know where he's going to now. Don't
20 know where he's going to now. That might be your
21 position. I don't know. But I wanted to say,
22 Mr. Schwartz and everybody from Chevron and from
23 Endurance, is that you guys met that day, and you were
24 there. If you guys had shared all this information, you
25 guys would not be presenting to me today. I don't know

1 why you guys don't do that. I mean, you guys may have a
2 recent agreement. If you were there --

3 THE WITNESS: If you would like me to
4 comment on the meeting, I will be happy to.

5 EXAMINER EZEANYIM: Yes, I will, because,
6 you know, I have something else I could be doing. If
7 you had agreed to do, we would not be here.

8 THE WITNESS: Yes.

9 EXAMINER EZEANYIM: And I think we have
10 talked a lot. So the point I'm trying really make is,
11 he was at that meeting; you were at that meeting. Did
12 you-all share this information among you, what you have
13 and what you have? I think it's better when you don't
14 go to court for anything. You don't get anything when
15 you go to court or come to hearing. So we could have
16 addressed this issue. I may not have heard about it if
17 you guys agreed to do it.

18 So I'm not going to go back and waste time
19 and tell me what happened at the first -- I don't want
20 to be a part of the meeting. You guys have to have a
21 meeting. Maybe you guys will go back to the drawing
22 table and tell me to dismiss the case. That would be
23 the best thing for me, because I can see that I don't
24 know what I'm going to do.

25 And in this case, it appears I'm not going

1 to decide this baby. Somebody has to be appointed the
2 operator, because there is no way I can do that, because
3 there is one east-west, there is one north-south, and we
4 don't want those to be consent [sic]. So somebody has
5 to be an operator, and I don't know who is going to be.

6 So I'm warning you now, if you guys want
7 to -- maybe after this hearing, may be an eye-opener.
8 You go back to the drawing table, share the information
9 you have, that information, too, and then see whether
10 you can come to an agreement. And I hope that you are
11 going to do.

12 THE WITNESS: Well, in response to that as
13 well, we started off our discussion trying to do exactly
14 as you said, come to an agreement in some way, shape or
15 form with Chevron on this and other opportunities. In
16 fact, we are going to be partners with Chevron in four
17 or five more wells in this area. We never wanted to
18 start off anything that was adversary with Chevron from
19 the beginning. So we actually went down there to meet
20 with them not only on Section 18, but on another
21 proposal we had and some other suggestions about how we
22 might cooperate on some of the other wells.

23 In fact, at that meeting, we also, you
24 know, presented our experience very much. We've
25 presented most of what we presented today, and not much

1 has really changed between now and that meeting, other
2 than the fact that we have tried to communicate with
3 them.

4 In fact, we can probably introduce other
5 exhibits from today, all the e-mail and different
6 conversations and options that we provided to Chevron at
7 three or four different opportunities. In fact, once
8 we, unfortunately, had to kind of try to climb up the
9 management ladder at Chevron to get some response
10 because we were not getting a response on the proposals
11 and efforts that we are using. So we can share those
12 and put them in for your reading.

13 But we feel like we have made every effort
14 not to be in front of you here today. We have the
15 science to back up what we're doing. We have the
16 experience in the area. We're applying that. We think
17 we can make very good wells. I mean, all of our wells
18 that we are making now are in the top 10 percent or
19 higher than any of the Bone Spring wells in the entire
20 play. And Chevron is a partner in the east half of 29,
21 which we are designated the operator, and we have signed
22 an operating agreement and JOA. So it's not that we're
23 not going to be partners. We're going to be partners.
24 And we hated to come here and air our laundry out as
25 well, but, unfortunately, we were forced to.

1 The well was spudded before we were
2 notified for pooling, and we're really, you know,
3 concerned that that's how it got started.

4 EXAMINER EZEANYIM: Yeah. I like the fact
5 that you say you're going to fight with Chevron. I
6 don't like it when that happens. Because if you start a
7 fight, the fight collects, and then you guys come in for
8 compulsory pooling every time. I like to have order and
9 keep -- we don't want to fight with you or whoever in
10 the area, and that is the best thing to do, you know.

11 I used to be there. We can negotiate these
12 things and see where we can come to agreement to be able
13 to do the right thing. I mean, that's okay. I agree
14 with you. We didn't come here to bruise the eye and
15 everything. That's not why I'm here. I'm here to, you
16 know, make a determination on which well to go. I don't
17 know until I'm submitted all the facts. I don't know
18 now because there is a lot of information in front of
19 me. I have to go back to the information and see what I
20 can do.

21 Okay. Go ahead. Do you want to continue
22 with him, or are you done?

23 MR. PADILLA: Mr. Examiner, I would simply
24 like to hand you what we've marked as Endurance Exhibit
25 Number 17 and ask you to take administrative notice of

1 that. Those are correspondence to the director of
2 Division concerning the commencement of the Chevron
3 well.

4 MR. FELDEWERT: Which exhibit? 17?

5 MR. PADILLA: 17. This correspondence
6 is --

7 EXAMINER EZEANYIM: So you wrote this after
8 you knew they started the well, right?

9 MR. PADILLA: Yes. That includes
10 Mr. Feldewert's --

11 THE WITNESS: We saw the rig on location.
12 We didn't know the well had started.

13 EXAMINER EZEANYIM: Do you oppose taking
14 administrative notice of this?

15 Is this an exhibit or what? Do you want to
16 admit it?

17 MR. PADILLA: Well, it could be admitted as
18 an exhibit, but this is a background of how this whole
19 thing started.

20 EXAMINER EZEANYIM: What do you want to do,
21 because I --

22 MR. PADILLA: Introduce it as an exhibit.

23 EXAMINER EZEANYIM: You want to introduce
24 it as an exhibit.

25 Okay. Now, how many exhibits do you want

1 to admit, so I can ask them whether they have any
2 objection.

3 MR. PADILLA: I'm sorry?

4 EXAMINER EZEANYIM: How many of them do you
5 want admitted into evidence, because we need to admit
6 them.

7 MR. PADILLA: Oh, okay. Exhibit 17,
8 Exhibit 10 and Exhibit 11.

9 EXAMINER EZEANYIM: Okay. Start from --
10 10, 11.

11 MR. PADILLA: I think we referred to the
12 AFE, which I can introduce through our land person.

13 EXAMINER EZEANYIM: So 10, 11, 17?

14 MR. PADILLA: Yes.

15 EXAMINER EZEANYIM: Do you have any
16 objection?

17 MR. FELDEWERT: No.

18 EXAMINER EZEANYIM: Exhibits 10, 11, 17
19 will be admitted into evidence.

20 (Endurance Resources, LLC Exhibit Numbers
21 10, 11 and 17 were offered and admitted
22 into evidence.)

23 EXAMINER EZEANYIM: Are you done with
24 Mr. Ritter?

25 MR. PADILLA: No. Let me ask one final

1 question.

2 Q. (BY MR. PADILLA) Mr. Ritter, would approval of
3 the Endurance application be in the best interest of oil
4 and gas and correlative rights?

5 A. Yes, it would.

6 MR. PADILLA: That's all I have of this
7 witness.

8 EXAMINER EZEANYIM: Thank you.

9 Cross-examine?

10 MR. FELDEWERT: Mr. Examiner, I notice
11 we've been at it for an hour and a half. Any chance we
12 could break to use the facilities before we start the
13 cross-examination?

14 EXAMINER EZEANYIM: Okay. Sure. You guys
15 want to take a break, because I want to go, because we
16 have to be done and finished by 12:00?

17 MR. FELDEWERT: Before we take a break, I
18 notice that Mr. Ritter has a number of documents in
19 front of him. I think some of them are exhibits, and
20 some are not.

21 So can I take a look at what you have in
22 front of you, Mr. Ritter, during the break?

23 THE WITNESS: Oh, sure. They're just --
24 they're just -- I'll tell you what they are.

25 MR. FELDEWERT: Why don't you state for the

1 record.

2 THE WITNESS: They're the same questions
3 that you read -- did your discussion with. I just had
4 my own copy.

5 MR. FELDEWERT: Okay. Do you mind if I
6 take a look at them while we're taking the break?

7 THE WITNESS. Sure.

8 (Break taken 10:35 a.m. to 10:54 a.m.)

9 EXAMINER EZEANYIM: Mr. Feldewert.

10 MR. PADILLA: Mr. Examiner, before he
11 starts his cross-examination, I have one additional
12 question.

13 EXAMINER EZEANYIM: Okay. Go ahead.

14 Q. (BY MR. PADILLA) Mr. Ritter, Chevron has
15 already commenced the well here and has gone to 5,000
16 feet. Do you have any thoughts on how that could be
17 remedied if your application is approved?

18 A. If the well is indeed at that depth, of 5,000
19 feet, it would make a very good saltwater disposal well
20 for the field area. So it could be utilized in that
21 capacity.

22 EXAMINER EZEANYIM: Which well?

23 MR. PADILLA: The well that Chevron already
24 started.

25 EXAMINER EZEANYIM: What was your question?

1 MR. PADILLA: My question is: If the
2 Endurance application is approved, how can that well be
3 utilized in order not to waste that effort?

4 EXAMINER EZEANYIM: Oh, okay. Okay. What
5 was the answer?

6 THE WITNESS: Yes. So it could be used as
7 a saltwater disposal well. I'm not sure if it's been
8 cemented to 5,300 with casing. There is nothing in the
9 record with the OCD.

10 Has it been cemented at 5,300 feet? I
11 guess that's a question I'll throw out? But if so, it's
12 also next to a road, so it would be -- it would make a
13 very good saltwater disposal facility area.

14 EXAMINER EZEANYIM: Go ahead.

15 MR. PADILLA: That's all I have.

16 CROSS-EXAMINATION

17 BY MR. FELDEWERT:

18 Q. Mr. Ritter, you're aware that if Endurance
19 really believes that the east-to-west well is not going
20 to be economic, that you could opt out of the well,
21 correct? I mean, you don't have to participate.

22 A. That is possible. But I'm 55 percent of the
23 north half, and why would I want to just walk away from
24 \$700,000 of lease costs?

25 Q. You have now seen the evidence that Chevron's

1 presented here yesterday morning.

2 A. I did.

3 Q. And you had a chance to review it, right?

4 A. I have.

5 Q. Do you agree with their interpretation of the
6 Section 18 area?

7 A. No.

8 Q. Are you entrenched in a north-south well?

9 A. I'm only entrenched in the north-south well
10 because of the permeability that is being exhibited
11 across this entire section. The permeability would be
12 higher. We could demonstrate the permeability that was
13 higher. If the permeability was something similar to
14 the Macho Nacho area, which you identified as something
15 similar to what we have here, then I could be inclined
16 to go in that direction. But there is no evidence. In
17 fact, all the evidence we have is pointing to a low
18 permeability, and that requires the direction to be
19 transverse and to include as many fracks as possible.

20 Q. What is the permeability of what you call the
21 pile of sand in Section 20?

22 A. It's between .005 and .05 millidarcies.

23 Q. .005 and .05?

24 A. Yes.

25 Q. In Section 20, in that pile of sand, you'd be

1 drilling in?

2 A. That's correct.

3 Q. But as I understand your testimony -- and
4 correct me if I'm wrong -- your company has taken a
5 position that you would only agree to development if
6 it's north to south in Section 18?

7 A. Yes. And, in fact, I shared that on our
8 November 20th meeting with Chevron. That was the entire
9 intent of us going down and trying to work out some
10 other option.

11 Q. Right. But my point is -- my point is at that
12 meeting, and again today, you're saying, We're not going
13 to agree to anything but the north-south well; is that
14 correct?

15 A. That's correct.

16 Q. Now, you have proposed a well in Section 19,
17 correct?

18 A. We have.

19 Q. And that's a north-to-south well?

20 A. That is correct.

21 Q. Has the company drilled mile-and-a-half
22 laterals in other areas of the Basin?

23 A. Have we? No.

24 Q. Are you aware that other companies have in the
25 2nd Bone Spring?

1. A. There are companies that have.

2 Q. And do you believe that one of the optimal ways
3 to proceed in the 2nd Bone Spring Sand is to drill a
4 mile-and-a-half well?

5 A. I haven't seen the evidence that that is
6 optimal. In fact, all the extended-reach wells we have
7 built there have had EUR less than the wells we are
8 currently producing in the area. In addition, they have
9 a lot of mechanical risk in the completion. And the
10 only way that we would engage in a 7,500-foot-plus well
11 would be if we were trying to secure a lease from
12 expiration. Then we would consider it. That would
13 really be the only internal consideration that I would
14 have to that.

15 Q. I thought you had proposed to Chevron a
16 mile-and-a-half lateral?

17 A. We did, extending from the south half of
18 Section 20 into Section 29.

19 Q. Have you discussed that with Chevron?

20 A. It's not a mile and a half.

21 Q. What is it?

22 A. It's roughly 5,700 feet or 5800 feet. It's not
23 a full 7,500 lateral.

24 Q. Roughly a section and a half?

25 A. No. Roughly a section and a quarter.

1 Actually, less than a section and a quarter because of
2 offsets.

3 Q. But you've talked about extending a lateral and
4 beyond the section lines into another section in the 2nd
5 Bone Spring Sand, haven't you?

6 A. Only to capture what would be the orphaned sand
7 that is currently there to prevent waste, as we've
8 discussed.

9 EXAMINER EZEANYIM: Excuse me, please.
10 Excuse me, please. The section of the well -- you're
11 asking about a section and a quarter? I thought it's
12 just a section.

13 THE WITNESS: We're not here -- it's in one
14 of the other areas that we are partners with Chevron.

15 EXAMINER EZEANYIM: It's a different well?

16 THE WITNESS: Different well.

17 EXAMINER EZEANYIM: When I hear about a
18 section and a quarter, I think of 160 acres, but if it's
19 different well to get something, okay. I'm not
20 interested in that, but I'm interested in the well that
21 is in that east half-east half, which is just 160,
22 right?

23 THE WITNESS: That's correct.

24 EXAMINER EZEANYIM: The way you are
25 asking -- I mean, I don't want to ask you a question --

1 the one that has been drilled somewhere, I don't know
2 about that, right? I don't know about that well?

3 THE WITNESS: You don't know about that
4 well.

5 EXAMINER EZEANYIM: I don't know about
6 that, but I have to ask.

7 Q. (BY MR. FELDEWERT) So if I look at -- let's
8 take your Exhibit 16. Do you have that? Would you pull
9 that out in front of you, please?

10 EXAMINER EZEANYIM: 16?

11 MR. FELDEWERT: Endurance's Exhibit 16.
12 That's the one that was just recently submitted.

13 Q. (BY MR. FELDEWERT) Right? Isn't that your
14 exhibit?

15 A. It is. It is. Mine is missing the first
16 couple of pages.

17 Can I grab a copy?

18 MR. PADILLA: Sure.

19 MR. FELDEWERT: And, Mr. Examiner, I advise
20 you to go to the fourth page of that exhibit.

21 EXAMINER EZEANYIM: Fourth page?

22 MR. FELDEWERT: Fourth page.

23 Q. (BY MR. FELDEWERT) Okay. We're on the fourth
24 page of Exhibit 16, right?

25 A. Yes.

1 Q. My point of this, Mr. Ritter, is that you have
2 already proposed a well in the east half-east half of
3 Section 19, which is just south of Section 18, correct?

4 A. That's correct.

5 Q. And didn't you indicate to Chevron in your
6 discussions about extending a well out of Section 20,
7 south, into Section 29?

8 A. Yes.

9 Q. That you thought, in the 2nd Bone Spring Sand,
10 a longer lateral is optimal for the area?

11 A. No. The longer lateral is not optimal for the
12 area. The reason for the lateral is that there is an
13 orphaned 40-acre parcel in Section 20 that no one would
14 ever be able to recover the oil from, and, therefore, we
15 would propose to add that 40-acre section so that we
16 would not be wasting oil, as Mr. Ezeanyim is interested
17 in.

18 Q. So one option, if you're really entrenched in a
19 north-south orientation in the area of Section 18, is
20 that you take your Section 19 well and extend it up on
21 the section and cover the south half, right?

22 A. I don't know any of the south half.

23 Q. But you do pool that acreage, just like you're
24 trying to pool here today?

25 A. I could, but the owner of that acreage, who is

1 BTA, who has protested to your well as well, who has, in
2 the letter that they've protested to you and to the
3 Commission --

4 Q. They want a stand-up well.

5 A. -- stated that they want a stand-up well in 18.

6 Q. Right. So you can extend your --

7 A. And that they wanted to join us to drill it.

8 Q. I agree. They did say that.

9 So if you can extend your Section 19 well
10 into the south half of 18, you can accommodate your
11 desire to have a stand-up well in Section 18, in the
12 south half, and your desire and BTA's desire to have a
13 stand-up well in Section 18. And that's all federal
14 acreage, isn't it?

15 A. That is.

16 So Section 19 -- or Section 29 is a
17 combination of state and federal, and we've pooled that
18 before as well.

19 Q. So it can be done?

20 A. It can be.

21 Q. Is that an option that you have considered with
22 these -- both parties' desire here, to try to develop
23 this acreage?

24 A. No, because we own half of Section 18 at the
25 moment. This would have been something that we could

1 have discussed if we were able to discuss this at our
2 20th meeting. And the three or four subsequent times
3 that we they gave options --

4 Q. Are you willing to consider that now?

5 A. No.

6 Q. You're not?

7 A. No, because we were forced to purchase acreage
8 to defend our spot up there, and you're asking to give
9 it away. I'm sorry. And it's a waste. The well you
10 drilled will be a waste for everybody.

11 Q. Okay. And if you really feel that, you could
12 opt out of that well, correct?

13 A. Do you want to pay me for all of my acreage
14 costs?

15 Q. I'm just trying to see --

16 A. In fact, Chevron's never offered that. In all
17 of our discussions, they've never offered.

18 Q. Did you review our pre-hearing statement here
19 today that we filed before this hearing?

20 A. I believe so.

21 Q. And didn't it indicate in that pre-hearing
22 statement that one option for Endurance would be to
23 extend its proposed east half-east half well into
24 Section 19, up into the south half of Section 18, so
25 they could accommodate your desire and BTA's desire to

1 have a stand-up well? And Chevron could have a lay-down
2 well in the north half of 18, and then we'd have actual
3 data for these two sections.

4 A. We have actual data. We have wells drilled on
5 here. We have wells producing over 1,500 barrels a day.
6 We don't need to waste it.

7 Q. You're not willing to consider that? Is that
8 what I'm hearing?

9 A. I was willing to consider many things during
10 the many meetings that we attempted to have with
11 Chevron, the calls that we had with Tom Krause.

12 Q. I'm just trying to help things out now. I'm
13 just asking: Are you willing to consider that now?

14 A. If we would have been helped out, we would have
15 had an opportunity to work this out before a hearing.
16 And this only gave me the option -- in fact.
17 Mr. Schwartz commented to us that our option was a
18 bidding war.

19 Q. My question is: Are you willing to consider
20 that option now?

21 A. No.

22 MR. FELDEWERT: May I approach the witness,
23 Mr. Examiner?

24 EXAMINER EZEANYIM: Sure.

25 Q. (BY MR. FELDEWERT) I'm going to hand you what

1 I've marked as Chevron Exhibits 34 and 35.

2 A. Are you offering to buy me out of Section 18,
3 or just opt out, just leave my money on the table?

4 Q. Mr. Ritter, we have in front of us --

5 MR. FELDEWERT: Mr. Examiner, I would
6 also -- we're going -- just so I can streamline and make
7 it quicker here. You already have in front of you page
8 4 of Exhibit 16.

9 EXAMINER EZEANYIM: This one?

10 MR. FELDEWERT: Yes.

11 EXAMINER EZEANYIM: Yeah, I do.

12 MR. FELDEWERT: The other thing I'm going
13 to refer to during his examination is Chevron Exhibit
14 11, so if you could lay that out in front of you.

15 Q. (BY MR. FELDEWERT) And, Mr. Ritter, if you
16 could do the same thing, too, please, Chevron Exhibit
17 11, in the notebook.

18 A. (Witness complies.)

19 Q. Now, Mr. Ritter, are you familiar with Chevron
20 Exhibit 34?

21 I'm sorry. Let me have you catch up. Turn
22 to Exhibit 11 in the notebook. Lay that out in front of
23 you.

24 A. All right.

25 Q. There you go. Put it to the right and get it

1 out of the way.

2 Then I want you to look at Chevron Exhibit

3 34. That's one of the two maps I just handed to you.

4 A. Got it.

5 Q. Got it?

6 A. Uh-huh.

7 Q. Are you familiar with that map?

8 A. Yes.

9 Q. Isn't that map you presented at the November
10 20th hearing?

11 A. It is.

12 Q. And was the same methodology used to create
13 this map as was used to create the new map that you just
14 introduced here this morning, which is on page 4 of
15 Exhibit 16?

16 A. The methodology might have been the same. But
17 we've drilled significantly more wells since that time,
18 so it may have been updated.

19 Q. So the methodology is the same, correct?

20 A. I'd have to ask Mr. Harris if it's exactly the
21 same. I would assume it is.

22 Q. And then Exhibit 35, what's been marked as
23 Chevron Exhibit 35, are you familiar with that? Have
24 you seen that map before?

25 A. I may have. Can you -- it seems

1 unrepresentative because all the context has been taken
2 off. Was there any headers on this before at any time?

3 Q. No.

4 A. All the maps that we have ever given Chevron
5 have actual --

6 Q. I'll represent to you that this is a map that
7 Chevron sent -- or Endurance sent to Chevron on December
8 19th? Remember that e-mail?

9 A. Can you tell me which person is that?

10 Q. I believe it was from Mr. Sirgo.

11 A. It's from Mr. Sirgo --

12 Q. To Chevron.

13 A. -- to Chevron to -- what's the lady's name?

14 Q. Someone. I don't remember.

15 A. She's the head land person.

16 Q. So you're familiar with that?

17 A. We did send a copy of that.

18 Q. And you attached this, what's been marked as
19 Chevron Exhibit 35, correct?

20 A. If that is where it came from, I'll agree that
21 that's -- but --

22 Q. My question is: Was the same methodology used
23 to create Chevron 35 as was used to create 34, and then
24 what is the new map in Exhibit 16? Is it the same
25 methodology?

1 A. I will have to ask Mr. Harris. He's the one
2 who constructs the maps.

3 Q. Do you have any reason to believe it's a
4 different methodology?

5 A. Unless -- unless he tells me they've added
6 wells or they've looked at porosity cutoffs differently,
7 I can't tell you that without conferring with him.

8 Q. And then in addition to these two maps and the
9 map on page 4 of Exhibit 16, when you came to hearing
10 today -- or yesterday, you brought the map which is on
11 page 3 of Exhibit 16.

12 A. Yes. We brought the map.

13 Q. So we've had four maps, different maps,
14 correct?

15 A. That's correct.

16 Q. If I look at the first map you gave to Chevron,
17 which is Exhibit 34, I'm looking over in Section 20.

18 EXAMINER EZEANYIM: What are we looking at?
19 Which one?

20 MR. FELDEWERT: Take Exhibit 34, and I want
21 to compare it with their new map they gave us this
22 morning, which is page 4 of Exhibit 16. Okay?

23 EXAMINER EZEANYIM: Yeah.

24 Q. (BY MR. FELDEWERT) Now, Mr. Ritter, you'll see
25 in Section 20, which is an area that you-all have

1 developed, correct?

2 A. Uh-huh.

3 Q. And you claim to have a lot of knowledge about
4 this Section 20 because of your development?

5 A. That's true.

6 Q. You see the data point there in the southeast
7 quarter of Section 20? It says "Section 69"?

8 A. Yes.

9 Q. And if I go to the map you brought here this
10 morning and I go to that same data point, it's now
11 changed to 74.

12 A. I see that.

13 Q. Can you explain the change?

14 A. I cannot explain it, but Mr. Harris, I'm sure,
15 can. Would you like to call him?

16 EXAMINER EZEANYIM: Where is 69 on 34?
17 Where is 69?

18 THE WITNESS: We're talking about four feet
19 of net pay represented on this particular map.

20 MR. FELDEWERT: So I'm looking at the
21 southeast quarter of Section 20, Mr. Examiner, of
22 Exhibit 34.

23 EXAMINER EZEANYIM: Okay. Okay.

24 MR. FELDEWERT: I'm comparing that data
25 point to the --

1 EXAMINER EZEANYIM: Okay. 69 on Section
2 20. Then on page 4, it turns to what?

3 MR. FELDEWERT: 74.

4 THE WITNESS: Big change from yesterday?

5 Q. (BY MR. FELDEWERT) And then if I go to the data
6 point in Section 29 -- you see you have two data points
7 there in Section 29 on Exhibit 34?

8 A. I see 16 and 69, yes.

9 Q. And if I go to your new map presented here
10 today, I did see a data point of 60 in that same
11 section. You-all dropped the data point of 69?

12 A. Well --

13 Q. Is there a reason for that?

14 A. It might have been dropped at the same time,
15 since it's not on the current map --

16 Q. Can you explain that?

17 A. I would explain it by the same reason that we
18 had dropped off the 101 and returned the map to you
19 today.

20 Q. That's the next point I wanted to go to. If I
21 go to the map that you presented as Chevron Exhibit 34
22 back in November and I go to Section 19, and I compare
23 it to the map you brought here this morning for the
24 first time, which is Exhibit 16, I now see a data point
25 of 101 in Section 19 that wasn't in your previous map,

1 correct?

2 A. That is true.

3 Q. If we go up into Section 18 -- and I'm looking
4 at Exhibit 34 -- I see two data points in Section 18 in
5 Exhibit 34 of 51 and 48 that you-all presented, correct?

6 A. Uh-huh.

7 Q. And I go to your new map today and I see what?
8 Different numbers.

9 A. I see a 54 and a 48.

10 Q. I see a 54 --

11 A. . And a 48.

12 Q. -- and a 54 and a 48 in your new map here
13 today.

14 A. The same 54 and 48 that was in this map is in
15 this map that was presented.

16 Q. I'm looking at Exhibit 34.

17 A. I see that.

18 Q. Do you see a 54 in Exhibit 34, in Section 18?

19 A. Yes. Right here (indicating). Shall I point
20 it out for you?

21 Q. I'm sorry. I'm looking at Exhibit 34. There
22 you go, right there. Look at that one.

23 A. Yeah.

24 Q. Look at Section 18.

25 A. Yeah.

1 Q. Do you see a 54 in Section 18?

2 A. No. I see a 51.

3 Q. There you go, a 51 and then a 48, correct?

4 A. That's correct.

5 Q. Now, if I go to the second map that you sent to

6 Chevron in December -- let's go to Chevron Exhibit 35.

7 Same methodology as far as you know, right?

8 A. Sure.

9 Q. It's only one month later, right?

10 A. (No response.)

11 Q. Is that about when you sent it?

12 A. Yeah.

13 Q. If I go to Section 20, again I see a data point

14 there of 69 --

15 A. Uh-huh.

16 Q. -- which I don't see in your new map today.

17 Again, it's 74 on your new map today.

18 A. Yes. That was in the new map of yesterday as

19 well.

20 Q. Then if I go down into Section 29 on Exhibit

21 35, I see two data points again, 60 and 69. Do you see

22 that in the north half of Section 29?

23 A. North half of 29?

24 Q. Yeah.

25 A. 60 and 69. Yes, I see those.

1 Q. If I go to the new map here today, in the north
2 half of 29, and again you dropped off the 69 data point.

3 A. I would presume it's the same reason that we
4 dropped off the 101 and the other data point. They are
5 just labels.

6 Q. Okay. So if I go to Section 19, which is
7 mapped a little differently than what you've got on page
8 4 of Exhibit 16, you don't have your 101 data point
9 there, do you?

10 A. In Section 19? No.

11 Q. In fact, it's contoured -- Sections 20 and 19
12 are contoured differently in Exhibit 35 than they are in
13 the new map you presented here this morning.

14 A. Yes. I can see that.

15 Q. Now, let's go up into Section 18. If I compare
16 Chevron Exhibit 35 to the new map you presented here
17 this morning, you now have -- in Exhibit 35, you now
18 have three data points, correct? You had a 51, a 54 and
19 a 48 in Section 18.

20 A. Uh-huh.

21 Q. I come to your map here this morning, that you
22 gave us here this morning, and now you've once again
23 changed the data point in Section 18, in the south half
24 of the south half of Section 18. Do you see that?

25 A. 51 to 54, is that what you're referring to?

1 Q. Yes. So you changed the data point again,
2 correct?

3 A. The data point could have been changed.

4 Q. Okay.

5 A. Again, Mr. Harris could tell you.

6 Q. All right. Now, which map is more accurate?
7 Which one should we use today? Which one today do you
8 think that the company and the Division should use in
9 its analysis? That's my question to you.

10 A. I think, as most maps -- in the evolution of a
11 map, the most current is usually the best.

12 Q. So is it still evolving?

13 A. It evolves as we drill more wells on the block,
14 yes. But I'd like to know where we're going.

15 EXAMINER EZEANYIM: Let's stop right here.

16 Counselor, what are we trying to establish,
17 because I'm not following you? What are we trying to
18 establish by these data points not present here and
19 present -- what are we trying to establish?

20 MR. FELDEWERT: I'm trying to establish,
21 number one, it keeps changing. They're still trying to
22 settle on their maps, Mr. Examiner, and I think it seems
23 to be adjusting as we move forward with this hearing.

24 EXAMINER EZEANYIM: Number one. Number
25 two?

1 MR. FELDEWERT: All right. Number two I
2 want to get to in a minute.

3 EXAMINER EZEANYIM: What?

4 MR. FELDEWERT: I want to get to the second
5 point.

6 EXAMINER EZEANYIM: So one of the reasons
7 why you are asking these questions is because you think
8 they did a point change, right?

9 MR. FELDEWERT: Yeah.

10 EXAMINER EZEANYIM: Okay. Tell me number
11 two.

12 Q. (BY MR. FELDEWERT) Okay. Number two,
13 Mr. Ritter -- let's go into the map you suggest we
14 should now use, which is page 4 of Exhibit 16. Okay?

15 A. I can look at that. I'll remind you, I'm not a
16 geologist. While I'm an engineer, I'm really wondering
17 why you're not calling the geologist who is in charge of
18 making these maps and asking the questions.

19 Q. I am examining the witness that presented this
20 new map for the first time this morning. That was you,
21 correct?

22 A. Fair enough. Go ahead.

23 Q. Okay. Let's go to the fourth page of Exhibit
24 16.

25 A. Sure.

1 Q. Now, you have proposed an east half-east half
2 well in Section 19?

3 A. Yes.

4 Q. Correct?

5 A. Yes.

6 Q. And it's shown on here, the proposed well?

7 A. Yes, it is.

8 Q. In fact, you show all your proposed wells on
9 this particular map, don't you?

10 A. Yes.

11 Q. I mean, this map is not representative of wells
12 that have actually been drilled?

13 A. I can point out the wells that have been
14 drilled for you, sir. It would take a minute.

15 Q. Are the ones that have been drilled in red
16 boxes?

17 A. The ones that have been drilled are in -- have
18 been in red boxes, and there have been additional wells
19 drilled. If you would like to hear which ones, I will
20 tell you.

21 Q. Okay. I'm just trying to figure out. The well
22 in the east-half-east half of 19 is the one you have
23 proposed?

24 A. That is true. No wells have been drilled in
25 19.

1 Q. And that's federal acreage?

2 A. That is federal acreage.

3 Q. And if I look at the east half of the southeast
4 quarter of Section 18 -- do you see that?

5 A. Slow me down here. The east half --

6 Q. Of the southeast quarter of 18.

7 A. Of the southeast quarter. Okay.

8 Q. That, again, is federal acreage?

9 A. Yes.

10 Q. And if you so desire, you could extend that
11 proposed well in Section 19 into that east half of the
12 southeast quarter of Section 18, and you'd have similar
13 sand; would you not?

14 A. I don't -- I don't desire to do that for a
15 number of reasons.

16 Q. Okay. Based on your study, you'd have similar
17 sands in the east half of the southeast quarter of
18 Section 18 as you do under Section 19 under your map.

19 A. Say that one more time. I'm sorry.

20 Q. Based on your mapping, you've had similar
21 porosity in the sands in the east half of the east half
22 of Section 19, as you show in the east half of the
23 southeast quarter of Section 18?

24 A. That's true.

25 MR. FELDEWERT: That was my second point,

1 Mr. Examiner?

2 EXAMINER EZEANYIM: What is the second
3 point?

4 Q. (BY MR. FELDEWERT) That you could extend that
5 east half-east half well in Section 19 into the east
6 half of the southeast quarter of Section 18 with a
7 mile-and-a-half lateral and have similar sands being
8 developed on that federal acreage.

9 A. And have additional drilling risk and
10 completion risk and disparate owners between the blocks.

11 Q. Now, I'm looking now at your Exhibit 11.

12 A. Which page?

13 Q. Go to the second page.

14 A. Okay.

15 Q. Now, this was not created to orient the wells
16 that you have drilled in Section 20 or in Section 30,
17 correct?

18 A. That is true. It was not designed -- this
19 study was not designed just to orient those wells. We
20 have already picked the orientation based on all of the
21 offset EUR data and regional trends. We actually knew
22 the regional stress direction prior to the study, so
23 there was no reason to wait.

24 Q. And if you look at the second page of this
25 exhibit, it says -- this study says: "The stress regime

1 is most likely strike-slip faulting," and it gives their
2 equation. Do you see that?

3 A. Yes, I do.

4 Q. And then the third bullet point down, under the
5 first bullet point down, says that the SHmax azimuth of
6 that is negative 80?

7 A. Yes, approximately 80 degrees.

8 Q. This report says it's assumed, correct?

9 A. Yes.

10 Q. From regional experience in entire Lea County?

11 A. In the southeast Lea County area.

12 Q. Well, that's not what this says. This says:
13 "The SHmax azimuth of negative 80 is assumed from
14 regional experience in Lea County, New Mexico." Do you
15 see that?

16 A. I do see that, but I also know that the person
17 who prepared this report knew exactly what part of Lea
18 County he was looking at when he made this statement.

19 Q. And that individual was the one that put this
20 statement?

21 A. That's true. I have not altered any of these
22 statements. These come directly from the third party.

23 Q. So this particular study doesn't focus on the
24 geology -- what appears to be the geology in Section 18,
25 does it? This is more of a regional report?

1 A. For the area, yeah, for what we call our Caster
2 area, which includes Section 18. But this sand pile --
3 this entire sand pile we would consider one area, and
4 that's the focus of this study, yes.

5 Q. And if I go to the wells that you reference in
6 this particular study, and I look at your --

7 MR. FELDEWERT: I hope you still have this
8 out, Mr. Examiner, the fourth page of Exhibit 16.

9 EXAMINER EZEANYIM: Uh-huh.

10 Q. (BY MR. FELDEWERT) Which wells are referenced
11 in this study and where are they located, Mr. Ritter?
12 Could you point those out on Exhibit 16?

13 A. Sure. I can do that. So the west half of the
14 west half of Section 20.

15 Q. That's one of the wells?

16 A. That's one of the wells.

17 Q. And that's right in the heart of what you call
18 your big, deep sand pile?

19 A. That is true.

20 Q. Go ahead. Where is the next one?

21 A. The next one is the one that's east half -- or
22 east -- yeah, east half of the east half of Section 20.

23 Q. East half-east half of Section 20?

24 A. Yes, sir.

25 Q. More towards the edge of your -- what you have

1 mapped here as your big sand pile?

2 A. Yes. That's correct.

3 Q. Where is the next well?

4 A. It is the Telecaster 3H, so it is in the west
5 half of the east half of Section 30.

6 Q. Section 30. So maybe half of that well
7 includes a big sand pile, right?

8 A. It does.

9 Q. Where is your fourth well?

10 A. The fourth well is the Copperline 1H, which
11 would be the east half of the west half of 29. And it's
12 not in that area.

13 Q. Just off of your big sand pile?

14 A. Just off of it, yes.

15 Q. But it includes a little bit of the red and
16 orange, doesn't it?

17 A. It includes a little bit.

18 Q. The red, the orange and then -- well, it
19 includes whatever that color is between the yellow.

20 A. That's true.

21 Q. It's somewhere between -- what's that contour
22 line?

23 A. Which one?

24 Q. The one at the yellow line.

25 A. The yellow line is -- it looks like it is

1 between 50 and 60. There are two shades of yellow, and
2 my eyes aren't good enough to tell.

3 Q. All right. So this study doesn't involve any
4 data from any wells in Section 19, correct?

5 A. That is true.

6 Q. And it doesn't involve any data from wells in
7 Section 18?

8 A. That is true.

9 Q. Mr. Ritter, this study was not done to
10 determine the natural fractures that exist in Section
11 18?

12 A. It was done to determine the natural fractures
13 that exist in the entire area, but not 18 specifically.

14 Q. As a region?

15 A. Yeah. In this region, yes.

16 Q. Lea County?

17 A. No, not Lea County. This area here
18 (indicating).

19 Q. "Regional experience in Lea County, New
20 Mexico," right?

21 A. Well, if it's over here (indicating), it's
22 still here. This is the area that the study is focused
23 on (indicating).

24 Q. But it didn't focus on any -- trying to
25 determine the natural fractures in Section 18?

1 A. It did not.

2 Q. Would you agree with me that -- now, you've
3 seen Chevron's mapping, correct?

4 A. Yes.

5 Q. And that was based on seismic data. Do you
6 recall that testimony?

7 A. Yes, I recall that.

8 Q. And your map is not based on seismic data?

9 A. No. It's based on very good well control data.

10 Q. Do you have any other maps?

11 A. This is the only one I've ever seen.

12 Q. Now, let me ask you this: Is the SHmax
13 direction derived from your regional model?

14 A. Yes.

15 Q. Would that be the same as an SHmax direction
16 that would form from an anticline?

17 A. No. It's the exact opposite.

18 Q. It would be what?

19 A. Exactly opposite.

20 Q. So you would agree with your witness,
21 Mr. Lehman, that if the Section 18 area has an
22 anticline, which we believe is shown by the seismic data
23 reflected on Exhibits 11 and 12, that you wouldn't
24 orient your well north to south; you'd go east to west,
25 correct?

1 A. If I thought it was an anticline, but I don't.

2 And I have plenty of data to support that it isn't.

3 Q. You don't have any seismic data to support your
4 opinion?

5 A. I think your seismic data does support it. In
6 fact, if you're so worried about it, we could get some
7 seismologist here to look at it. We'd be happy to.

8 Q. You would agree that if an anticline exists in
9 Section 18, you could drill north-south or east-west?

10 A. I can agree to a lot of ifs, but that is not
11 anything to do with what we present.

12 Q. Do you disagree with Mr. Lehman, where he
13 testified yesterday that if an anticline exists in
14 Section 18, that you would drill east to west?

15 A. I think what Mr. --

16 Q. My question is: Do you agree or disagree with
17 what --

18 A. If something looks like the picture that you
19 present here (indicating) -- okay? -- the classic
20 picture -- it has a fault with compression -- you see
21 these here, these lines here, the compression lines
22 (indicating)?

23 Q. Mr. Ritter, I'm trying to get through my
24 question. My question is: Do you agree or disagree
25 with Mr. Lehman's statement yesterday that if an

1 anticline exists in Section 18, as depicted in Chevron
2 Number 11, that you would drill from east to west?

3 A. Which part of Exhibit 11? The map that you
4 have from seismic or the cartoon that you have? I have
5 a different answer for either one. Which one do you
6 want me to agree to?

7 Q. Here is my question. Okay?

8 A. Okay. I'm listening.

9 Q. Let me get my question out. Would you agree
10 with Mr. Lehman that if an anticline exists in Section
11 18, that you would drill from east to west?

12 A. If it existed, then I would agree with
13 Mr. Lehman. However --

14 Q. That's all I'm trying to make sure, see if we
15 can agree.

16 A. Okay.

17 Q. Would you agree that natural fractures that
18 would exist from an anticline like Chevron suggests
19 exists in 18 would change the permeability in the rock?

20 A. If they're open, they would. If they're
21 closed, they won't. And I think I have presented some
22 data regarding the fact that no natural fractures are
23 open in this area.

24 Q. Well, the data you presented was in Sections 20
25 and 30?

1 A. That's true.

2 Q. Not in Section 18?

3 A. That's right.

4 Q. But you would agree with me that if natural
5 fractures exist in Section 18 because of this anticline,
6 that will change the permeability?

7 A. Only if those fractures are open in the current
8 stress, not the stress state that generated this
9 anticline, if that anticline ever existed, which it
10 doesn't.

11 Q. Can you explain, Mr. Ritter, why the
12 east-to-west wells to the southwest of Section 18 that
13 Chevron studied outperformed the north-to-south wells?

14 A. They had a different permeability. We have
15 some information on that area. It's actually a
16 different geology. In fact, it's very different
17 geology. The geology in that --

18 Q. Hold on.

19 A. No, no. You asked me.

20 Q. You're saying the geology down there is much
21 different from Section 18?

22 A. Yes, very different. We just put a log --

23 Q. So would you agree that the geology changes as
24 you move across this Delaware Basin?

25 A. Yes. When you move, you know, two or three

1 sections at a time, of course.

2 Q. So you would agree that as you move two or
3 three sections, the geology changes, and, therefore, the
4 permeability will change?

5 A. It could, yeah.

6 Q. And that would impact -- and the geology could
7 change such that it would impact the orientation of a
8 well?

9 A. If -- if there were orders of magnitude
10 difference, it could, but what we're showing in this
11 slide here, in Section 18, is much, much less than the
12 big sand pile. So the chances of permeability being
13 enhanced in a thinner sand that's falling off of the
14 edge, the chances are that the permeability is going to
15 be less in your Section 18, as a general consensus, than
16 in the middle of the sand pile that is full of porosity.
17 So your -- this geology does not match up with the other
18 geology down here.

19 Q. So we're in a different region?

20 A. We're in a different region, that's correct, a
21 very different region.

22 MR. FELDEWERT: That's all the questions I
23 have.

24 EXAMINER EZEANYIM: Thank you.

25 Any other direct?

1 MR. PADILLA: Just have one, Mr. Examiner.

2 MR. FELDEWERT: Oh. Can I do one thing,

3 Mr. Padilla? I'm sorry.

4 MR. PADILLA: Sure.

5 MR. FELDEWERT: Mr. Examiner, I'd like to

6 move into evidence Chevron Exhibits 34 and 35.

7 EXAMINER EZEANYIM: Any objection?

8 MR. PADILLA: No.

9 EXAMINER EZEANYIM: Chevron Exhibits 34 and
10 35 will be admitted.

11 (Chevron USA, Inc. Exhibit Numbers 34 and
12 35 were offered and admitted into
13 evidence.)

14 EXAMINER EZEANYIM: Go ahead.

15 REDIRECT EXAMINATION

16 BY MR. PADILLA:

17 Q. Mr. Ritter, Mr. Feldewert seems to be making a
18 big point of this Lea County, New Mexico on your
19 geomechanical study. Did you order a geomechanical
20 study for all of Eddy and Lea Counties?

21 A. No.

22 Q. For what area did you order?

23 A. Specifically for this area (indicating), within
24 this 20, 30, 19.

25 Q. And that's shown on the exhibit that --

1 A. Yes. That's been shown on the exhibit.

2 Q. All right.

3 EXAMINER EZEANYIM: You done, Mr. Padilla?

4 MR. PADILLA: That's it.

5 EXAMINER EZEANYIM: Okay. Very good.

6 Before we have the landman, because I've
7 forgotten the crux of the matter, I need to recall the
8 witnesses, if you don't mind. I hope all the witnesses
9 are here that I want to recall.

10 RE CROSS EXAMINATION

11 BY EXAMINER EZEANYIM:

12 Q. Mr. Ritter, before you step down, let me ask
13 you these questions again, because that's why I want to
14 recall these -- I asked you these questions. I've asked
15 you all the questions, but one thing I want to rephrase,
16 from models -- and I'm directed to Section 18. You've
17 done all the studies allowing this, and you agree that
18 if the permeability in Section 18 is determined to be
19 set below .05, then we have to agree north-south. But
20 above .05 or .5, it doesn't really matter where you go,
21 east-west or north-south, right?

22 A. Yes.

23 Q. What is your cutoff permeability, before I
24 recall people I want to recall?

25 A. If I can just reference this (indicating) for

1 my memory.

2 Q. Yes. Because I want to --

3 A. I know exactly -- I know exactly what your
4 question is.

5 Q. Yes.

6 A. Okay. So you're asking if it's above -- if
7 it's .5 or above --

8 Q. .5. If you look at that exhibit -- assuming
9 that's -- okay. .5. So you can see that it is above
10 .5, 1 millidarcy or something.

11 A. Yeah. At this .5 and above, then I would agree
12 with you, that it wouldn't make much difference. Yeah.
13 It wouldn't make much difference. Well, it would
14 make -- actually, there is still -- so there would be
15 this -- it would be about 2 to 3 percent of OOIP, which
16 would be 10,000 barrels.

17 Q. What if -- what if you just say 1 millidarcy?
18 Is that okay? That would be -- if you plug that graph
19 to make a difference.

20 A. You're correct. It wouldn't.

21 Q. It wouldn't?

22 A. No, no. If it was if it was greater than. If
23 it was 1 millidarcy, it would probably be relatively the
24 same.

25 Q. I just wanted to make sure I established that,

1 you know, before --

2 A. Right. But what you are talking about is
3 orders of magnitude in this rock 10 to 20 times what we
4 have incorporated in the area. I just wanted to
5 reference that, too.

6 Q. Let's just take a benchmark of gradient .5.
7 Those can be very, very hard to measure. But let's take
8 .5 -- above .5. It doesn't make too much difference?

9 A. Above that, it would make less difference, yes.

10 Q. Very good.

11 Having established that, let me see if I
12 can --

13 A. Sure.

14 Q. So in that case -- so in that case -- I don't
15 want to go into JOA here. In that case, let's say we
16 just go out there and measure permeability at
17 1 millidarcy and .5 millidarcy, and you guys get
18 together and say it's that. You don't mind
19 participating in the east-west, but below that, you
20 wouldn't like it because of what your study says; is
21 that correct?

22 A. That's correct, but the only way to do that
23 would be to actually drill the well and log and core it.

24 Q. I understand.

25 A. Correct?

1 Q. Okay. Very good.

2 A. Okay?

3 And one other point, the rock that is to
4 the south would be closer to the type of sand that we
5 would see to the north from a thinning-off of the
6 structure. So we would expect it to be similar to the
7 core data we have in Section 21. We would consider
8 that.

9 Q. Very good. Very good.

10 EXAMINER EZEANYIM: Then that puts us where
11 I want to -- I don't want to neglect your land person.
12 We have the opportunity for that person to come here,
13 but I would like to recall Chevron's geologist and
14 recall Endurance's geologist. What I want to hash out
15 here now, from your discussion, is to determine, in
16 Section 18, do we have anticline, syncline or a mass of
17 sand? So I need to hear more testimony on that, because
18 I think the whole thing hinges on those two
19 parameters --

20 THE WITNESS: You're correct.

21 EXAMINER EZEANYIM: -- whether there is an
22 anticline or not, or whether, in Section 18, can we get
23 anything above .5 millidarcy, because I'm just working
24 with you guys to see where is better. And then where is
25 better, we go, and then all of you will like it. I

1 don't think you want to produce more hydrocarbons. Some
2 of you would say no. So we are going to do that.

3 But because of that, I want to, if you
4 don't mind, recall Chevron's geologist to prove to the
5 Division that we have anticline there and then have
6 Endurance's geologist to argue against that. Then I
7 take it into consideration. You see where I'm going?
8 Is that okay?

9 MR. FELDEWERT: Mr. Examiner, it's your
10 hearing, yes.

11 EXAMINER EZEANYIM: So. Mr. Ritter, I
12 think you have done very well. You can step down now.

13 THE WITNESS: Thank you.

14 EXAMINER EZEANYIM: Thank you.

15 So at this point, Mr. Padilla, we're going
16 to recall Chevron's geologist.

17 MR. PADILLA: That's fine.

18 EXAMINER EZEANYIM: And you are going to --
19 whatever you need to convince, you know, the OCD that we
20 have an anticline in that Section 18.

21 So who is the geologist? Mr. Schwartz?

22 Okay. At this point, we recall
23 Mr. Schwartz of Chevron to the witness stand. All I
24 want to hear is to get the information on that Section
25 18, what type of geology is in Section 18.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

KEN SCHWARTZ,

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

EXAMINER EZEANYIM: Mr. Schwartz has been sworn, and you are still under oath.

Counsel, let's go back to Section 18, that exhibit, for Chevron to establish that Section 18 has anticline.

DIRECT EXAMINATION

BY MR. FELDEWERT:

Q. Mr. Schwartz, let me ask you, your result that resulted in the identification of an anticline in Section 18, was that based on seismic data?

A. Yes.

Q. Did it require any extrapolation from well data?

A. No.

Q. Is there any well data to the east of the section -- well, let me --

EXAMINER EZEANYIM: What exhibit do I need to get?

MR. FELDEWERT: Let's look at -- what are you comfortable with?

EXAMINER EZEANYIM: I'm comfortable with

1 anything you want to use. I don't know which one you
2 want to use to convince me that --

3 MR. FELDEWERT: All right. Well, let's
4 then look at the map where they had to use
5 extrapolations of well data to come up with their
6 information. Let's look at the map they came here with
7 this morning.

8 EXAMINER EZEANYIM: I want you to use your
9 own exhibits.

10 MR. FELDEWERT: Exhibit 16, page 4.

11 EXAMINER EZEANYIM: From your pack?

12 MR. FELDEWERT: No. It's Endurance Exhibit
13 16, page 4.

14 EXAMINER EZEANYIM: Is that your work?

15 MR. FELDEWERT: No.

16 EXAMINER EZEANYIM: I want your work.

17 MR. FELDEWERT: Mr. Examiner, we didn't use
18 well data. They didn't extrapolate well data for this
19 anticline.

20 Q. (BY MR. FELDEWERT) But let's go to Exhibit 16,
21 what you used for your isopach map, Chevron Exhibit 16.

22 EXAMINER EZEANYIM: Here (indicating)?

23 MR. FELDEWERT: Yes.

24 MR. PADILLA: May I borrow your Exhibit 16?

25 (The court reporter complies.)

1 Q. (BY MR. FELDEWERT) Now, first off,
2 Mr. Schwartz, you said you used seismic data, correct?

3 A. Yes.

4 Q. What is the benefit of using seismic data to
5 determine whether there is an anticline in the area of
6 Section 18?

7 A. So by using seismic data, it better defines the
8 structures. You have no missing data. Like in the case
9 when you're using well data, they're just points, so you
10 extrapolate between the well data. The seismic is a
11 real -- more accurate field of the subsurface, so you
12 have no holes in your data.

13 Q. If we then go to Chevron Exhibit 16, does that
14 give you an idea of the well data that is available
15 around Section 18?

16 A. Yes, it does.

17 Q. Is there any well data available to the north
18 of Section 18 and Section 7?

19 A. No.

20 Q. What about to the northwest in Section 12?

21 A. No.

22 Q. What about to the west of Section 13?

23 A. No.

24 Q. What about to the southwest in Section 23?

25 A. No.

1 Q. Is that why you chose to use seismic to do your
2 mapping?

3 A. Yes.

4 Q. And what did your seismic show? Where would we
5 go to?

6 A. So if you switch back to Exhibit 11, from the
7 seismic data, it demonstrates an anticline that formed.
8 The fold axis runs, basically, north-south through
9 Section 18. So, again, an antiform, or anticline, is
10 represented here. You can see how the structural high
11 is at the center of Section 18, and you have opposing
12 dips going west and east in the -- in the sand -- or the
13 top of 2nd Bone Spring is dipping in opposite directions
14 from Section 18. This forms an anticline.

15 EXAMINER EZEANYIM: Okay. You said Exhibit
16 11, right? Microseismic or seismic?

17 THE WITNESS: Seismic.

18 EXAMINER EZEANYIM: Is this bid [sic] on
19 time or on --

20 THE WITNESS: This is in time, and it was
21 tied to wells. The wells -- so it was tied to wells, so
22 it's on dip. It's tied to those wells. The time is
23 tied to the wells.

24 EXAMINER EZEANYIM: Okay. So you are
25 saying both on time and depth? What are you saying?

1 THE WITNESS: So this size and volume is in
2 time, what we commonly tie the seismic to well data to
3 make sure the formations -- we know exactly where the
4 formations are in the seismic.

5 EXAMINER EZEANYIM: But the seismic is on
6 time?

7 THE WITNESS: Yes.

8 EXAMINER EZEANYIM: Go ahead.

9 Q. (BY MR. FELDEWERT) And so you had this --
10 reading from your seismic in Exhibit Number 11, did you
11 also do another analysis of the seismic data to confirm
12 what you saw on Exhibit 11?

13 A. Yes. So a seismic -- you know, there are a lot
14 of work flows that you can do, including -- one is
15 curvature analysis, and that is represented in Exhibit
16 12, the next page.

17 CROSS-EXAMINATION

18 BY EXAMINER EZEANYIM:

19 Q. Before you go to that next page, I see those
20 two arrows. What is that indicating? You told me
21 seismic is on time. What is your two arrows indicating
22 there?

23 A. So that's a common symbol geologists use to
24 show the opposing dips of the anticline. So the dips
25 are going in the opposite direction. It just shows the

1 dip of the rock.

2 Q. Okay. You've got that, and then you've got
3 that. The seismic is on time. And then we go to where?

4 A. So if you go to the next page, Exhibit 12, this
5 just confirms, from our curvature analysis, that there
6 are lineaments from the 2nd Bone Spring seismic data
7 which confirms that the natural fracture system would be
8 paralleling; the fold axis would be north-south.

9 Q. You know, I see the outline in yellow.

10 A. Yeah. That is Section 18.

11 Q. Okay. Section 18. Then explain what is
12 happening in that Section 18.

13 A. You can see there's red and purple coloring,
14 and you can see how these colors are lining up. There
15 are linear features that run north-south through Section
16 18.

17 Q. That red and purple color is -- okay. What is
18 that blue? What is that color?

19 A. So there is purple and red, purple and red.
20 There is kind of a banding.

21 Q. Showing what?

22 A. So this shows -- it's a curvature analysis,
23 changes in dip in the seismic suggesting lineaments in
24 the 2nd Bone Spring. These lineaments suggest that
25 there are natural fractures that are also trending

1 north-south through Section 18.

2 Q. Now, in the blue -- the color in blue, what
3 does that say? As you go to the west side, there is a
4 bunch of blue there. On the east side, I can see
5 yellow.

6 A. So basically the color change is a change in
7 dip, just slight changes in the dip in the seismic. So
8 red is a bigger change in dip. Purple is less change.
9 But what's important to get from this is how they line
10 up. They're parallel features. They trend north-south.

11 Q. So you're saying that the fracture is
12 north-south?

13 A. Yeah. So when the anticline formed, you're
14 going to get -- like the cartoon I show on the previous
15 page, when it formed, if you use fractures that form on
16 the crest -- and this data suggests -- it confirms that.

17 Q. This is interesting.

18 EXAMINER EZEANYIM: Okay. Well, go ahead.

19 CONTINUED DIRECT EXAMINATION

20 BY MR. FELDEWERT:

21 Q. Mr. Schwartz, were you here when Mr. Harris
22 testified?

23 A. Yes.

24 Q. He seemed to draw some -- have some criticism
25 with your conclusion?

1 A. Yes.

2 Q. Do you recall -- do you recall what exhibit he
3 was referencing?

4 A. I think he was looking at the seismic cross
5 section or the map. I'm not sure.

6 Q. And what was his criticism, and what is your
7 response?

8 A. I believe he referenced this structure as a
9 drape feature, and anticline -- a drape feature can also
10 form an anticline. So if he's saying it's a drape
11 feature, it doesn't change the fact that it is an
12 anticline.

13 Q. Anything else?

14 A. No.

15 EXAMINER EZEANYIM: I have something else.

16 RE-CROSS EXAMINATION

17 BY EXAMINER EZEANYIM:

18 Q. He said something about anticline. What did
19 you just say about anticline right now, because I was
20 thinking? What did you say?

21 A. Yes, sir. Randall Harris, in his testimony,
22 said that this was a drape feature, but I'm saying a
23 drape -- an anticline can also be a drape feature. Just
24 because it's a drape feature does not change the fact
25 that it is --

1 Q. Anticline?

2 A. -- yeah, anticline.

3 EXAMINER EZEANYIM: Okay. Go ahead. I
4 don't want to jump the gun.

5 MR. FELDEWERT: Now I am going to go to an
6 Endurance exhibit, if that's okay.

7 EXAMINER EZEANYIM: Are you done with that
8 one?

9 MR. FELDEWERT: I want you to leave that
10 open. Actually, go back to Exhibit Number 11,
11 Mr. Examiner.

12 EXAMINER EZEANYIM: Out of?

13 MR. FELDEWERT: Chevron.

14 CONTINUED DIRECT EXAMINATION

15 BY MR. FELDEWERT:

16 Q. I want you, Mr. Schwartz, to go to Endurance
17 Exhibit Number 5.

18 EXAMINER EZEANYIM: And you're saying
19 Exhibit Number 5?

20 MR. FELDEWERT: Yes, the structure map,
21 Mr. Examiner.

22 Q. (BY MR. FELDEWERT) Okay. You've got this,
23 correct?

24 A. Yes.

25 Q. And to orient ourselves, Section 18 is more to

1 the north. Do you see that?

2 A. Yes. Yes, I do.

3 Q. And this was developed by Endurance, as you
4 understand it, using well control?

5 A. Yes.

6 Q. And, again, it shows that they don't have any
7 well control to the north-northwest, west or southwest,
8 correct?

9 A. Yes.

10 Q. Does this structure map they put together
11 likewise indicate a crest running through Section 18?

12 A. Yes.

13 Q. And if you compare that to the anticline that
14 you depict on Chevron Exhibit Number 11, does it tend to
15 follow the crest that you show on Exhibit Number 11?

16 A. Yes. The crest that Endurance mapped is --
17 their crest of their anticline that they mapped in
18 Section 18 is very similar to the crest I mapped using
19 seismic in Section 18.

20 Q. Is there anything else that informs the
21 Examiner that it would appear that an anticline exists
22 in and through Section 18?

23 A. Say that again.

24 Q. Is there anything else that the Examiner should
25 be aware of that indicates that an anticline exists in

1 Section 18?

2 A. No.

3 EXAMINER EZEANYIM: There is no anticline
4 in Section 18?

5 THE WITNESS: There is no additional
6 information.

7 Q. (BY MR. FELDEWERT) Is there anything else that
8 would assist the Examiner in determining that an
9 anticline exists in Section 18?

10 A. No.

11 EXAMINER EZEANYIM: Using this, right?
12 Using this map?

13 MR. FELDEWERT: Let me step back,
14 Mr. Examiner.

15 EXAMINER EZEANYIM: Yeah. I want to
16 understand what you're asking.

17 Q. (BY MR. FELDEWERT) Mr. Schwartz, we've looked
18 at Chevron Exhibit Number 11?

19 A. Yes.

20 Q. And you've explained how that was developed
21 using seismic data?

22 A. Yes.

23 Q. And you've explained that seismic data is nice
24 because it doesn't have any holes, correct?

25 A. Right.

1 Q. Gives you a better picture?

2 A. Yes.

3 Q. Gives you continuous coverage?

4 A. Yes.

5 Q. And then we went through Exhibit Number 12,
6 which indicates that another way that you can use that
7 seismic data to demonstrate there is an anticline in
8 Section 18?

9 A. Exhibit 12 just demonstrates how -- there are
10 lineaments through Section 18 which would parallel --
11 that would suggest that natural fractures would parallel
12 those lineaments caused by an anticline.

13 Q. They're consistent with the fold and the
14 fracturing that you would see?

15 A. Yes.

16 Q. And then we looked at Endurance Exhibit Number
17 5, and the crest that they map with their well control
18 data seems to match the crest that you mapped with your
19 seismic data?

20 A. Yes. We are in agreement.

21 Q. Anything else the Examiner should be aware of?

22 A. No.

23 MR. FELDEWERT: That's all the questions I
24 have, Mr. Ezeanyim.

25 EXAMINER EZEANYIM: Okay. Go ahead.

1 MR. PADILLA: Are you referring to me to go
2 ahead?

3 EXAMINER EZEANYIM: Are you done?

4 MR. FELDEWERT: Yes. I said that's all the
5 questions I have of this witness.

6 EXAMINER EZEANYIM: Okay.

7 RE CROSS EXAMINATION

8 BY EXAMINER EZEANYIM:

9 Q. So you are telling your testimony,
10 Mr. Schwartz, that Section 18 has an anticline, on 11
11 and 12, right? That's your seismic?

12 A. Yes.

13 Q. You know, for administrative geology, I know
14 this is a -- this is a structure map -- simple structure
15 map. You know, we can -- you know, we know how we do
16 it. We can distinguish -- we can use this structure
17 map. I don't know whether Endurance will do it.

18 But I want to ask you: You did this, and
19 you are telling me that an anticline is there. But you
20 could use this structure -- once you get a structure
21 map, you can get the net, and you can then decide, you
22 know -- draw to see whether you are getting an anticline
23 or a syncline or nothing. Of course, that's your
24 structure here. You are going to have either a syncline
25 or a -- if I remember. I did geology in the '70s. I

1 can still remember that you can use -- no, no. I can
2 still remember. It's an elective, right (laughter)?

3 (Laughter.)

4 EXAMINER EZEANYIM: I can remember that you
5 could either decide whether, if you have your structure
6 map, that is a syncline or an anticline. And here we
7 are fighting about whether it's anticline. I can even
8 go back and do this myself. Okay. Regardless of
9 that -- but, you know, I'm here to let you know I'm not
10 a geologist, but I have an idea, you know. I'm sorry.
11 But I think I know what's going on here.

12 Q. (BY EXAMINER EZEANYIM) So you are done with --
13 and then you are convinced that Section 18 is an
14 anticline?

15 A. Yes.

16 EXAMINER EZEANYIM: Do you have any
17 questions for him?

18 MR. PADILLA: Yes, I do.

19 CROSS-EXAMINATION

20 BY MR. PADILLA:

21 Q. Mr. Schwartz, are you a geophysicist?

22 A. I am a geologist by education. I've worked
23 many years using seismic data.

24 Q. But you're not a geophysicist?

25 A. No.

1 Q. Who conducted the seismic study?

2 A. A geophysicist.

3 Q. And you don't have that geophysicist here
4 today?

5 A. No.

6 Q. Is it possible that -- and I understand where
7 your testimony is coming from, but is it possible that
8 Mr. Harris is correct when he says that this is a draped
9 sand deposition?

10 A. I'd have to investigate it more as a geologist.
11 I'd have to look into it. I'm not sure.

12 Q. But it's possible, isn't it?

13 A. Can you explain a drape?

14 Q. Well, that's what he described, a draped sand
15 deposition.

16 A. I need more definition of a drape, how you
17 define what a drape is.

18 Q. Well, we're going to recall him.

19 A. Then you should ask him.

20 Q. But have you ever heard of a draped sand
21 deposition versus an anticline?

22 A. Drape deposition -- it's a depositional
23 process, and anticline is a structural process.

24 Q. So there could be a difference of opinion as to
25 what you have in terms of when you say a crest of this

1 sort, and it could be an anticline or it could be a
2 draped sand deposition, correct?

3 A. Yes.

4 Q. It's going to be a matter of difference of
5 opinion as to what geologists -- how you're going to
6 interpret the data, right?

7 A. Yes.

8 Q. And as I understand your testimony, you didn't
9 tie your mapping to any well control; is that right?

10 A. No. I did tie seismic to wells.

11 Q. How many wells?

12 A. Three or four.

13 Q. But you seem to confine yourself to Section 18.
14 Does your anticline end at the leaselines?

15 A. No.

16 Q. How do you explain the production and the
17 success that Endurance has encountered in Section 30?

18 A. In Section 30?

19 Q. Yes.

20 A. I haven't looked at their completion. I
21 haven't looked at the reservoir. I can't really comment
22 on that unless I have the data to look at it.

23 Q. When did you study this area? After
24 Endurance's proposal to you or before?

25 A. I testified yesterday that after our November

1 meeting, I went back -- they presented some data, so we
2 went back and looked at it in more detail. And that's
3 when this study was done.

4 Q. Did you ever get back to them and say, We're
5 looking at it this way?

6 A. I testified yesterday that at that point we had
7 a very uncomfortable relationship, and, like I said,
8 every time I presented -- if I spoke with them, they
9 were using it against us, that we're in a bidding war
10 for the leases that were open there. So at that point,
11 our relationship was uncomfortable. So, unfortunately,
12 the relationship -- that's where the relationship was,
13 so I did not present this data.

14 Q. After January, when they won the bidding war,
15 did you go back to them, prior to this hearing, and say,
16 Hey, we're looking at it differently?

17 A. At that point in time, the protests had been
18 filed, so that's where we were going to go. And I told
19 them that we would present the data at the hearing, and
20 this is where it is.

21 Q. So you didn't get back to them with your new
22 data, right?

23 A. No.

24 Q. Did you tell them you were going to conduct
25 seismic studies?

1 A. I don't know.

2 Q. Let me ask you a hypothetical. Would you agree
3 that if the Endurance geology is correct, that a
4 north-south orientation would recover more oil?

5 A. For where?

6 Q. For the north -- well, anywhere in Section 18.

7 MR. FELDEWERT: Let me object. When you
8 say "the Endurance geology," what are you referring to?
9 Is that an exhibit?

10 EXAMINER EZEANYIM: Is that an objection?

11 MR. FELDEWERT: Yes.

12 EXAMINER EZEANYIM: Can you rephrase your
13 question?

14 Q. (BY MR. PADILLA) Well, you've heard the
15 difference in geologic presentations here, and you've
16 heard the stress-orientation testimony of Mr. Lehman and
17 of Mr. Ritter. And you've also listened to the
18 testimony of Mr. Harris indicating that this is not an
19 anticline. And I'm asking you if that data is correct,
20 would you agree with me that a north-south orientation
21 would be -- would recover more oil?

22 A. No. And I can explain.

23 Q. So you're not willing to make that assumption?
24 I'm just asking you a hypothetical, if. And you're not
25 willing to go that far?

1 A. If I look at their structure map, their land
2 plan goes over Section 18. Again, that's --

3 Q. I'm not asking you if there is an anticline
4 there. I'm telling you that Mr. Harris' testimony is
5 that that is not an anticline.

6 And my question to you is: If that is not
7 an anticline, would you agree that a north-south-
8 oriented well would better drain with the reservoir in
9 Section 18?

10 A. It's a hypothetical question.

11 Q. I understand.

12 A. If it's not an anticline --

13 Q. Mr. Feldewert asked a number of hypotheticals
14 to Mr. Ritter, so I'm asking you a hypothetical.

15 EXAMINER EZEANYIM: It's hypothetical,
16 Mr. Schwartz. Answer that question. It's hypothetical.
17 I want you to answer that hypothetical. Hypothetical is
18 not real. It's just "if," right?

19 THE WITNESS: Yes.

20 EXAMINER EZEANYIM: Answer the question.

21 THE WITNESS: So disregarding --

22 EXAMINER EZEANYIM: Disregarding whatever
23 it is.

24 THE WITNESS: All right. Yes.

25 EXAMINER EZEANYIM: So we can move on.

1 Q. (BY MR. PADILLA) Yes or no?

2 A. Yes.

3 EXAMINER EZEANYIM: He said yes.

4 MR. PADILLA: Okay.

5 Q. (BY MR. PADILLA) Your entire case is based on
6 your anticline theory; is that right?

7 A. No.

8 Q. What else is it based on?

9 A. The last couple days, we've looked at a lot of
10 data. The EUR has proven that east-west wells can
11 produce better than north-south. That's another
12 evidence.

13 Q. Have you been involved in the drilling of all
14 the Chevron wells in this area of Lea County?

15 A. Yes.

16 Q. And how many have you oriented east-west?

17 A. The Bell Lake well in Section 18.

18 Q. How many have you actually drilled north --
19 east-west?

20 A. Well, we initiated the drilling of the Bell
21 Lake well.

22 Q. Oh, okay. You spudded that one down 5,000?

23 A. Yes, we spudded that well.

24 Q. You haven't completed it?

25 A. Well, it's approved permit to drill east-west,

1 and we've spudded that well.

2 Q. So are you telling us also that the stress
3 regime presented by Mr. Lehman and by Mr. Ritter is
4 totally unimportant in this case?

5 A. Because we're on an anticline, it changes how
6 we drill the well. The stress regime is less important,
7 and I believe Mr. Ritter also testified to that.
8 Because it's on a anticline, the stress regime --

9 Q. He testified -- he agreed based on a
10 hypothetical, right?

11 A. I wouldn't say it's hypothetical.

12 MR. FELDEWERT: Object to the form of the
13 question. We presented our data.

14 Q. (BY MR. PADILLA) He agreed based on a
15 hypothetical question posed by Mr. Feldewert; isn't that
16 correct?

17 MR. FELDEWERT: Object to the form of the
18 question.

19 EXAMINER EZEANYIM: Okay.

20 MR. PADILLA: I don't want to argue with
21 Mr. Schwartz. Obviously, he doesn't want to answer the
22 question.

23 MR. FELDEWERT: No, that's not true. I
24 think the question is not properly phrased. He
25 testified based on our analysis that's set forth in

1 Exhibit 11 and Exhibit 12.

2 MR. PADILLA: My question was whether or
3 not he's ignoring the testimony and the presentations of
4 Mr. Ritter and Mr. Lehman with regard to stress
5 orientation.

6 MR. FELDEWERT: I think he answered that
7 question.

8 MR. PADILLA: And as I understand it, he's
9 saying that's not important.

10 EXAMINER EZEANYIM: The witness is not
11 supposed to answer that question. We are going to hear
12 from Mr. Harris. So I'm not saying that I'm sustaining
13 the objection, but if you want to rephrase your
14 question. I'm trying as much as I can to make sure I'm
15 impartial, right? So rephrase your question, please.

16 Q. (BY MR. PADILLA) Let me just ask this: You
17 agree that there could be more than one interpretation
18 of the geology in this area; is that right?

19 A. Yes.

20 EXAMINER EZEANYIM: Could be,
21 unfortunately.

22 Are you done?

23 Q. (BY MR. PADILLA) Mr. Schwartz, was your seismic
24 calibrated with actual log penetrations, and, if so,
25 which wells did you calibrate it with?

1 A. I don't have that information in front of me.

2 Sorry.

3 Q. You don't know, or you don't know if you've got
4 the information?

5 A. I know. I can't recall each well name.

6 MR. FELDEWERT: Okay. So let's -- hold on.
7 Maybe split the question up. I think it's a compound
8 question. Ask the first part, and then you can ask the
9 second part.

10 Q. (BY MR. PADILLA) You said you calibrated with
11 actual well log penetrations?

12 A. Yes.

13 Q. What well logs did you use?

14 A. Used sonic, gamma ray, your standard quad
15 combo.

16 Q. Which wells did you use?

17 A. Unfortunately, I don't have that information in
18 front of me.

19 Q. You can't tell the Examiner where those wells
20 were located?

21 A. There were a number of wells, like I mentioned,
22 several wells. I can't tell you exactly where every
23 single well is.

24 Q. Are they around Section 18?

25 A. Yes. There is a sonic log on Section 18 that

1 we utilized.

2 Q. From what well?

3 A. I can't recall which well it was.

4 Q. What other wells around there did you use?

5 A. Well, there are three -- there are three or
6 four wells -- three wells on Section 18. Again, we used
7 a nice distribution, where we have sonics, calibrate the
8 seismic, two wells that have sonics, et cetera, you
9 know. We utilized all the data that we could in that
10 seismic. Sorry I can't name each well.

11 Q. Well, I want to know how far away the wells
12 are. Can you give us an idea of where in the world
13 these wells are?

14 A. Well, there is one on Section 18, and I can't
15 recall the other ones we used.

16 Q. Where are the data points on your maps from
17 these wells?

18 A. There are no data points on my map from these
19 wells.

20 Q. Well, wouldn't it be fair that if you're
21 testifying that you tied to the actual well logs, that
22 there is something to show where those data points are?

23 A. Maybe, yes.

24 Q. That would give us a better picture, wouldn't
25 it?

1 A. Not necessarily. The picture is right there
2 (indicating). The wells are tied to the seismic.
3 That's the picture. Are you saying that we didn't do it
4 accurately?

5 Q. I don't know. You can't tell me which wells
6 you used.

7 MR. PADILLA: That's all I have.

8 EXAMINER EZEANYIM: Thank you.

9 Mr. Feldewert?

10 REDIRECT EXAMINATION

11 BY MR. FELDEWERT:

12 Q. Mr. Schwartz, is it important, when you're
13 depicting, for example, on Exhibit 11, that you have to
14 identify on there the wells that you calibrated?

15 A. No.

16 Q. Does that affect the result?

17 A. No.

18 MR. FELDEWERT: That's all the questions I
19 have.

20 CROSS-EXAMINATION

21 BY EXAMINER EZEANYIM:

22 Q. I recalled you, Mr. Schwartz, but I don't want
23 to ask you a lot more questions. What I would ask
24 you -- I know this is important. I want you to give me
25 your best estimate of the permeability in and around

1 Section 18 in this general area. I know you haven't
2 measured what you think would be -- having walked in
3 that area, what would be your best estimate of
4 permeability in that area?

5 A. So we have heard some numbers. So if you're
6 just looking at the sand, .05, but in Section 18, there
7 is going to be some enhancement of the permeability
8 because of the natural fractures.

9 Q. So you're saying it's going to be more than 05?

10 A. Yeah. It would be greatly more.

11 Q. So greatly more than 05 in Section 18. Okay.
12 Very good.

13 The well -- first of all, let me ask you
14 something. I just put it down now, where you got -- you
15 have data points, where you got for your assessment for
16 the calibration. You mentioned -- you said something
17 about three wells in Section 18. I thought there are no
18 wells in Section 18 except the one you just drilled?

19 A. There are some previous vertical wells.

20 Q. They are not -- okay.

21 So what is the status of those three wells
22 in Section 18 that are vertical wells?

23 A. I think they're plugged and abandoned.

24 Q. Are the wells productive?

25 A. They were deeper gas wells.

1 Q. Oh. So they are not really -- they have no
2 play in the Bone Spring?

3 A. No.

4 Q. And that's why we neglected them?

5 A. Right.

6 Q. Because, you know, if you go -- I'm not
7 interested in deeper formations.

8 A. Right.

9 Q. So there are three wells, but they're vertical,
10 in Section 18. So we can't really use it. You can't
11 compare apples and oranges. Okay. But there are three
12 wells, but they are all vertical, right?

13 Okay. So the only well now in the
14 formation of interest is the well you have spudded and,
15 you know, and then cemented at 5,000. That's the only
16 well --

17 A. Yes.

18 Q. How did that well begin, you know? Did you get
19 a voluntary agreement from the working interests? How
20 did you, you know -- before you spudded that well, you
21 know, because it's -- first of all, it's a one-mile acre
22 unit. If you have voluntary agreement, all you have to
23 do is submit a Form C-102 to the district. Is that what
24 happened, for you to spud that well, or did you -- how
25 did you -- what were the circumstances of that well when

1 you spudded that well?

2 A. So we had a drilling permit. We had a slot
3 open in our drill line.

4 Q. You had what?

5 A. We had an opening in our drill queue. We had
6 an expiring lease in June of 2014, and so we commenced
7 drilling of that well to save that lease.

8 Q. Okay. But all interests didn't voluntarily
9 join in drilling the well?

10 A. No.

11 Q. Was your Form C-102 approved to drill the well,
12 because it should have been approved by the district?

13 A. I'm not sure.

14 Q. Was that approved?

15 A. I'm not sure.

16 MR. FELDEWERT: Mr. Examiner, if you go to
17 Chevron Exhibit Number 2, you'll see that that APD was
18 approved. I'm sorry. Chevron Exhibit Number 1. I
19 apologize.

20 EXAMINER EZEANYIM: Well, you know what it
21 says here? "Conditions of Approval Attached." Where
22 are those? I circled it. It's approved, but it says
23 "Conditions of Approval." What are those conditions?
24 They're not here.

25 MR. FELDEWERT: Well, I think if you -- if

1 you look on the third page, perhaps, and the fourth
2 page, and -- this is the permit.

3 EXAMINER EZEANYIM: I can see a Form C-102
4 here.

5 MR. FELDEWERT: I'm looking at the third
6 page. I'm looking at the fourth page, "Permit
7 Conditions of Approval."

8 EXAMINER EZEANYIM: Fourth page?

9 MR. FELDEWERT: Fourth page of Exhibit
10 Number 1.

11 EXAMINER EZEANYIM: What does it say?

12 MR. FELDEWERT: The title on the fourth
13 page of Exhibit Number 1 is "Permit Conditions of
14 Approval."

15 EXAMINER EZEANYIM: "Permit Conditions of
16 Approval." Okay.

17 When this Form C-102 was submitted, was it
18 indicated to Mr. Kautz that an agreement had been
19 reached, agreement of that well? Because as a project
20 are of 160, an agreement has to be reached, and that was
21 agreed. Then you send your Form C-102 to the district,
22 and they approve it. But there is nothing about
23 compulsory pool. So this is mainly because the lease is
24 expiring. That's why the well was spudded.

25 MR. FELDEWERT: I think the testimony has

1 been, number one, yes, that was the reason. Number two,
2 up to that point, there had been no competing well
3 proposals submitted to the working interest owners.
4 Number three, they had their meeting in November, and,
5 as is apparent here today, Endurance was entrenched in
6 the north-south well, and Chevron's geology indicates
7 east to west.

8 And number four -- and I don't want to get
9 into too much legal. Number four is that what they did
10 is consistent with the Horizontal Well Rules. What they
11 did here is drill the vertical portion. There is
12 nothing wrong with that. Once they got the competing
13 well proposal, they then pulled out and waited for this
14 hearing. But if they wanted to, Mr. Examiner, under the
15 Horizontal Well Rules, they could have gone ahead and
16 drilled the vertical -- vertically the horizontal
17 portion of that well. They just couldn't complete it
18 and produce the product until they had a pooling order.
19 But Chevron didn't do that. They stopped.

20 EXAMINER EZEANYIM: But under the rules,
21 too, you have to have a voluntary agreement to drill the
22 one-mile well. If you have a voluntary agreement --

23 MR. FELDEWERT: You can, under the rules,
24 apply for a permit, and you can drill the well. You
25 can't complete it, but you can apply and drill the well.

1 EXAMINER EZEANYIM: That much I understand.

2 MR. FELDEWERT: Under the Horizontal Well
3 Rules, you can't complete it until you have a pooling
4 order.

5 EXAMINER EZEANYIM: Okay. So is Chevron in
6 agreement that they can -- and, of course, you can do
7 that, get the compulsory pooling. Because you
8 understand that not everybody will participate in the
9 well?

10 MR. FELDEWERT: Correct.

11 And once they got the competing well
12 proposal, that's when they stopped.

13 EXAMINER EZEANYIM: No, I understand what
14 you're saying. Now I have a clear view of what it is.

15 It's about 12:15. I'm sorry we didn't
16 finish by 12:00.

17 Let me see. I don't want to bother you
18 again. So I think that's all I have for now. Thank
19 you.

20 So I think what we're going to do --
21 unfortunately, we have one more witness, the geologist,
22 and then we have two more witnesses. We're going to
23 come back at 1:20.

24 (Break taken, 12:23 p.m. to 1:25 p.m.)

25 EXAMINER EZEANYIM: We'll go back on the

1 record and continue with this case. Hopefully we'll
2 finish with it today. TGIF (laughter).

3 Where did we leave off? We finished with
4 Mr. Schwartz. We're going to call Mr. Harris.

5 MR. PADILLA: We're going to call
6 Mr. Harris.

7 EXAMINER EZEANYIM: Call Mr. Harris to the
8 stand.

9 Mr. Harris, you were sworn yesterday. You
10 are still under oath.

11 THE WITNESS: Yes, sir.

12 EXAMINER EZEANYIM: And let me make a
13 comment. You know why you are here now? We are trying
14 to see what happened with Section 18. That's why you
15 were recalled.

16 So go ahead, Mr. Padilla.

17 RANDALL HARRIS,
18 after having been previously sworn under oath, was
19 recalled, questioned and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. PADILLA:

22 Q. Mr. Harris, would you go to our Exhibit Number
23 5?

24 EXAMINER EZEANYIM: Exhibit Number 5?

25 MR. PADILLA: Yes, the structure map.

1 Q. (BY MR. PADILLA) Mr. Harris, the discussion
2 here has been, according to Mr. Schwartz, that this is
3 an anticline instead of a geologic deposition, and you
4 called it a drape.

5 A. Yeah. Drape is kind of a broad term, but, yes,
6 it's draping over a deeper feature.

7 An anticline -- when we traditionally think
8 of an anticline, we think of a fold with some
9 compressional forces on the sides, which would give way
10 to the fracturing of a part of it.

11 What I have mapped this -- and much more
12 extensively than just this small six or seven miles. As
13 we see --

14 Q. Let me ask you: How far does this feature
15 extend north and south?

16 A. This feature is intermittent but fairly
17 constant through about a 24-mile area, north-south.

18 Q. How long have you been working within this
19 area?

20 A. I think my first well was the Paloma Federal 30
21 #1 in the Delaware, and I drilled that in 1990- -- in
22 the '90s.

23 Q. Do you have existing maps that show the
24 regional extent of this feature?

25 A. Yes, I do.

1 Q. And why did you choose to bring just this
2 version or this portion of the feature?

3 A. Well, the main reason is because it's
4 concentrated just around the acreage that we have an
5 interest in, and the geologist doesn't give away the
6 farm by bringing in a whole lot of other data.

7 Q. And can you explain in more detail what you
8 mean by this draping feature?

9 A. Yes. Rather than being an actual anticline, on
10 the eastward side, we're seeing basically regional dip.

11 Q. What do you mean by regional dip?

12 A. Yeah. It flattens out. It's just normal
13 depositional environment. It's -- just the reason it's
14 down dip going to the east in a generally-speaking area,
15 because there are some little highs and little lows, as
16 you find in all depositional environments. But
17 generally speaking, it's down dip to the east.

18 As we come to the west, all of a sudden we
19 have a big pile and then basically a straight-down
20 structure, and that's due to a deep-seated fault. So
21 we're not seeing an anticlinal deposition environment.
22 We're seeing a normal deposition environment and then
23 going over the top of a ridge, as a downside leg.

24 Q. If you saw an anticline in this area here, what
25 would it look like?

1 A. Well, you would see two pretty well-uniform
2 legs fold with a crest.

3 Q. So you'd see the same thing on the right side
4 of this so-called crest as you see on the other side?

5 A. Oh, yes. It would look something very similar
6 to this. But as you can see, it's much steeper on the
7 west side here than on the east side.

8 Q. Now, yesterday you talked about a Devonian
9 fault. How does that affect this structure?

10 A. Well, the Devonian fault has affected all the
11 structures, anything from above the Devonian. There's
12 been no faulting or evidence of faulting since that
13 period of time that I'm aware of. So subsequent layers
14 from the Atoka, The Morrow, the Strawn, the Wolfcamp
15 continue to build, and each subsequent layering, we
16 still have this downthrown side of the block that
17 continues to valley-fill.

18 Q. Now, Endurance has drilled wells south of
19 Section 18 in the same feature; is that right?

20 A. Yes.

21 Q. And what would happen if you actually had an
22 anticline or encountered an anticline in drilling the
23 well south of Section 18?

24 A. Well, if we just look at the structure map and
25 if they're limiting the anticline to the north half of

1 Section 18, to me it makes no sense, because the same
2 nose, the same structure, goes from 18 through 19
3 through 30, down to 31. I mean, it would all be
4 anticlinal. If one part of it was, all of it would be.

5 And in that case, we drilled right on the
6 apex of the nose of the structure with our Telecaster
7 #3. And when we fracked it, we didn't see any lateral
8 fractures. It was a normal frack-type pattern. It made
9 a good well. So all the evidence given to stress
10 patterns, directions of drilling held up with my
11 interpretation, not with it being a 90-degree
12 interpretation.

13 Q. Which means what? That there is no anticline?

14 A. In my opinion, there would be no anticline.
15 There would be no stress of fractures in the top part of
16 this. It's not a structure -- I mean, it is a
17 structural feature just because it's a nose and it's a
18 deposition environment.

19 Q. Have you ever dealt with an anticline in the
20 2nd Bone Spring or any version of the Bone Spring?

21 A. No, I have not.

22 Q. Have you dealt with anticlines anywhere in
23 southeast New Mexico?

24 A. No, not in the formations I have worked.

25 Q. And we have a real conflict here. How certain

1 are you that this is not an anticline of any sort?

2 A. I'm very positive.

3 Q. And that's based on your experience and your
4 knowledge of this area?

5 A. Yes.

6 Q. So let's talk about this draping effect in the
7 section south of Section 18. You don't have any wells
8 north, but you certainly have wells south, correct?

9 A. Yes, we do.

10 Q. Geologically -- and I think you've already
11 explained somewhat that you didn't encounter any
12 north-south fractures.

13 A. That's correct.

14 The wells frack -- the Telecasters in
15 Section 30 frack virtually identical to the wells in 20,
16 our Stratocasters.

17 Q. So what would happen if you did have fractures,
18 as Mr. Schwartz testifies?

19 A. Well, if we do or if we did --

20 Q. Let me ask this: What would you have
21 experienced in those wells you drilled south of Section
22 18?

23 A. I would have expected that we would have had a
24 lateral fracture pattern on completion.

25 Q. And what would have been the result?

1 A. We would have had much poorer wells than what
2 we're currently exhibiting on our production.

3 Q. Are the wells that you're drilling, the
4 Stratocaster wells, are they extraordinarily good wells?

5 A. I think the Stratocaster and Telecaster are
6 good wells, yes.

7 Q. Is there a fold in Section 18 in the geology?

8 A. A fold?

9 Q. A fold. Does the formation come back around
10 where you see it twice?

11 A. No. No, not at all.

12 Q. So, again, what are the deeper features here
13 that are shown in the seismic information shown by
14 Mr. Schwartz?

15 A. Well, I'm not a seismologist or a geophysicist,
16 but from the limited knowledge that I do have, because
17 we've all looked at them -- just like Mr. Schwartz,
18 we've all looked at seismic throughout our careers. I
19 just simply see, basically, a draping coming off the
20 west side into a normal pattern on the east side. I
21 don't see any folding, even in his cross section on
22 the -- that shows a fold, that shows any kind of
23 anticline.

24 Q. Now, Mr. Feldewert questioned Mr. Ritter this
25 morning on the changes on your mapping, especially on

1 Exhibit 6. We introduced a new revised map this
2 morning. Can you turn to Exhibit number -- I believe
3 it's Number 16.

4 EXAMINER EZEANYIM: Whose exhibit? Yours?

5 MR. PADILLA: Yes. Endurance Exhibit 16.

6 May I approach the witness, make sure we're
7 talking about the same thing?

8 Q. (BY MR. PADILLA) What is the difference between
9 the map that we introduced yesterday and the map we
10 introduced this morning?

11 A. As far as I can tell, it's just the addition of
12 a data point in Section 19.

13 Q. Why did you make that change?

14 A. I was asked if there were any data points in
15 Section 19, under cross-examination yesterday.

16 Q. And is that data point the same as you
17 testified yesterday?

18 A. Yes.

19 Q. Now, Mr. Feldewert also suggested that we
20 changed the version of the maps, due to thickness or
21 changes in data points, by three or four points in one
22 case and a couple of points in another. Why were those
23 changes made?

24 A. Well, as with any geologic process -- most
25 geologists draw in pencil for a reason. We're always

1 refining our maps. We're always tweaking here and
2 tweaking there, changing percentages of -- and some of
3 the comments this morning, I believe there were four
4 feet in one and five feet in another versus 100-foot of
5 pay. It didn't change the maps hardly any.

6 But as we grow in a prospect and grow in a
7 developmental area, we start noticing things, such as a
8 lateral log cutoff. Maybe we no longer like an 80
9 lateral log unit, so we cut that off, and we no longer
10 consider that pay. Or perhaps it drops down into a
11 lateral log reading of maybe 30, and we consider that
12 wet, so we'll chop that off. And that will affect our
13 pay.

14 Q. Now, in November, when you met with Chevron in
15 Houston, you presented certain geologic maps to them,
16 correct?

17 A. Correct.

18 Q. Has additional drilling been input into your
19 current maps because of this drilling?

20 A. Oh, yes.

21 Q. Which wells would have been used to refine your
22 mapping as it's shown on the exhibits presented
23 yesterday, you know, Exhibit 6, yesterday and today?

24 A. We would have drilled the Telecaster 3H,
25 Telecaster 4H. The Caza Copperline would have been

1 drilled. We also found some additional data on some
2 wells that we didn't have prior. A lot of -- the OCD
3 does not have in their files, and we had to go out to
4 public libraries and law libraries and get additional
5 information.

6 Q. Even though you were in a competitive situation
7 with Chevron, in terms of acquisition of leases in
8 regard to half of Section 18, did you receive anything
9 from Chevron comparative to any of the mapping and
10 geologic information that you gave to them on November
11 20th when you met?

12 A. No. I have not heard a word from them.

13 Q. Have you heard from Mr. Schwartz or any of the
14 geologists or persons in control at Chevron regarding
15 any of the information that you presented to them on
16 November 20th?

17 A. No, I have not.

18 Q. Now, in terms of changes in thickness and the
19 calculations, gross pay or whatever it may be, does that
20 materially change any of the calculations that you may
21 have talked about on November 20th?

22 A. No. Not substantially, no.

23 Q. Did the additional drilling that you have just
24 testified about, that you used to input and update your
25 data and refine it, has that improved your vision of

1 what you're going to encounter in Section 18?

2 A. Yes, I believe it has.

3 Q. And how has it improved your vision?

4 A. Every refinement of the map just seems to more
5 or less state what is going on in that area. I mean,
6 it's a north-south trend on a nose. The sand has piled
7 up against the nose, and as goes over the top and drapes
8 over the side, the sand appears to, according to my
9 isopachs, start to go away. And that will be a very
10 traditional sand deposition environment.

11 Q. And you're now looking at Exhibit 6, right?

12 A. Yes.

13 Q. You're saying there's really no difference in
14 any of this mapping, substantial differences of any
15 sort?

16 A. No. There will be a few feet here or there.
17 In addition, I have a geotech that works for me, and
18 occasionally, when she finds a data point that I have
19 not or vice versa, she'll put it into the system. And
20 she may not count exactly the way I do, but eventually
21 we'll get it exactly the way we both agree on. But it's
22 substantially the same.

23 Q. Would your regional mapping support your
24 testimony today that this is not an anticline?

25 A. Yes, it would.

1 Q. Mr. Harris, you have the mineral interests in
2 the north half of Section 18, correct?

3 A. Correct, I do.

4 Q. And so you've had more than a normal interest
5 as being the geologist for Endurance; is that right?

6 A. A personal interest in a well does make a lot
7 of difference, yes.

8 Q. And why do you feel strongly that a
9 north-south -- well, let me ask you: Would you
10 participate in an east-west well?

11 A. No, I would not.

12 Q. Can you explain that?

13 A. I believe in my own geology, and for years,
14 I've had working interests all over the state based on
15 my geology. Generally when I've drilled a well or
16 proposed a well, I took a working interest. So I'm very
17 forthcoming in that if I'm putting my money where my
18 mouth is, then other people believe me, also.

19 This one I could not see an east-west
20 direction whatsoever. And it was a debate between my
21 wife and myself if we were going to participate at all.
22 It was nothing to do with Endurance, at the time, taking
23 a farm-out. They hadn't even approached me of taking a
24 farm-out.

25 Q. On the north half?

1 A. On the north half.

2 My wife and I considered it. But back in
3 2008, we did sell out all of our working interest, and
4 she persuaded me in the most strong fashion that we were
5 not going to get back into the working-interest game.
6 And then consequently to that, Endurance did make me an
7 offer, and it was the same offer they made all the other
8 participants or mineral interest owners.

9 Q. How many 2nd Bone Spring wells have you been
10 involved in?

11 A. Participated in or --

12 Q. No. Just been the geologist and a consultant.

13 A. Probably 20 of the horizontals. Many more
14 verticals prior to that. I mean, verticals go back for
15 the last 25 years as plug-backs of the Morrrows, et
16 cetera.

17 Q. And how many of those horizontals have been in
18 this immediate area?

19 A. Seven.

20 Q. Let me ask you about the east-west wells that
21 were drilled by Concho. I think they're called the
22 Macho and the Nacho, if I'm --

23 A. The Mucho Nacho [sic]?

24 Q. Mucho Nacho [sic]. Those are drilled
25 east-west, right?

1 A. Yes, sir.

2 Q. Do you know what the geology is in that area as
3 opposed to the one in Section 18?

4 A. Yes. There were some comparisons made
5 yesterday about being the same geology. It's not. It's
6 totally different. For one, we have this big --

7 MR. FELDEWERT: I object to the form of the
8 question. There was no testimony that it was the same
9 geology.

10 EXAMINER EZEANYIM: What?

11 MR. FELDEWERT: There was no testimony
12 yesterday that the area that was studied to the
13 southwest had the same geology as Section 18. There was
14 no testimony to that. The testimony was that the area
15 to the southwest of Section 18 was sufficiently
16 developed to indicate that those wells were in the same
17 type of geology. There was no testimony that that
18 geology was consistent with Section 18.

19 EXAMINER EZEANYIM: Okay. Counselor, let's
20 concentrate on that --

21 Q. (BY MR. PADILLA) Let me ask this question:
22 What is your understanding of the geology underlying --
23 if you have any understanding, of the geology underlying
24 the Mucho and the Concho wells?

25 A. Well, the direction of flow of the turbidity

1 curves, the turbidity flows that deposit these things
2 come from a slightly different angle, different
3 direction. They're mappable features. And where those
4 wells are, it happens to be more broken in nature, more
5 limes, heavier shales, thicker sands, believe it or not.
6 So there is thinner two- and four-foot laminated sand
7 shales that are more blocky, so the geology is
8 different.

9 Q. Let's go to our Exhibit Number 7. In this
10 exhibit, how far away are those Nacho wells from the
11 north half of Section 18?

12 A. 10, 12 miles away.

13 Q. In looking at your exhibit -- well, Exhibit
14 Number 6, your structure map, where would that
15 structure -- where do those wells lie in terms of your
16 continuation of this structure as shown on Exhibit 6?
17 Where do they lie?

18 A. Exhibit 5?

19 Q. Yeah. Assuming a continuation of --

20 Well, let me ask this: Does the feature
21 shown on your structure continue on down as far south as
22 where those wells are located?

23 A. No. No. They're back to original dip going to
24 the west.

25 Q. So would you say they're on a different

1 structure?

2 A. Yes.

3 Q. Do you know whether they have higher
4 permeabilities than you would encounter in the wells
5 that you have drilled in Section 30?

6 A. The only way that I could determine that would
7 be on lateral log calculations. Yes, I have looked at
8 the deep and shallow medium lateral log in that area,
9 and, yes, we do have a nice widening effect. So under
10 those circumstances, I would say there is better perm.

11 Q. But you don't know exactly what they are?

12 A. No. No. It's all relative to --

13 EXAMINER EZEANYIM: Which area of the --

14 THE WITNESS: I would say the Mucho Nacho
15 area.

16 EXAMINER EZEANYIM: Which is the south?

17 MR. FELDEWERT: Southwest.

18 THE WITNESS: Southwest, about 10, 12
19 miles.

20 MR. FELDEWERT: Down in here (indicating).

21 EXAMINER EZEANYIM: Far away from 18.

22 Okay.

23 Q. (BY MR. PADILLA) So can you use the Concho
24 wells -- can you compare those wells with the geologic
25 features of Section 18?

1 A. No. The only thing similar is that they're
2 both 2nd Bone Spring, but the makeup of the rock is
3 different. The direction of flow is different. So the
4 structure's different.

5 Q. And you believe that the permeability is higher
6 there?

7 A. For the most part, yes.

8 Q. Is that a belief, or is that more knowledge
9 that you have as to --

10 A. Well, it's a combination of production and
11 acknowledge of the lateral logs.

12 Q. So you're not guessing? Let me put it that
13 way.

14 A. No. It's just a well response.

15 Q. And that corresponds with what Mr. Lehman has
16 said in terms of higher permeability?

17 A. Sweet spots, yes.

18 Q. So at some point, an east well or a north-south
19 wouldn't matter, according to the testimony that we've
20 heard here, right?

21 A. Oh, yeah, agree 100 percent.

22 EXAMINER EZEANYIM: What do you agree 100
23 percent?

24 THE WITNESS: That in certain areas, an
25 east-west wouldn't make any difference from north-south.

1 EXAMINER EZEANYIM: Depending on what?

2 THE WITNESS: Permeability.

3 EXAMINER EZEANYIM: Okay.

4 Q. (BY MR. PADILLA) Let's talk about the Mewbourne
5 well in, I believe, Section 21. Is that the same
6 geologic feature that you're drilling into?

7 MR. FELDEWERT: I'm sorry. I missed that,
8 Counsel. Where are you?

9 MR. PADILLA: Section 21.

10 Q. (BY MR. PADILLA) I'm looking at the structure
11 map now, Exhibit 6. Are you talking about the same
12 geology as your well -- as the Stratocaster wells in
13 Sections 20 and 30?

14 A. It is 3rd Bone Springs versus -- we're going
15 into the 2nd, but same type of similar sands, yes. It's
16 a sand-shale sequence. It's deeper.

17 Q. How about stress orientation, if you know?

18 A. From every indication that we've had that I've
19 seen in red, in this area, it's going to be the same,
20 north-south.

21 Q. Do you know whether the Mewbourne well has low
22 permeability?

23 A. Low perm? I can give you the first month's
24 production history of less than 10,000 barrels.

25 Q. And how does that compare to your wells?

1 A. We generally make -- well, we've made 30,000
2 barrels in the first month.

3 MR. PADILLA: That is all I have.

4 EXAMINER EZEANYIM: Okay. Thank you.

5 Mr. Feldewert?

6 CROSS-EXAMINATION

7 BY MR. FELDEWERT:

8 Q. Mr. Harris, let's see what we can agree on
9 here. Is the Bone Spring sand faulted?

10 A. No.

11 Q. Are there anticlines that exist in the Basin,
12 Delaware Basin?

13 A. Not that I'm aware of. I'm sure there could be
14 some.

15 Q. Are there any anticlines in the Devonian?

16 A. Anticlines in the Devonian? Most of that is a
17 fault-block system, so I would say no.

18 Q. You'd say no. Okay.

19 Would you agree that seismic data, in terms
20 of trying to map a structure like we see in Section 18,
21 is better than well control?

22 A. Not necessarily, no.

23 Q. Would you consider the wells that you drilled
24 down in Section 30 to the south of 18 to be a sweet
25 spot, as you defined it?

1 A. No sweeter than Section 18 and Section 19,
2 Section 20.

3 Q. Do you consider those to be sweet spots?

4 A. I consider that whole area to be a sweet spot,
5 yes.

6 Q. What do you define -- how do you define a drape
7 feature, which is -- wait. Let me ask you: Are you
8 saying that the structure we see in Section 18 is a
9 drape feature?

10 A. Yeah. Drape is kind of --

11 Q. Let me split it up. The structure that we see
12 in 18, are you saying that that's a drape feature?

13 A. Partially, yes.

14 Q. Partially, yes?

15 A. Yes.

16 Q. What is it, if it's not a drape feature?

17 A. Because on the eastern side, it's normal
18 depositional environment. When you get to the apex,
19 then you can say it's draping over into the faulted --
20 or the lower zone created by the fault.

21 Q. So how do you define a drape feature?

22 A. It's draping over the top (demonstrating).

23 Q. So is it kind of like that (demonstrating)?
24 Would that be right?

25 A. Yes.

1 Q. So it's going to slope down to one side?

2 A. Yes.

3 Q. Would you expect to see a thickening of the
4 sand to the west of Section 18 if you had a drape
5 feature, as you suggest?

6 A. I would suggest that you would see thickening
7 of the section.

8 Q. I'm talking about thickening of the sand.

9 A. Thickening of the 2nd Bone Spring Sand.

10 Q. To the west of Section 18, if you had a drape,
11 would you see that thickening of the sand?

12 A. Yes, you should.

13 Q. Even though your drape feature is like this
14 (demonstrating)?

15 A. It's going to be valley-fill.

16 Q. Okay. We're getting confused in our
17 orientation. As I understand your drape feature, it
18 goes from Section 18 to the east; does it not?

19 A. No. It goes to the west.

20 Q. To the west?

21 A. Yes.

22 Q. You're saying the drape feature in Section 18
23 goes to the west?

24 A. Yes. It's normal to the east.

25 Q. Normal to the east.

1 I guess I misunderstood. I thought you had
2 a big pile of sand because you had your drape feature to
3 the east of Section 18?

4 A. No.

5 Q. Did the company do a gross isopach map for this
6 Section 18 into the nine-section surrounding area?

7 A. No. No, I did not.

8 Q. How do you define an anticline?

9 A. An anticline is a fold that has used
10 compressional forces east-west, north-south.

11 Q. Can you have an anticline without compressional
12 forces?

13 A. An anticline is created by forces.

14 Q. But, I mean -- at lunchtime, I went and Googled
15 anticline.

16 A. Okay.

17 Q. And I got that it's a structural high with
18 opposing dropping ridge in opposite directions. Do you
19 agree with that?

20 A. Yes, I'll agree with that.

21 Q. If I go to your Exhibit Number 5 -- have you
22 got that in front of you?

23 A. Got it in front of me.

24 Q. As I look to the crest going over Section 18,
25 the middle section, 18, I see dropping limbs off both

1 sides; do I not?

2 A. Yes. To a layman's eye, I would agree with
3 that.

4 Q. But to be fair, though, you don't have any well
5 control to the west of Section 18?

6 A. I have well control to the southwest.

7 Q. Let's go around your map here. If I go to
8 north of Section 18, I don't see any well control data,
9 correct?

10 A. I'm sorry. To where?

11 Q. To the north of Section 18.

12 A. No.

13 Q. If I go to the northwest in Section 12, I see
14 no well control data?

15 A. Correct.

16 Q. If I go to the west of Section 13, I see no
17 well control data?

18 A. Correct.

19 Q. And if I go to the southwest of Section 18 and
20 Section 24, I don't see any well control data?

21 A. Correct.

22 Q. And that is a circumstance when the seismic is
23 helpful in trying to define what we have; is it not?

24 A. Yes. But if I take my regional picture --

25 Q. I can only go with what you brought here today.

1 We don't have your regional picture here today.

2 A. No.

3 Q. Now, would you turn to Chevron Exhibit 11?

4 That's the one that was created with the seismic data,
5 Exhibit 11.

6 A. (Witness complies.)

7 Q. There you go.

8 Based on the data that they've mapped using
9 the seismic, that anticline does not go south into
10 Section 30, does it?

11 A. Not according to this map.

12 Q. It drapes more over to the east, correct, if
13 I'm reading it right?

14 A. Yes.

15 Q. And I think you even testified that you, in
16 drilling your Section 30 wells, did not encounter any
17 evidence of an anticline?

18 A. Correct.

19 Q. Which would be consistent, then, with Chevron's
20 map?

21 A. I can't testify on the consistency of the
22 Chevron map not going into 30, when my evidence of
23 mapping of structure says it does.

24 Q. Okay. But you just testified that you didn't
25 see any evidence of the anticline going into Section 30?

1 A. I did not say that, no.

2 Q. Isn't that what you testified?

3 A. I testified I don't see an anticline on the
4 entire --

5 Q. Okay. But your testimony is you don't see any
6 evidence of the anticline that is depicted on Chevron
7 Exhibit 11 going into Section 30?

8 A. Again, you're trying to lead me into saying
9 that's an anticline, and I can't see that it is on my
10 mapping.

11 Q. Let's assume it's an anticline.

12 A. I can't assume it. My geologic -- I've been
13 mapping this for years, and I cannot see it, sir.

14 Q. Is it your position that we should never drill
15 east-to-west wells in the Delaware Basin?

16 A. Absolutely not.

17 Q. Is it your position --

18 A. I have never said that.

19 Q. Is it your position that no one should drill an
20 east-to-west well in the 6-by-6 township area that is
21 depicted on Exhibit Number 5?

22 A. 6-by-6 township area?

23 Q. I'm sorry. Section area. Well, I'll give it
24 5. Right? What do you have? Five-section area right
25 here (indicating), if I'm counting right.

1 A. Yeah, it's a 6-by-6 area.

2 Q. 6-by-6?

3 A. Uh-huh. 5.

4 Q. Is it your position that companies should never
5 drill an east-to-west well in this 6-by-6 area?

6 A. For 2nd Bone Spring, it's my opinion, no.

7 Q. If I look at your Exhibit Number 7, the area
8 down to the southwest, that was the common geology and
9 common completion techniques and similarly aged wells
10 that allowed for a comparison of north-to-south and
11 east-to-west wells. You recognize that that study
12 indicated the east-to-west wells were superior to the
13 north-south, correct?

14 A. From -- from the two wells that were given
15 evidence on, yes.

16 Q. And it looks like to me, at least, someone
17 started the development going north to south up there in
18 5 and 6; did they not?

19 EXAMINER EZEANYIM: Are we talking about
20 this (indicating)?

21 MR. FELDEWERT: I'm sorry. We're down here
22 in the southwest of Section 18, down in the study area
23 that Chevron utilized, where we had a lot of
24 development.

25 EXAMINER EZEANYIM: Section 18?

1 MR. FELDEWERT: Are you with me,
2 Mr. Examiner? So we're down here (indicating).

3 EXAMINER EZEANYIM: Let me see where you're
4 at.

5 MR. FELDEWERT: Well, here is Section 18
6 (indicating). And remember, Chevron did their study
7 down here, where you could do some apples-to-apples
8 comparisons.

9 EXAMINER EZEANYIM: Okay.

10 Q. (BY MR. FELDEWERT) It looks to me like someone
11 started doing a lot of north-south wells in Sections 5
12 and 6, correct?

13 A. It looks to me that way, also.

14 Q. Do you know who drilled those wells?

15 A. Those are called the Tres Equis, and those were
16 started by Cimarex.

17 Q. Cimarex.

18 And do you know who drilled those
19 north-south wells to the north of Sections 5 and 6, and
20 31 and 32?

21 A. Can you refresh me with a well name?

22 Q. Well, let's see if I can read it. H-E-M-L --
23 it's tough to read on your map. So you don't know?

24 A. I can't recall what has been drilled, no.

25 Q. But despite the success of those wells, Concho

1 decided to try an east-to-west well, correct?

2 A. Apparently, they did. They drilled one.

3 Q. And it was successful?

4 A. I did not do the geology, so I cannot comment
5 on which way would have been the best at the time.

6 Q. But they drilled that well, and it was the
7 highest-performing well?

8 A. Well --

9 Q. According to the study?

10 A. Well, according -- I have not seen the study,
11 so I do not know if it's the highest. I mean, it was
12 talked about yesterday.

13 Q. The data, you haven't looked at it?

14 A. No. I have not seen the data.

15 Q. Well, I'll represent to you the data indicated
16 that those were the highest-performing wells?

17 EXAMINER EZEANYIM: Which wells? The Nacho
18 wells?

19 MR. FELDEWERT: From east to west.

20 EXAMINER EZEANYIM: They call them Nacho
21 wells.

22 MR. FELDEWERT: Nacho.

23 THE WITNESS: May I ask you a question?

24 MR. FELDEWERT: No. I get to ask you
25 questions.

1 Q. (BY MR. FELDEWERT) So my point is, if Cimarex
2 hadn't drilled those east-to-west wells -- if somebody
3 hadn't tried it, you wouldn't know how they would
4 perform versus the north-south wells, correct?

5 A. That's not necessarily correct, no.

6 Q. But because someone chose to drill an
7 east-to-west well, we at least had data to compare how
8 they did with respect to the north-south well. It gave
9 us an opportunity for comparison?

10 A. I'm going to disagree with that, because I do
11 not know the horizontal interval within the 2nd Bone
12 Spring that each of these have been landed in.

13 Q. Would you agree with me that all these wells
14 were drilled in the 2nd Bone Spring?

15 A. That, I would agree with, yes.

16 MR. FELDEWERT: That's all the questions I
17 have.

18 EXAMINER EZEANYIM: Before we leave that,
19 I'm looking at those wells now. Do we have the
20 performance of those wells, the ones drilled? Most of
21 them are to one side. And then these Concho wells, do
22 we have any performance on them?

23 MR. FELDEWERT: Mr. Examiner, that was the
24 subject of Chevron's study that was presented by
25 Mr. Sigmundik, where he compared the north-south versus

1 the east-to-west, the Macho wells.

2 EXAMINER EZEANYIM: So we have it in your
3 exhibits?

4 MR. FELDEWERT: It's in our exhibits. It
5 would be starting at Exhibit 28 and continuing on
6 through Exhibit 33.

7 EXAMINER EZEANYIM: Anything further?

8 MR. FELDEWERT: That's all the questions I
9 have.

10 EXAMINER EZEANYIM: Any redirect?

11 MR. PADILLA: No, Mr. Examiner.

12 EXAMINER EZEANYIM: Okay.

13 CROSS-EXAMINATION

14 BY EXAMINER EZEANYIM:

15 Q. Mr. Harris, who do you work for?

16 A. Endurance Resources.

17 Q. Who?

18 A. Endurance Resources.

19 Q. I was confused when you were talking about your
20 working interests.

21 A. I've had working interests and overrides in
22 wells over the last 40 years.

23 Q. And some of them were operated by Endurance?

24 A. No.

25 Q. It's something else?

1 A. It's something else, yes, sir.

2 Q. Okay. Very good.

3 You know we are in trouble if this is
4 what's happening -- and I don't like it -- if two
5 geologists disagree vehemently on that one section,
6 whether it's anticline -- has an anticlinal feature or
7 not, whether the direction of flow is different,
8 recovery is different.

9 What do you want me to do? I mean, I
10 thought we were using some science, I mean, to have an
11 agreement, but what I get is that one says anticline and
12 one says not anticline. Well, that's my job, to
13 determine which one is it.

14 And Mr. Harris yesterday said it's not an
15 anticline because -- it's not even a syncline.

16 A. No.

17 Q. It's not an anticline, not a syncline, just,
18 you know, it's a mass of sand.

19 A. (Indicating.)

20 Q. You know the position of the sand, right?

21 A. Yes, sir.

22 Q. You used a lot of -- you said sweet spots.

23 Sweet spots may be different. What do you mean by sweet
24 spots?

25 A. Sweet spots are when I made the map and find

1 area concentrations of sands within the -- within the
2 2nd Bone or the 1st Bone or 3rd Bone Spring Sand
3 interval, when I'm able to find the cleaner sands.
4 That's what I consider the sweet spot.

5 Q. Sweet spot because you think it will be
6 productive?

7 A. More productive, yes, sir.

8 Q. And apart from this study that was done by a
9 model, did you decide that this is not an anticline
10 because you are looking at this map, because we dwelled
11 on this map? This is Exhibit Number 5.

12 A. Yes, sir.

13 Q. Is that why you decided that it's not an
14 anticline?

15 A. No. I think we have a normal depositional
16 environment from the apex to the east, and then due to
17 the faulting in the Devonian, a steep depositional
18 environment on the west side. So that would not be an
19 anticline. That would be just a depositional
20 environment.

21 EXAMINER EZEANYIM: Does this really happen
22 in industry? Because what it tells me is that one of
23 your geologists is wrong. You know, both of you cannot
24 be right. Can they? No. And if you say anticline, you
25 cannot be right -- if you say it's a mass of sand, you

1 cannot be right if it's anticline.

2 So the point I'm trying to make is that one
3 of you is right about the geology on the structure in
4 18. If it were me that somebody may be given a wrong
5 angle to drill -- leave hydrocarbons in the ground, it
6 shouldn't happen here. If you didn't come to hearing
7 and this thing went, you know, and the geologist said
8 whatever -- I don't know which one it is. I don't know
9 yet.

10 MR. PADILLA: Well, Mr. Examiner --

11 EXAMINER EZEANYIM: But what I'm trying to
12 say is that it's not really -- I wanted to see -- that's
13 why I recalled the geologists. There might be a
14 consensus, one consensus on the permeability, but not on
15 this structure of Section 18, which bothers me. But
16 that's okay.

17 MR. PADILLA: Mr. Examiner, let me say
18 something here. Because of your comments, perhaps both
19 sides are missing a geophysicist, at this point, to
20 interpret the geophysical data. That may paint a better
21 picture.

22 EXAMINER EZEANYIM: So what are you
23 suggesting?

24 MR. PADILLA: Well, maybe a continuance so
25 that we can be more precise.

1 EXAMINER EZEANYIM: No, we're not going to
2 continue this case. I think I've heard enough. We are
3 not going to continue, even though I do not what's going
4 on here, but I think I do. I don't think I need a
5 geophysicist to come, if he'll say the same thing.

6 So complete your -- complete what you're
7 saying.

8 REDIRECT EXAMINATION

9 BY MR. PADILLA:

10 Q. Mr. Harris, when you talk about sweet spots,
11 you're not equating that with permeability?

12 A. No, I'm not.

13 Q. So the sweet spot represented by Exhibit 6 does
14 not indicate that you have high permeability?

15 A. No, just a higher -- cleaner sand on the log
16 interpretation.

17 MR. PADILLA: That's all I have.

18 EXAMINER EZEANYIM: Mr. Feldewert, do you
19 have anything to say?

20 RECROSS EXAMINATION

21 BY MR. FELDEWERT:

22 Q. Where is your sweet spot?

23 A. Anything in the -- anything in the colored
24 area.

25 Q. If I look at Exhibit 6, where is your sweet

1 spot?

2 A. I'd say from the light green all the way to the
3 red.

4 Q. From the light green all the way to the red?

5 A. Yes.

6 Q. That's the sweet spot?

7 A. Yes. Sweeter to the center.

8 EXAMINER EZEANYIM: Thank you.

9 I think we're going to have a land person.

10 MR. PADILLA: Yes.

11 EXAMINER EZEANYIM: Mr. Harris, you may
12 step down. Oh, you are already stepping down
13 (laughter).

14 Call your next witness.

15 MR. PADILLA: Mr. Examiner, call Jason
16 South.

17 EXAMINER EZEANYIM: Mr. South, you have
18 been sworn. You are still under oath.

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

22 DIRECT EXAMINATION

23 BY MR. PADILLA:

24 Q. Mr. South, please state your name and where you
25 reside.

1 A. Jason South, Midland, Texas.

2 Q. Mr. South, I know you haven't testified before
3 as a landman before the Oil Conservation Division in the
4 past. So please would you state your educational
5 background?

6 A. Yes, sir. I graduated from Texas A & M
7 University in 2005 with a business marketing degree.
8 And as far as my experience as a landman, I started my
9 career as a field landman for Shaw Interests.

10 Q. When did you start that?

11 A. June of 2005. Sorry. And I graduated May of
12 2005.

13 I worked at Chevron after that for almost
14 five years. I worked with Pioneer Natural Resources
15 after that for about a year and a half, and I've been at
16 Endurance for close to a year now.

17 MR. PADILLA: I'd tender Mr. South as a
18 petroleum landman.

19 EXAMINER EZEANYIM: So qualified.

20 Q. (BY MR. PADILLA) Mr. South, let's turn to what
21 we've marked as Exhibit Number 1, and tell us what that
22 is.

23 A. Yes, if I can find Exhibit 1. Okay. Here we
24 go.

25 EXAMINER EZEANYIM: What exhibit are we

1 looking at? Number 1?

2 MR. PADILLA: Exhibit Number 1.

3 Q. (BY MR. PADILLA) What is that?

4 A. This is a timeline that we put together. We
5 wanted to kind of share with you all the work that's
6 gone into this, when we started it to the whole --
7 everything that's gone on with Chevron. And we've tried
8 to do it piece by piece because of the broad --

9 Q. Well, let me ask this: Does this timeline show
10 when you started putting together the prospect for
11 drilling a well in Section 18?

12 A. Yes, sir. Yes, sir.

13 Q. And when did you start?

14 A. Oh, that was one of the first things I was
15 assigned when I started at Endurance Resources. I was
16 handed the takeoff cover of Section 18 and told to get
17 to work leasing it up.

18 Q. And that's covered by Number 1; is that right?

19 A. Yes, sir, that is correct.

20 Q. With regard to Chevron, when was the first time
21 you contacted Chevron?

22 A. Well, the first time we contacted Chevron was
23 on Monday, November 18th. And to kind of set that up,
24 the bullet point before that, I was contacted by another
25 mineral interest owner. I had been talking with this

1 guy for a while. He called me and said, I've got some
2 questions; I don't know what's going on. And he said,
3 you know, You presented an AFE to us awhile back, and it
4 was a little over \$7 million, and you guys want to drill
5 a north-south well. I said, Yes, sir; that's correct.

6 He proceeded to say, I just got a well
7 proposal from Chevron, and they want to drill a well
8 that's east-west, and their fee is almost \$10 million.
9 Can you tell me what's been going on? And that was -- I
10 didn't know. I said, Maybe it's a different formation
11 they're chasing. Do we have the right section we're
12 talking about? So that was the first time I knew
13 anything on the Chevron side.

14 So we then proceeded -- I called Don and
15 told everybody what was going on. And then Randall
16 Harris, since he is a mineral interest owner in the
17 north half of 18, he received a letter as well, and he
18 said, Yes, I got that, too. He scanned it to us, so we
19 could see it.

20 So our next step was then -- we wanted to
21 go meet with Chevron to discuss it. And we were
22 actually working on a trade proposal in a different
23 area, and so we wanted to -- since we were working on
24 that, we sped that up and then went to meet with Chevron
25 on the 20th in Houston, Texas.

1 Q. And you're generally talking about point number
2 11 through -- 11 and 13 on the timeline; is that right?

3 A. Yes, sir. 12 is just talking about a survey
4 that we completed. But, yes, sir.

5 Q. How did you set up the meeting to meet in
6 Houston?

7 A. I called Jason Levine at Chevron and said, you
8 know, we needed to meet to discuss; we had some issues,
9 questions on your well proposal.

10 Q. So when you met with them, what did you take
11 with you?

12 A. Oh, we brought --

13 Q. Well, let me ask: Who went to the meeting?

14 A. Don Ritter, Randall Harris and myself.

15 Q. What did you take with you?

16 A. We took a slide show that -- the slide show
17 started out with an introduction to Endurance, who we
18 were, what we were doing. What we do is drill Bone
19 Spring wells. And so that was the first part of our
20 slide show.

21 The next part was dealing with the trade
22 proposal that we had from Chevron in lands that do not
23 affect this.

24 And the third part was discussing the well
25 proposal and presenting why we viewed north-south as the

1 better direction to go.

2 Q. During Mr. Levine's testimony, he implied that
3 Chevron set up the meeting; is that correct?

4 A. We made contact and everything, and they told
5 us when they could meet. And we were on a plane to go
6 meet.

7 Q. And it took you -- you were on a plane three
8 days later?

9 A. Yes, sir. We found out on the 15th of, which
10 is a Friday, November, and we were in Houston on the
11 20th, which is a Wednesday.

12 Q. And you had your meeting. And what happened
13 following the meeting, at the conclusion of the meeting?

14 A. Well, we had our meeting because we had some
15 questions and concerns. The first one was, you know,
16 what was going on with the AFE. And I think that was
17 addressed earlier. There were some glitches and costs
18 had decreased.

19 But our second one was -- we wanted to know
20 why they proposed an east-west well. And both Don and
21 Randall point-blank asked that question, and we never
22 got a response on that. And that was kind of our basis.
23 You know, we wanted to know why. Is there something we
24 don't know about? What's going on? Nothing. Then we
25 presented why we thought north-south was the way to go

1 with drilling north-south wells in the area.

2 Q. I think you're jumping ahead of me here. When
3 you say you got nothing, you not nothing at the meeting
4 or --

5 A. Oh. Just no responses. There was no -- you
6 know, no data. Nothing was conveyed to us why an
7 east-west well was proposed.

8 Q. So on November 20th, it's fair to say you made
9 a proposal to them about drilling a north-south well?

10 A. Yes. In our slide show, we showed one spot
11 where we had a four-well stake going north-south in
12 Section 18, and we talked about why we thought it was
13 best to drill north-south. And we also talked about how
14 we had operations in the area and had our infrastructure
15 set up and that we could operate that well.

16 Q. Is there a time when you sent an AFE to --

17 A. Yes, sir. I sent a follow-up e-mail about a
18 week later, on the 27th.

19 Q. Where is that represented on your timeline?

20 A. It's number 15.

21 Q. So on November 27th, you sent them an AFE?

22 A. Yes, sir, that is correct.

23 Q. Correct me if I'm wrong. Did Mr. Levine say
24 you never sent them an AFE?

25 A. That was brought up yesterday. I think he said

1 we hadn't sent them one until -- I think the 31st of
2 December was when they said was the first time we had
3 received an AFE from them. I think we brought that
4 e-mail just to show --

5 Q. Did you send a letter to them, as shown by
6 Exhibit 2, attaching your AFE? Let me put it this way.
7 You e-mailed them an AFE, is that right, on the 27th?

8 A. Yes, sir. My e-mail to them was outlining kind
9 of our trade proposal. We talked about the lands had
10 nothing to do with this deal, and also to show our AFE,
11 and that we looking forward to hearing back from them on
12 our discussions on Section 18.

13 Q. And then on December 31st, as shown by Exhibit
14 2, you sent a formal election letter; is that right?

15 A. Yes, sir.

16 Q. Now, between the 27th of November, when you
17 sent them an AFE the first time, did you hear anything
18 back from Chevron?

19 A. We never heard anything back on Section 18 from
20 Chevron.

21 Q. Did you try to engage Chevron in further
22 discussion with regard to drilling a well in Section 18?

23 A. Yes, sir. We left many voice mails. We ended
24 up -- Manny Sirgo sent a letter to a higher-up, Becky
25 Wagstaff.

1 Q. When was that sent; do you know?

2 A. December 19th. It's number 18.

3 Q. And is that represented on the timeline?

4 A. Yes, sir, number 18. Yes, sir.

5 Q. Number 18.

6 Who is Becky Wagstaff?

7 A. She's way up in the stratosphere. I don't know
8 her title there at Chevron, but she's way up there.

9 Q. So you tried to engage a higher authority at
10 Chevron?

11 A. We were just trying to get somebody to talk to
12 us.

13 Q. So when was the next time you heard from
14 Chevron?

15 A. We never -- we never did. The next thing we
16 knew, one of our field guys call us and said, Chevron's
17 moving a rig and equipment onto location, and that was
18 when we had to file our protest.

19 Q. When did you learn that, that they were moving
20 a rig on location?

21 A. I'm sorry, what was the question?

22 Q. When did you learn that Chevron was moving a
23 rig on location?

24 A. It was late December. I don't have the exact
25 date.

1 Q. And what did you do as a result of learning
2 that a rig was being moved to the location?

3 A. We contacted you and told you everything going
4 on, and that resulted in us filing a protest.

5 Q. You protested the well to begin with? Is that
6 what you did, or did you file an application for a
7 compulsory pooling?

8 A. We protested the well on the 27th.

9 Q. And that is shown by -- I believe it's the
10 December 27th letter, what I believe is our Exhibit
11 Number -- I believe it's 17.

12 Is this series of correspondence -- do you
13 have that up there?

14 A. Yes, sir.

15 Yes, sir. This is it.

16 Q. And what exhibit is that? Is that Number 17?

17 A. Mine's not marked.

18 EXAMINER EZEANYIM: It's 17.

19 THE WITNESS: Thank you.

20 Q. (BY MR. PADILLA) Why did you feel compelled to
21 get me involved in sending this correspondence to the
22 director of the Division?

23 A. We were out of options. We had an asset up
24 there, and it was getting drilled, and we had no
25 knowledge that any of this was going on.

1 Q. Had you still been trying to get ahold of
2 Chevron at this time?

3 A. Yes, sir. We made lots of attempts. And I
4 sent a letter on to Chevron, the protest letter. I
5 stated in there that we tried for weeks to get somebody
6 to talk to us, and, you know, this is not what we wanted
7 to do. We wanted to be a partner of choice with
8 Chevron. And I worked there for five years, so I have a
9 soft place in my heart for them. That is not what we
10 wanted to do, but it was one of those things -- that was
11 our last option.

12 Q. Was there a point in time when you asked me to
13 file a competing compulsory pooling application for a
14 north-south well?

15 A. Yes, sir.

16 Q. And when did that occur?

17 A. I believe, on January 3rd.

18 Q. Now, there was testimony concerning the
19 spudding of the well on December 25th, on Christmas Day.
20 And when did Chevron move the rig on again?

21 A. We heard from our field supervisor that it was
22 late December.

23 Q. Late December?

24 A. Yes.

25 Q. So at this time are you still competing with

1 Chevron in trying to acquire oil and gas leases on the
2 north half?

3 A. Yes, sir.

4 When Chevron spudded the well, they only
5 owned about 42 percent ownership in that section. And
6 at that point in time, there was over 30 percent of the
7 section unleased, as well as we had the remainder of the
8 interest.

9 Q. By that time, had Chevron already filed a
10 compulsory pooling case against you?

11 A. Yes. They had already -- they spud, drilling,
12 and we got notice of that on January 3rd from you, which
13 wasn't even proper notice. They wanted to do it on the
14 23rd of January. And they sent it through you, which
15 wasn't proper notice, because you weren't representing
16 us at that time.

17 Q. In the compulsory pooling case?

18 A. Yes.

19 Q. So has Chevron's interest in the north half
20 increased?

21 A. No, sir.

22 Q. And how about the interest of Tritex Energy?

23 A. Yes. We picked up all the remaining mineral
24 interest owners in the north half of Section 18. And
25 the one person that did not want to lease was Mr. Ray

1 Westall, and he signed our election letter to
2 participate in a north-south well.

3 Q. How about BTA?

4 A. Yeah. BTA owns 100 percent in the south half
5 of Section 18, and they -- they protested earlier,
6 around the 27th, when we protested. And then they sent
7 a letter, which is Exhibit 3, because they are against
8 any such well because of economics, and they wanted to
9 be in a north-south well with Endurance.

10 Q. And that letter on Exhibit 3 is a letter that
11 they sent to the director of the Division; is that
12 right?

13 A. Yes, sir.

14 Q. And that's marked as Exhibit 3?

15 A. Yes, sir, that is correct.

16 Q. What do they say about the economics of an
17 east-west well on Exhibit 3?

18 A. BTA is of the opinion that an east-west well in
19 Section 18 is not economic.

20 Q. Let me ask you: There's been some testimony
21 here concerning the south half being federal land or
22 federal minerals and the north half being private
23 minerals. In your experience, has the BLM ever refused
24 to authorize a communitization agreement solely on the
25 basis of federal land only?

1 A. No, sir, not that I'm aware of.

2 Q. How often are private and federal, state lands
3 mixed together to form a spacing unit?

4 A. All the time.

5 Q. Now, was there a time that you sent a JOA to
6 Chevron?

7 A. Yes, sir. We sent our JOA on January 20th,
8 2014.

9 Q. And where is that represented on Exhibit 3?

10 A. Number 31.

11 Q. In that JOA, what overhead rates did you have?

12 A. We sent, for drilling, 9,400, and I believe
13 940. And those numbers were taken from -- there is a
14 Joint Operating Agreement that covers Section 29, just a
15 few miles south, where Endurance is the operator of the
16 east half and Caza is the operator of the west half.
17 And Chevron owns a non-op interest in the entire Joint
18 Operating Agreement, and they signed and agreed to those
19 numbers. So that's why we presented those numbers.

20 EXAMINER EZEANYIM: What are the overhead
21 rates?

22 THE WITNESS: 9,400 and 940. So that was
23 our basis on those numbers. Chevron had already agreed
24 to those numbers in another section.

25 Q. (BY MR. PADILLA) So let's go over the ownership

1 breakdown on your Exhibit Number 1.

2 A. Yes, sir.

3 Q. How does it break down on the north-south well?

4 A. Well, for a north-south well, BTA owned 50
5 percent. Tritex would own a little over 27 percent,
6 Chevron USA, a little over 20, and Ray and Carol
7 Westall, a little over two percent.

8 Q. And on an east-west well?

9 A. Tritex would own 54 percent of that, while
10 Chevron almost 42 percent, and Ray and Carol Westall, a
11 little over 4 percent.

12 Q. So you would still have a majority interest
13 whether or not you drill an east-west or north-south
14 well, other than when you include the BTA --

15 A. Oh, yes sir.

16 Q. -- acreage?

17 A. Yes, sir.

18 Q. In the letter from BTA to the director of the
19 Division that's represented by Exhibit Number 3, is
20 there a -- does BTA state that they have elected to join
21 in the north-south well?

22 A. Yes, they do. They have fully supported
23 drilling the north-south well.

24 Q. And going on to the last page, is there a
25 percentage of working interest owners that favor a

1 north-south well in Section 18?

2 A. Almost 80 percent of the owners of all of
3 Section 18 favor a north-south well. Really, the only
4 group opposed to a north-south well is Chevron.

5 Q. Let me hand you what I've marked as Endurance
6 Exhibit Number 1A and ask you what that is.

7 A. This is the follow-up e-mail to our meeting on
8 November 27th, 2013 -- our meeting on the 20th, and this
9 is just a follow-up on our trade proposal, present our
10 AFE for our Starcaster well located in Section 18, and
11 just throwing out there that we were excited to hear
12 back on the discussion on Section 18 as well.

13 And the next page is correspondence between
14 Don Ritter and Mr. Todd Kratz of Chevron. And these are
15 the e-mails just kind of showing some different trade
16 proposals that we threw out there for Chevron, in
17 Section 18, to try to work out some type of deal.

18 Q. When you look at any of this correspondence, is
19 there anything coming back from Chevron indicating that
20 they have either some interest or no interest or any
21 interest?

22 A. No, sir. The only thing we were ever hearing
23 was evaluation. The only thing that I ever got an
24 answer on from Chevron was that they did not like our
25 trade proposal in 25 South, 35 East. That was it. As

1 far as Section 18, there was -- there was no
2 correspondence.

3 Q. Has this been, in your experience -- in any of
4 the negotiations that you've conducted with respect to
5 trying to have other people join in drilling wells --

6 A. I'm sorry. I missed the first part of the
7 question.

8 Q. Let me ask you: Have you ever experienced this
9 type of communication or lack of communication from
10 anyone in negotiating well proposals?

11 A. No, sir. I've never been in a spot like this,
12 where we couldn't get any action.

13 Q. Have you received any comment on the Joint
14 Operating Agreement that you sent to Chevron?

15 A. No, sir. No, sir.

16 Q. What is your experience as to whether or not
17 Chevron, in bringing this case, is acting in good faith
18 before filing a compulsory pooling application?

19 A. None that I see.

20 I mean, we found out about a well that was
21 being drilled on land where we own 50 percent, and we
22 did not know -- we had never heard from Chevron that
23 this was something they wanted to do.

24 Q. Was there a time that somebody told you that
25 they had not spudded a well?

1 A. (No response.)

2 Q. Let me rephrase. Testimony has been here that
3 Chevron spudded -- at least I think Mr. Feldewert said
4 that the well was spudded on December 30th, and there
5 was also testimony about maybe it was spudded on the
6 25th. When is that correct -- what date is correct as
7 far as you know?

8 A. You know, yesterday Jason Levine said they had
9 spud the well on Christmas. So, you know, I don't have
10 an exact date.

11 Q. And it's your testimony they had already filed
12 a compulsory pooling application; is that right?

13 A. Yes, sir. Well, we did not know about that at
14 all until we received notice on January 3rd of 2014.

15 Q. For the January 23rd hearing?

16 A. Hearing, yes, sir.

17 Q. Let me direct your attention, again, to
18 paragraph 17, which is the compilation of correspondence
19 to the director of the OCD, and let me direct your
20 attention to the fourth page of that. And it's the
21 second page of Mr. Feldewert's letter to the OCD.

22 EXAMINER EZEANYIM: Which one?

23 MR. PADILLA: The December 30th, 2013
24 letter.

25 EXAMINER EZEANYIM: Which exhibit?

1 MR. PADILLA: Exhibit Number 17.

2 EXAMINER EZEANYIM: Okay. This one
3 (indicating)?

4 MR. PADILLA: Yes.

5 EXAMINER EZEANYIM: Okay. From
6 Mr. Feldewert?

7 MR. PADILLA: Yes.

8 EXAMINER EZEANYIM: Go ahead.

9 Q. (BY MR. PADILLA) Mr. Feldewert states, at the
10 top of the page: "Chevron has had a rig scheduled for
11 this well for sometime and plans on spudding the well
12 today." And the letter is dated December 30th. So on
13 December 30th, according to Mr. Levine's testimony, they
14 had already, in fact, spudded the well?

15 A. That would appear to be the case.

16 Q. Before I finish, let's go to Exhibit Number --

17 EXAMINER EZEANYIM: Before you go there,
18 none of your letters got a reply, right? You didn't get
19 a reply, right?

20 MR. PADILLA: No, Mr. Examiner. We were
21 both sending letters to Ms. Bailey.

22 EXAMINER EZEANYIM: I wasn't here at that
23 time. That's okay.

24 MR. PADILLA: To be fair to Mr. Feldewert,
25 I protested the well, and I sent -- ultimately, he got a

1 copy of that letter, and then we went back and forth.

2 EXAMINER EZEANYIM: No response?

3 MR. PADILLA: No.

4 EXAMINER EZEANYIM: Just for my own
5 information.

6 MR. PADILLA: Then we got with the
7 compulsory -- with this hearing.

8 Q. (BY MR. PADILLA) In all of your proposals, was
9 there some kind of an agreement, either to buy out the
10 acreage or get a term assignment from Chevron so you
11 could drill the north-south well?

12 A. Yes, sir. We had several talks with them to
13 see -- in this election letter, you'll see -- I'm sorry.
14 This is Exhibit 2, under paragraph three. We offered
15 to, you know, negotiate a term assignment if Chevron did
16 not want to drill a north-south well.

17 Q. How about the converse of that? Did you offer
18 to sell your acreage in the north half of Section 18 to
19 get out of the way?

20 A. At one time Don Ritter had spoken with them.
21 The way the ownership -- at that point in time, we had a
22 little over 20 percent in the north half of Section 18,
23 and Chevron had about the same interest in the east half
24 of 19. And we said we would do a swap, get out of your
25 way, let you go drill your well.

1 Q. Let me direct your attention to Exhibit 13.

2 It's an affidavit, my affidavit.

3 A. Okay.

4 Q. Mr. South, is that an affidavit saying that I
5 have notified all offset operators and parties?

6 A. Yes, sir.

7 Q. On the second page, does that identify the
8 parties who are offset operators and nonconsent?

9 A. Yes, sir.

10 Q. So in this case, number four, Chevron would be
11 both the offset operator and a nonconsent person --

12 A. Yes, sir.

13 Q. -- party?

14 Let me ask you -- there is some -- before
15 we move on, I neglected to ask you. Chevron has
16 ConocoPhillips as owning an interest in the south half
17 of Section 18. What's your information in regards to
18 ConocoPhillips? What is ConocoPhillips' interest?

19 A. We did not reflect ConocoPhillips to own any
20 interest in the south half of Section 18. Just to give
21 you a little -- where we are. On the timeline, if you
22 go to number five, I received a takeoff on the south
23 half of Section 18 on that date. And a few days later
24 we made contact with BTA, because they own 100 percent
25 in the south half of Section 18, to work out some type

1 of term assignment: And they told us they weren't
2 interested in that but would like to participate in the
3 well.

4 Q. And that's a Bone Spring well?

5 A. Yes, sir. Correct.

6 Q. Do you know whether ConocoPhillips owns some --
7 well, is there a depth limitation of the BTA ownership?

8 A. Yes, sir. BTA owns to 43,580 feet. And below
9 that, I don't know, because we don't care because it's
10 nothing to do with what we're doing.

11 Q. Your compulsory pooling case only includes to
12 the base of the Bone Spring; is that right?

13 A. Yes, sir, that's correct.

14 And, also, if you go to Exhibit 3, BTA
15 says, on the first line, that they own 100 percent
16 working interest in the south half.

17 Q. And that applies to the Bone Spring?

18 A. Yes, sir.

19 Q. Did Chevron ever offer you a term assignment?

20 A. No, sir. The only thing received from Chevron
21 was an election letter, and at that time, they had us
22 reflecting that we owned a two percent interest. And
23 there was no -- there was no offer at all of a term
24 assignment. It was: Do you want to participate at all
25 or not? That was it.

1 Q. So let's go on to Exhibit 14. That's merely
2 your application for a permit to drill, that you filed
3 with regard to the BLM, to drill your proposed well,
4 right?

5 A. Yes, sir, that is correct.

6 Q. I won't go into that, other than that tells us
7 what the footage is and that sort of thing, right?

8 A. Yes, sir. We proposed the well 330 from the
9 north and 660 from the east.

10 MR. PADILLA: Mr. Examiner, we offer
11 Exhibits 1, 1A, 2, 3, 13 and 14.

12 EXAMINER EZEANYIM: All right. Let me
13 write them down. Which ones? 1, 1A?

14 MR. PADILLA: 1, 1A, 2, 3, 13 and 14.

15 EXAMINER EZEANYIM: Any objection?

16 MR. FELDEWERT: No objection.

17 MR. PADILLA: And we'll pass the witness.

18 EXAMINER EZEANYIM: Exhibits 1, 1A, 2, 3,
19 13 and 14 will be admitted.

20 (Endurance Resources, LLC Exhibit Numbers
21 1, 1A, 2, 3, 13 and 14 were offered and
22 admitted into evidence.)

23 EXAMINER EZEANYIM: Mr. Feldewert, your
24 witness now.

25

CROSS-EXAMINATION

1

2 BY MR. FELDEWERT:

3 Q. Mr. South, when you met with Chevron on
4 November 20th, they had proposed formally to all the
5 working interests in the north half to drill an
6 east-west well, correct?

7 A. Yes, sir.

8 Q. And at that time, as I understand it, at that
9 meeting, Endurance tried to convince Chevron to drill a
10 north-south well, right?

11 A. Yes, sir. We brought forth that we thought the
12 best orientation was north-south.

13 Q. And you were asking Chevron to drill a
14 north-south well?

15 A. No, sir.

16 Q. You were not?

17 A. No, sir. That was part of the -- we introduced
18 ourselves, in our introduction that I was talking about,
19 and we were showing our expertise in the area, why we
20 thought we would be the best operator to do that.

21 Q. And you believe it should be a north-south
22 well?

23 A. Yes, sir. I'm not a geologist or anything.

24 Q. But the company's remained adamant throughout
25 the entire process that it should be a north-south well,

1 right?

2 A. Yes.

3 Q. Go to our notebook with Exhibit Number 4. And
4 I just want to talk a little bit about the AFE that you
5 referenced. If I look at the third page of Exhibit
6 Number 4 --

7 A. Yes, sir.

8 Q. -- I see that the AFE is dated November 19th,
9 2013. Is that the one you said you eventually e-mailed
10 to Chevron?

11 A. I believe that's correct. It's attached to --

12 Q. Yeah. It was cut off, and I couldn't --

13 A. Oh, yeah. It's the same.

14 Q. I saw that the date's the same.

15 A. Yes, sir. It should be the exact same.

16 Q. Okay. This is all -- you sent this by e-mail
17 to Chevron, correct?

18 A. This letter?

19 Q. No, this AFE.

20 A. Yes, sir. I sent that in an e-mail to
21 Mr. Schwartz and Mr. Levine.

22 Q. Sometime in November?

23 A. The 27th, I believe.

24 Q. And if I look at this AFE, it's not -- stay
25 there for me, Exhibit 4.

1 A. Sorry.

2 Q. Just go to the AFE.

3 A. Okay.

4 Q. It wasn't signed, correct? There is no
5 signature at the bottom; is that right?

6 A. No, sir.

7 Q. It doesn't show any -- it doesn't identify the
8 well orientation?

9 A. I mean, it's --

10 Q. On the AFE?

11 A. No, sir. It's addressed in the letter, which
12 is attached.

13 Q. But one could surmise that it looked like a
14 draft, since it wasn't actually signed? Would that be
15 fair?

16 A. I don't know. I just --

17 Q. And it wasn't until December 31st, then, that
18 the company then formally proposed, not only to Chevron
19 but all the other interest owners, to actually go out
20 and drill a north-south well, right?

21 A. Yes, sir.

22 Q. That's shown on Exhibit 4?

23 A. Yes, sir.

24 Q. Keep that in front of you, please. As I look
25 at this well proposal, it's for a well that you describe

1 in the RE line as the east half of the east half of
2 Section 18. Do you see that?

3 A. Yes, sir.

4 Q. And the proposal of the well is going to be a
5 stand-up, 660 from the east line.

6 A. Okay.

7 Q. So that would be the east half of the east
8 half?

9 A. Yes, sir.

10 Q. And are you aware that the Bone Spring spacing
11 in this area is 40 acres?

12 A. Yes, sir.

13 Q. That's statewide spacing; is it not?

14 A. Yes, sir.

15 Q. And the well you've proposed is only going to
16 penetrate the 40-acre tracts that comprise the east half
17 of the east half?

18 A. Yes.

19 Q. That's right?

20 A. (Indicating.)

21 Q. That well is not going to penetrate the west
22 half of the east half?

23 A. No, sir.

24 Q. And so that well that you have proposed here is
25 not going to develop the entire east half of Section 18,

1 is it?

2 A. No, sir.

3 Q. Can you explain, then, why you're pooling
4 application that you filed with the Division seeks to
5 dedicate this well to an east-half spacing unit
6 something Mr. Ezeanyim brought up at the beginning of
7 this hearing?

8 A. Well, I didn't prepare it, but we wanted to
9 drill two wells in the east half of Section 18.

10 Q. But your pooling application that you filed
11 with the Division is not to first create an east-half
12 spacing unit in an east-half spacing unit, then pool.
13 Your pooling application asks the Division to create an
14 east-half spacing unit and then pool the entire east
15 half, correct?

16 A. Yes, sir.

17 Q. And that's something they cannot do under their
18 rules. Are you aware of that?

19 A. No, sir.

20 Q. In fact, the advertisement that came out for
21 this hearing here today only advertised a request to
22 pool the east-half spacing unit. It did not request to
23 pool an east half-east half spacing unit.

24 A. Is that a question?

25 Q. Yeah. Is that correct?

1 A. Sorry. Could you repeat that?

2 Q. The advertisement for this hearing here today
3 for Endurance's application is not to pool an east
4 half-east half spacing unit. It is to pool an east-half
5 spacing unit?

6 A. Yes, sir, that's correct.

7 Q. For a well that's going to develop the east
8 half of the east half?

9 A. Okay.

10 Q. Now, you mentioned that you don't believe
11 ConocoPhillips has an interest in the south half of
12 Section 18?

13 A. No, sir, not at all.

14 Q. Do you have a title opinion?

15 A. I have takeoffs that were done, and I have BTA
16 saying they own 100 percent.

17 Q. Those takeoffs that you received, I guess you
18 didn't have sufficient trust in them, because didn't you
19 ask for a title opinion?

20 A. Yes, sir. We were trying to get a title
21 opinion because we want to drill a well.

22 Q. If I look at Exhibit Number 1, paragraph nine,
23 it says: "I sent a title opinion request to David Smith
24 with Stubbeman Law Firm on November 13th, 2013."

25 A. Yes, sir.

1 Q. Have you received that yet?

2 A. No, sir.

3 Q. So you still don't have a title opinion for the
4 south half of Section 18?

5 A. No, sir.

6 Q. Were you here when Mr. Levine testified the
7 company has a title opinion for Section 18?

8 A. For the north half.

9 Q. And for the south half?

10 A. He didn't say they had a title opinion for the
11 south half. He said he had a takeoff.

12 Q. Are you aware that David [sic] testified that
13 ConocoPhillips does hold an interest in the south half
14 of Section 18?

15 A. I heard that, but, you know --

16 Q. Were you aware that they contacted
17 ConocoPhillips and discussed their well proposal with
18 ConocoPhillips?

19 A. That was mentioned yesterday.

20 Q. But ConocoPhillips did not receive notice of
21 your hearing here today, did they?

22 A. We do not have any evidence that Conoco owns
23 anything.

24 Now, I would like to speculate on that.
25 You said that Conoco is the record title owner, correct?

1 Q. They are.

2 A. Okay.

3 Q. Is that correct? Is that what your takeoffs
4 show?

5 A. Yes.

6 Q. Okay. So you know we're leasing record title?

7 A. Yes, sir. So my guess would be that BTA drills
8 Morrow wells. Correct? BTA owns the south half.

9 Q. That's your -- that's what your records
10 reflect, your takeoffs?

11 A. Our takeoff reflects that BTA owns --

12 Q. My question is: Do you have a title -- you
13 asked for a title opinion to confirm the takeoffs, but
14 you have not received that?

15 A. I ordered a title opinion so we could be ready
16 to drill the well.

17 Q. Have you received that title opinion?

18 A. No, sir.

19 Q. And that title opinion will confirm, will it
20 not, whether ConocoPhillips has an interest in the Bone
21 Spring in the south half of Section 18?

22 A. It will, yeah, whenever we get it. But Chevron
23 does not have a title opinion either, correct? They
24 have a takeoff by a broker, which is the same thing we
25 have, correct?

1 Q. And they show ConocoPhillips having an interest
2 in the south half of Section 18.

3 A. What depths do they show?

4 Q. You'd have to ask Mr. Levine, but he testified
5 at the hearing today. You were here.

6 A. Okay.

7 Q. He said ConocoPhillips has an interest in the
8 Bone Spring in the south half of Section 18.

9 A. Oh. You know, my guess would be they do own an
10 interest below the 14,800 area. My guess would be that
11 there was a farm-out agreement between Conoco and BTA.
12 BTA went out and drilled a Morrow well. They earned all
13 the depths they've drilled, and Conoco retained the deep
14 rights.

15 Q. That's your guess? That's your guess?

16 A. Well, y'all are guessing, too. It's the
17 same -- we have a takeoff. BTA, they may own 100
18 percent.

19 Q. Have you looked at the farm-out agreement?

20 A. No. I'm just -- I'm just --

21 Q. So you don't know?

22 A. No. Y'all are throwing stuff on the wall, so
23 I'm going to throw stuff, too.

24 (Laughter.)

25 THE WITNESS: I apologize. Sorry.

1 Q. (BY MR. FELDEWERT) Now, I want you to take a
2 look at Exhibit Number -- Chevron Exhibit Number 2.

3 Actually, you know, let's look at a map.
4 That might be better. Do you have your Exhibit Number 6
5 in front of you?

6 A. My Exhibit Number 6?

7 Q. Endurance's Exhibit Number 6.

8 A. Yes, sir.

9 Q. Now, we have this big debate over how Section
10 18 could be developed.

11 A. Yes, sir.

12 Q. And one option you're aware of could be that
13 you could develop the federal acreage in the south half
14 of Section 18 with the federal acreage in Section 19,
15 correct?

16 A. That's what you talked about earlier, yes, sir.

17 Q. And you wouldn't need a comm agreement,
18 communitization agreement, to develop that federal
19 acreage in the south half of 18 with the federal acreage
20 in Section 19.

21 A. Okay.

22 Q. Correct? You're aware of that?

23 A. I was under the impression that you force --
24 that federal leases do not allow approval.

25 Q. So we've got two different concepts here. Let

1 me ask it this way. To drill your stand-up well, you're
2 going to have to a federal permit.

3 A. Yes, sir.

4 Q. And you've applied for that?

5 A. Yes, sir.

6 Q. Have you received it?

7 A. No, sir.

8 Q. You're going to also have a comm agreement for
9 your well; are you not?

10 A. Yes, sir.

11 Q. Did you apply for that?

12 A. No. That can occur after production of the
13 well.

14 Q. How many times have you sought a
15 communitization agreement from the BLM?

16 A. That I have?

17 Q. Uh-huh.

18 A. I have not.

19 Q. You've never done it?

20 A. No, sir.

21 Q. Are you familiar with the BLM's manual on
22 communitization?

23 A. I've seen it, yes, sir.

24 Q. Have you reviewed it?

25 A. I've read pages, yes, sir.

1 MR. FELDEWERT: May I approach the witness?

2 EXAMINER EZEANYIM: Sure.

3 Q. (BY MR. FELDEWERT) Have you had a chance,
4 Mr. South, to look at what I've marked as Chevron
5 Exhibit 36?

6 A. I'm looking at it now, yes, sir.

7 Q. It's the 3160-9 communitization manual, I
8 guess, from the Bureau of Land Management.

9 A. Yes, sir.

10 Q. Have you previously looked at this?

11 A. I've looked at a lot of this stuff. I am no
12 expert by any stretch.

13 Q. Here's what I want you to do for me. Would you
14 read out loud -- go to the second page of this. You're
15 there?

16 A. Yes, sir.

17 Q. Read paragraph -- you see A1 there? It says:
18 "Conforming to an Acceptable State Spacing Pattern."

19 A. Okay. Yes, sir.

20 Q. Would you read that out loud for us, please?

21 A. The whole paragraph?

22 Q. Yeah.

23 A. Okay. "Communitization is required in order to
24 form a drilling unit that conforms to an acceptable
25 nonoptional spacing pattern established by State order."

1 The whole paragraph?

2 Q. Keep going.

3 A. "As a general guideline, communitization will
4 not be authorized when a single Federal lease or
5 unleased Federal acreage can be fully developed and
6 still conform to an optional (North-South or East-West
7 spacing) pattern established by State order."

8 Q. Okay. You can stop right there.

9 Would you agree with me there that they say
10 that communitization will not be authorized when a
11 single federal lease can be fully developed and still
12 conform to a State spacing pattern?

13 A. Yes, sir.

14 Q. Let's go to the second page.

15 A. Is this referring to the trade proposal that
16 you were bringing us? Is that where we're at?

17 Q. Go to the second page.

18 EXAMINER EZEANYIM: Second or third?

19 MR. FELDEWERT: I'm sorry. The third page
20 of this exhibit, yes.

21 Q. (BY MR. FELDEWERT) Now, I'm going to have you
22 read to yourself paragraph G2 down there towards the
23 bottom. Do you see "Optional State Spacing"?

24 A. Yes.

25 Q. Just read it to yourself.

1 A. (Witness complies.)

2 Q. Have you finished?

3 A. Oh, yeah.

4 Q. Now, the federal acreage in the south half of
5 Section 18 can be independently developed under the
6 state spacing rules; can it not?

7 A. South half of 18?

8 Q. Uh-huh.

9 A. Are you referring to an east-west well?

10 Q. Yeah. That's one option, right? You can do an
11 east-west well and independently develop that federal
12 acreage?

13 A. Yes, sir, which the person with 100 percent
14 said they do not want to do.

15 Q. You own interest down there, don't you?

16 A. In the south half?

17 Q. Oh, you don't. You don't.

18 A. No.

19 Q. You'd have to pool.

20 It could also be developed -- that south
21 half of Section 18 could be developed with a
22 mile-and-a-half stand-up well coming out of Section 19,
23 correct?

24 A. It could.

25 Q. That's also federal acreage?

1 A. Yes, sir.

2 Q. And would you agree with me that this manual at
3 least indicates a strong preference by the BLM to have
4 their federal acreage developed independently of fee
5 acreage whenever it's possible?

6 A. That's what it appears. I'm not an expert.

7 Q. Finally, I want to look -- I didn't quite
8 understand something with Exhibit Number 1.

9 A. Yes, sir.

10 Q. I'm looking at your paragraph 30 on the second
11 page of that exhibit.

12 A. Okay. Yes, sir.

13 Q. Don e-mailed Todd Kratz, land manager at
14 Chevron, on January 16th, 2014 and offered several trade
15 options.

16 A. Yes, sir.

17 Q. The first trade option: "Chevron participate
18 as a non-op working interest owner in the north-half
19 well."

20 A. Yes, sir.

21 Q. What is the north-half well?

22 A. I think it's just a typo, but it was to
23 participate in the well we proposed. We have the e-mail
24 as evidence if you'd like to look at it.

25 Q. That's a typo? Is that what you said, the

1 north-half well? I'm just trying to figure out what the
2 north-half well is.

3 A. I believe that's a typo.

4 Q. That's not Chevron's north-half well, lay-down
5 north-half well?

6 A. Oh, no, sir.

7 Q. That's all the questions I have.

8 EXAMINER EZEANYIM: Okay. Thank you.

9 MR. PADILLA: I have a couple of follow-up
10 questions real quick.

11 REDIRECT EXAMINATION

12 BY MR. PADILLA:

13 Q. Mr. South, looking at this manual of --

14 EXAMINER EZEANYIM: Wait a minute. Wait a
15 minute. Mr. Feldewert, do we have to admit this,
16 because we need to do it right?

17 MR. FELDEWERT: Can I move the admission of
18 Exhibit 36?

19 EXAMINER EZEANYIM: Any objection?

20 MR. PADILLA: No.

21 EXAMINER EZEANYIM: Exhibit 36 will be
22 admitted.

23 (Chevron USA, Inc. Exhibit Number 36 was
24 offered and admitted into evidence.)

25 EXAMINER EZEANYIM: Okay. Go ahead,

1 Mr. Padilla.

2 Q. (BY MR. PADILLA) Mr. South, Mr. Feldewert asked
3 you to read a portion of paragraph A1 of the second page
4 of this exhibit.

5 A. Which exhibit, please? Sorry.

6 Q. The last one.

7 A. Yes, sir.

8 Q. Can you read the last sentence of that
9 paragraph? He had you stop at the word "order."

10 A. Okay. And you want me to read that?

11 Q. Yes.

12 A. Okay. "If the Federal tract cannot be
13 independently developed and there are a number of
14 spacing options, the authorized officer should require
15 the one that is in the best interest of the Federal
16 Government, i.e., the one that provides the largest
17 Federal participation."

18 Q. In your opinion, can that be interpreted to
19 justify an east-half proration unit in this section?

20 A. Yes, sir.

21 Q. And based on the testimony here that the
22 east-west orientation of this pattern, as far as
23 Endurance's case is concerned, the federal government
24 interest -- the north-south would be more favorable to
25 the government?

1 A. Oh, yes, sir.

2 MR. FELDEWERT: Object to the form of the
3 question. He doesn't have the background to answer that
4 question, and he's never applied for a comm agreement.

5 MR. PADILLA: I asked him in terms of the
6 evidence presented here.

7 A. Yes, sir, a north-south --

8 EXAMINER EZEANYIM: You can't answer the
9 question until I rule.

10 THE WITNESS: I'm sorry. Sorry, sorry.

11 EXAMINER EZEANYIM: The objection is
12 overruled.

13 Ask that question in a different way.
14 Otherwise, it's sustained, because I know what's going
15 on here. Ask that question in a different way, so I can
16 be -- you know, not be partial to somebody. I know what
17 is going on.

18 So that concludes your cross-examination,
19 right?

20 MR. PADILLA: Let me ask this real quick.

21 Q. (BY MR. PADILLA) Do you have an opinion as to
22 whether it would be in the best interest of the federal
23 government to form east-half proration unit?

24 A. Oh, yes, sir. It would bring in the south half
25 of the section. And while I'm not a geologist or

1 anything like that, 100 percent of something is better
2 than 100 percent of nothing.

3 MR. PADILLA: That's all I have.

4 MR. FELDEWERT: May I ask one more
5 question?

6 EXAMINER EZEANYIM: Okay. I give everybody
7 a chance.

8 RE CROSS EXAMINATION

9 BY MR. FELDEWERT:

10 Q. Mr. South, if you proposed a stand-up well,
11 what would be the proposed participation by the federal
12 government?

13 A. The federal government?

14 Q. Uh-huh.

15 A. They would own 6.25.

16 Q. It would be half of your royalty, 50 percent?

17 A. Yeah. They would have to --

18 Q. Half?

19 A. Yes, half.

20 Q. To do a lay-down in the south half, they get
21 their full royalty?

22 A. Yes, sir. But the problem on that is BTA has
23 said they do not want to drill an east-west well, which
24 would orphan that acreage.

25 Q. So the one that provides the largest federal

1 participation would be the lay-down, number one,
2 correct?

3 A. Yes, it would, but --

4 Q. And if you did a stand-up well from Section 19
5 that was a mile and a half, the federal government would
6 also get their full royalty. It would not be diluted by
7 any fee acreage; is that right?

8 A. Yes, sir. But the problem on that is the
9 working interest owner in the south half says they do
10 not want to be in an east-west well, so this is
11 potentially orphaning that.

12 Q. I agree with you. And so if you did a
13 mile-and-a-half stand-up well in Section 19, in the
14 south half of 18, you would accomplish two things. We
15 would meet the objective of BTA, who wants a stand-up
16 well, and the federal government interest is not
17 diluted.

18 A. But the problem on that is you're not
19 addressing the north-half interest. We are the dominant
20 interest in the north half, and you have not proposed
21 anything on that. That asset is worth millions to us.

22 Q. We have proposed a lay-down well, correct?

23 A. Yes. And your only option was for us to go
24 nonconsent.

25 Q. You don't have to go nonconsent.

1 A. We don't want to drill the well.

2 MR. FELDEWERT: That's all the questions I
3 have.

4 EXAMINER EZEANYIM: Interesting.
5 Are you done?

6 MR. FELDEWERT: I'm finished.

7 MR. PADILLA: I'm done.

8 EXAMINER EZEANYIM: Okay. Good. I hope
9 you don't have any more witnesses --

10 MR. PADILLA: No.

11 EXAMINER EZEANYIM: -- because I know I
12 have enough information.

13 CROSS-EXAMINATION

14 BY EXAMINER EZEANYIM:

15 Q. Okay. Would the orientation of the well make
16 any difference in the overhead rates?

17 A. No, sir. And we had talked about that. We
18 don't -- we will do any -- what Chevron, their overhead
19 rates that they proposed, we hadn't seen those numbers
20 beforehand. We had just offered those numbers because
21 Chevron had agreed to that in another section.

22 Q. I thought -- I thought you arrived at that
23 using COPAS. If I'm wrong, correct me, because it could
24 be important if you're drilling a 160-acre. I think the
25 overhead rates should be approximate, but what I have in

1 my notes is that they are not.

2 So my question is the orientation going to
3 be a factor in how much overhead rates are charged by
4 the operator?

5 A. Well, where those numbers came up -- Caza had
6 done a study of how much the wells cost, and that was
7 how they came up with those numbers, in a joint
8 operating agreement.

9 Q. Okay. Why I'm asking that -- it's not your
10 fault. Let me show you why I'm asking that question.
11 If Chevron's application is approved, the overhead rate
12 is 6,500 and 650. If yours is approved, it's 9,400.
13 Why such a difference for similar wells? I know what
14 the wells are. So why is that different? It's not for
15 you to answer the question. So maybe I'll call the
16 attorneys to tell me that, because I don't want you to
17 be -- because, you know, we can go back to --

18 EXAMINER EZEANYIM: Okay. Now, for you,
19 there are no questions. You may step down.

20 I said this yesterday when we started,
21 about the project area. So after I talked about it,
22 when we started this case. You brought it up now, about
23 pooling the east half, and I said you can't pool a
24 vacuum. And you can only pool a project area. And the
25 only way you can pool a project area is when that

1 project area is formed.

2 And in the rules, there are -- wells form
3 project areas. I never realized how were we developing
4 that rule, and then finally the thing that was adopted
5 was: A project area is an area that can be developed by
6 a well. However, in that project area, you can even
7 drill more wells. You can drill infills. I put that in
8 the rules. But when you are trying to compose a new
9 pool in a project area, you have to pool a project area
10 that can be developed alone [sic].

11 So I think because Endurance didn't
12 understand this, they wanted to pool the east half. But
13 I don't think they can pool the east half. They can
14 pool the east half-east half. So, I mean, if they were
15 to be the operator, the east -- the west half of the
16 east half will not be included even though they were
17 asking for the east half. So it's going to be the east
18 half-east half.

19 MR. PADILLA: That's acceptable to us.

20 EXAMINER EZEANYIM: That's what I was
21 trying to say yesterday.

22 MR. RITTER: We understand.

23 EXAMINER EZEANYIM: I think people have not
24 understood our Horizontal Well Rule, and I'm trying to
25 use this opportunity to explain it. And you can start

1 with the docket if you want to pool -- in the east
2 half-east half, there is nothing to pool. The OCD will
3 say, Yeah, you can form it before you pool. If you
4 start with the center, like -- it doesn't work that way.
5 I said it yesterday, but I didn't recall until I read it
6 again.

7 I wanted to make those points, that that
8 would not make us continue this case because I know
9 anybody can make that mistake.

10 So let's go on with this case. Because you
11 know what, that might be a possibility in this case,
12 because you guys can reach an agreement, unless you guys
13 want to go to district court. From your compartment,
14 you don't want to go.

15 So if you have any objection to that east
16 half -- you mentioned it, but I think it's an honest
17 mistake. The new rules have some implication. And so
18 I'm going to take it as east half-east half. I wrote it
19 down as east half-east half. That's where the well is
20 located, and you want the compulsory pooling.

21 MR. FELDEWERT: Mr. Examiner, it has not
22 been advertised for the east half-east half. The
23 application is not filed for the east half-east half.

24 EXAMINER EZEANYIM: So what do you suggest,
25 then?

1 MR. FELDEWERT: I think you ought to check
2 with your Legal Department. I don't think this is
3 legal. I don't think their application is approvable.

4 EXAMINER EZEANYIM: What?

5 MR. FELDEWERT: Their application is not
6 approvable.

7 EXAMINER EZEANYIM: Well, I'm not an
8 attorney, but I will check with them, as you said.

9 MR. PADILLA: Mr. Examiner, let me respond
10 to that. All parties of interest have already been
11 notified. There's been no one who has complained of an
12 east-half proration unit. They've had notice of this
13 hearing, and they could have raised this objection.
14 This is a technical objection. We're willing to amend
15 our application to include just the east half-east half.
16 But all parties were notified of this application.

17 EXAMINER EZEANYIM: It's a legal issue. I
18 thought it was a typographical error. I didn't think
19 there was a technical issue involved. That's why I said
20 that. But that's okay. I will check and then let you
21 guys know.

22 Okay. Now, when we come to Endurance, the
23 only person you want to pool is Chevron, right?

24 MR. PADILLA: That's it.

25 EXAMINER EZEANYIM: And vice versa? You're

1 only pooling Endurance?

2 MR. FELDEWERT: We are pooling the parties.

3 EXAMINER EZEANYIM: I mean in terms of
4 working interest.

5 MR. FELDEWERT: Yes, the parties they
6 represent.

7 MR. RITTER: There is another. Ray
8 Westall.

9 EXAMINER EZEANYIM: Okay. It doesn't
10 matter. But for you, only Chevron?

11 MR. PADILLA: Just Chevron.

12 MR. FELDEWERT: I will say, Mr. Examiner,
13 Endurance doesn't have ownership. It's apparently
14 Tritex and others, but we've identified who we need to
15 pool.

16 EXAMINER EZEANYIM: But in my mind, Tritex
17 is Endurance.

18 MR. FELDEWERT: As I understand it, yes.

19 EXAMINER EZEANYIM: I mean, that's why I
20 assured that. Tritex is -- and I said that yesterday,
21 that Tritex was Endurance, because if you look at that,
22 you will see Endurance and Tritex are one and the same.
23 Right?

24 MR. RITTER: Yes.

25 EXAMINER EZEANYIM: I'm going to take these

1 two cases under advisement.

2 Is there anything that would prevent me,
3 Mr. Padilla and Mr. Feldewert, from doing so? I want to
4 take them under advisement because it was two full days.
5 Anything that would prevent me, apart from my checking
6 with my legal people about the east half-east half? For
7 me, I want to proceed, but you are disagreed. This is a
8 contested case.

9 MR. FELDEWERT: No. I think that's part of
10 the analysis when you take it under advisement,
11 Mr. Examiner.

12 EXAMINER EZEANYIM: Is that what you
13 implied? Okay. I'm going to take it under advisement.

14 Anybody have anything else to say, because
15 I want to give everybody an opportunity to say
16 something?

17 MR. PADILLA: Mr. Examiner, do you want a
18 proposed order?

19 EXAMINER EZEANYIM: ^{for the} Yeah, I will. Yeah,
20 because as you know, I'm very, very swamped from both of
21 you, for one person. Tell me why it should be in
22 Section 18. I think that would be very, very -- so I
23 can -- as I'm looking at the engineering portion of it,
24 you know, the geology portion. Actually, this case is
25 brought out on geology mainly, because geology is how

1 you drill to assess most of the -- that's my point.

2 There are two key factors: 'Permeability' and the
3 fracture orientation in Section 18, right?

4 So at this point -- where is my docket? At
5 this point, Case Numbers 15074 and 15084 will be taken
6 under advisement, and finally we are done.

7 (Case Numbers 15074 and 15084 conclude,
8 3:25 p.m.)

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. _____
heard by me on _____

_____, Examiner
Oil Conservation Division

1 STATE OF NEW MEXICO
2 COUNTY OF BERNALILLO

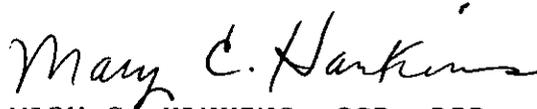
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE OF COURT REPORTER

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

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

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



MARY C. HANKINS, CCR, RPR
Paul Baca Court Reporters, Inc.
New Mexico CCR No. 20
Date of CCR Expiration: 12/31/2014