

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

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

7 APPLICATION OF NEMO FUND I, LLC CASE NOS. 15522,  
8 FOR APPROVAL OF A UNIT AGREEMENT, 15523 and 15524  
9 LEA COUNTY, NEW MEXICO.

10

11 REPORTER'S TRANSCRIPT OF PROCEEDINGS

12 EXAMINER HEARING

13 August 4, 2016

14 Santa Fe, New Mexico

15

16

17 BEFORE: WILLIAM V. JONES, CHIEF EXAMINER  
18 DAVID K. BROOKS, LEGAL EXAMINER

19

20

21 This matter came on for hearing before the  
22 New Mexico Oil Conservation Division, William V. Jones,  
23 Chief Examiner, and David K. Brooks, Legal Examiner, on  
24 Thursday, August 4, 2016, at the New Mexico Energy,  
25 Minerals and Natural Resources Department, Wendell Chino  
Building, 1220 South St. Francis Drive, Porter Hall,  
Room 102, Santa Fe, New Mexico.

26

27 REPORTED BY: Mary C. Hankins, CCR, RPR  
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## 1 APPEARANCES

2 FOR APPLICANT NEMO FUND I, LLC:

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1 (9:01 a.m.)

2 EXAMINER JONES: Call Case Number --  
3 Do you want to call all three of them  
4 together?

5 MR. BRUCE: Sure. Why not? That way I  
6 don't have to get witnesses up and down.

7 EXAMINER JONES: Okay. Call Case Number  
8 15522 and Case Number 15523 and Case Number 15524.  
9 We'll hear them together. They're all three in the  
10 application of NEMO Fund I, LLC for approval of a unit  
11 agreement in Lea County, New Mexico.

12 Call for appearances in all three cases.

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

15 EXAMINER JONES: Any other appearances?  
16 The State Land Office is here, but no  
17 appearance from the State Land Office.

18 Okay. Will the witnesses please stand?

19 And would the court reporter please swear  
20 the witnesses?

21 (Bo Blue and Steven Gohlke sworn.)

22 MR. BRUCE: I've handed you, Mr. Examiner,  
23 exhibits for the first case. I'll go through that, and  
24 then the other two can be a summary.

25

1 BO BLUE,  
2 after having been previously sworn under oath, was  
3 questioned and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. BRUCE:

6 Q. Would you please state your name for the  
7 record?

8 A. Bo Blue.

9 Q. And where do you reside?

10 A. Conroe, Texas.

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

12 A. NEMO Fund I, LLC, and I'm vice president of  
13 land.

14 Q. Have you previously testified before the  
15 Division?

16 A. Yes, but a long time ago.

17 Q. Were your credentials as an expert petroleum  
18 landman accepted by the Division as a matter of record?

19 A. Yes, they were.

20 Q. And does your area of responsibility at NEMO  
21 include this area of southeast New Mexico?

22 A. It does.

23 Q. And are you familiar with the land matters  
24 involved in these applications?

25 A. I am.

1 Q. And right off the bat, the three units we're  
2 here for today are all contiguous; is that correct?

3 A. That's correct.

4 MR. BRUCE: Mr. Examiner, I tender  
5 Mr. Blue as an expert petroleum landman.

6 EXAMINER JONES: He is qualified as an  
7 expert in petroleum land matters.

8 Q. (BY MR. BRUCE) Could you identify Exhibit 1 for  
9 the Examiner?

10 A. That's the unit agreement. These are  
11 exploratory fee unit agreements for the first one, being  
12 Larry San Andres Unit, which covers various sections in  
13 Township 10 South, Range 37 East, Lea County,  
14 New Mexico.

15 Q. You said fee land. The land is state and fee?

16 A. It is state and fee.

17 Q. And does the unit agreement cover only the San  
18 Andres Formation?

19 A. It does.

20 Q. And is the unit agreement the standard form  
21 taken off of the State Land Office Web site for  
22 exploratory units?

23 A. It is.

24 Q. Who is the operator -- proposed operator under  
25 the agreement?

1 A. NEMO Fund I, LLC.

2 Q. And is NEMO a duly-qualified operator under  
3 Division regulations?

4 A. We are.

5 Q. Just briefly, let's go through the unit  
6 agreement. Turning to Exhibit A, is that simply a land  
7 plat of the unit area as required by the State Land  
8 Office?

9 A. Yes, it is.

10 Q. And does it indicate the types of land by  
11 shading or whatever in the unit area?

12 A. Yes.

13 Q. And does it set forth the percentage interests  
14 of the fee lands and the state lands in the unit area?

15 A. Yes, it does.

16 Q. And what is Exhibit B to the unit agreement?

17 A. That's a schedule of the ownership of the lands  
18 inside the unit boundary.

19 Q. And does it give each and every owner and each  
20 and every -- either working interest, overriding royalty  
21 interest or royalty interest?

22 A. It does.

23 Q. This is a voluntary agreement, correct?

24 A. Correct.

25 Q. Therefore, is joinder -- nobody can be forced

1 into the unit?

2 A. No.

3 Q. And did you meet with the State Land Office  
4 personnel last week regarding preliminary approval of  
5 the unit?

6 A. Yes, we did.

7 Q. And they're here today at the hearing.

8 Are you still waiting at this point for  
9 preliminary approval?

10 A. We are.

11 Q. Have you been seeking ratifications of the fee  
12 royalty and the overriding royalty in the working  
13 interest owners?

14 A. Yes, we have.

15 Q. And do you believe that you will gain  
16 sufficient interest to have effective operations as  
17 required by the State Land Office?

18 A. I believe so.

19 Q. How soon will drilling commence in the units?

20 A. Within 60 days of the --

21 Q. Final approval?

22 A. -- final approval.

23 Q. Are there any impending lease expirations?

24 A. No.

25 Q. So this -- these unit agreements are not being

1 submitted for approval because you have a bunch of  
2 leases without -- going out?

3 A. No.

4 Q. And with respect to the reason you want to  
5 unitize, will the next witness discuss operations --  
6 operational and geologic reasons for the unit?

7 A. Yes.

8 Q. Mr. Blue, I'm handing the Examiner --

9 MR. BRUCE: I only have two of them,  
10 Mr. Examiner.

11 Q. (BY MR. BRUCE) -- what's been marked as Exhibit  
12 4. Is that the form of the operating agreement that  
13 will be used by the working interest owners in the unit  
14 area?

15 A. It is.

16 Q. And I believe that one only covers one section  
17 of land, but that is the form of agreement that has been  
18 negotiated by working interest owners?

19 A. Yes.

20 Q. Were Exhibits 1 and 4 prepared by you or  
21 compiled from company business records?

22 A. They were.

23 MR. BRUCE: Mr. Examiner, that's all the  
24 questions I have of Mr. Blue's exhibits, if you care to  
25 question him.

1 EXAMINER JONES: Do you want to admit those  
2 exhibits yet?

3 MR. BRUCE: Sure.

4 I'd move the admission of Exhibits 1 and 4.

5 EXAMINER JONES: 1 and 4 of the first case.

6 MR. BRUCE: Of the first case, 15522.

7 EXAMINER JONES: 15522, Exhibits 1 and 4.

8 (NEMO Fund I, LLC Exhibit Numbers 1 and 4  
9 are offered and admitted into evidence.)

10 CROSS-EXAMINATION

11 BY EXAMINER JONES:

12 Q. So in this case, it's going to be 5594, almost  
13 5595 acres. Is that still correct?

14 A. Yes.

15 Q. So nothing has changed since the applications?

16 A. (Indicating.)

17 Q. And these three units are all almost contiguous  
18 to each other?

19 A. They are contiguous.

20 Q. Why did you form three and not just one?

21 A. On advisement of counsel, 15,000-acre unit  
22 would not have been probably approved.

23 Q. Okay. Okay.

24 A. And there are geographical reasons for  
25 splitting it this way.

1 Q. In addition?

2 A. Yes.

3 Q. So these are state units. So they are all  
4 participating from the get-go; is that correct?

5 A. Yes.

6 Q. Okay. So what's the first well you would  
7 drill, or is the next witness going --

8 MR. BRUCE: The next witness will discuss  
9 that.

10 EXAMINER JONES: Okay.

11 Q. (BY EXAMINER JONES) Any trouble signing people  
12 up?

13 A. Yes. We have all working interest owners and  
14 the overriding royalty owners. We do not have the  
15 State. And in the next unit, we have quite a bit of fee  
16 that's trickling in.

17 EXAMINER JONES: You have the State  
18 preliminary approval; is that correct?

19 MR. BRUCE: Not yet.

20 THE WITNESS: I do not.

21 EXAMINER JONES: Okay. Okay. When do you  
22 anticipate that?

23 MR. BRUCE: Nonwitnesses could answer that,  
24 I'm sure.

25 EXAMINER JONES: But the State --

1                   MR. BRUCE: We hope to obtain approval  
2 relatively soon.

3                   EXAMINER BROOKS: Well, the Unitization  
4 Section may be behind at this point.

5                   MR. BRUCE: Yeah. There's been a change in  
6 ownership at the unit agreement level at the State Land  
7 Office.

8                   EXAMINER JONES: Okay. Yeah.

9                   There's no --

10                  EXAMINER BROOKS: That's what I was  
11 thinking of.

12                  Q. (BY EXAMINER JONES) The leases involved,  
13 though, they're not -- when's the first expiration of --

14                  A. State?

15                  Q. -- of the state lease on this unit?

16                  A. 2019.

17                  Q. Okay. So they're new leases -- brand-new  
18 leases?

19                  MR. BRUCE: Correct.

20                  Q. (BY EXAMINER JONES) And is it safe to say this  
21 is a play that's heating up, a lot more interesting than  
22 it used to be?

23                  A. I would say yes, particularly in Texas, but  
24 more so now coming into New Mexico.

25                  Q. So over in Yoakum County?

1 A. Yoakum.

2 Q. Is it for horizontal drilling purposes?

3 A. We're trying to -- well, I'll defer to my  
4 esteemed colleague.

5 Q. Okay. Okay. We've got you on record saying  
6 he's an esteemed colleague, so he'll hold that against  
7 you someday.

8 A. I know that, but I'm a landman; I can say that.

9 EXAMINER JONES: Mr. Brooks?

10 EXAMINER BROOKS: Mr. Bruce, you asked the  
11 witness a question about Exhibit 4 and said that the  
12 operating agreement has some kind of provision in it,  
13 and I didn't catch what you said. What was the  
14 provision that's unusual in this?

15 MR. BRUCE: Well, I think what I said was  
16 that that's the form agreement that will be used.  
17 That's the form agreement that has been negotiated. But  
18 before the unitization really got going, it was going to  
19 be section by section in this large area. And so a  
20 formal unit operating agreement has not been signed, but  
21 this is the form that would be used.

22 EXAMINER BROOKS: Okay. Very good. Thank  
23 you.

24 Q. (BY EXAMINER JONES) Was this the same kind of  
25 form that you would sign over in Texas?

1 A. Yes. Yes, it is.

2 Q. It's a petroleum landman form --

3 EXAMINER BROOKS: Well, it's based on the  
4 AAPL 1989, but, of course, people base all kinds of  
5 things on that and make all kinds of changes.

6 THE WITNESS: There are a number of changes  
7 in that.

8 MR. BRUCE: I only made two copies because  
9 my printer was running out of cartridge ink.

10 EXAMINER BROOKS: Well, that's an adequate  
11 number.

12 Q. (BY EXAMINER JONES) Is there a depth limit on  
13 this unit -- these units?

14 A. Yes. But he will give you the -- it covers the  
15 entire San Andres, but he's got a definition for you.

16 Q. Okay. So basically the agreement is only for  
17 the San Andres?

18 A. Yes.

19 Q. Not for the Glorieta?

20 A. No.

21 Q. And not for the Grayburg up above?

22 A. No.

23 EXAMINER BROOKS: Nothing further.

24 EXAMINER JONES: Anything else you want to  
25 say on these other two?

1 MR. BRUCE: I'll just have him introduce  
2 and confirm the exhibits.

3 EXAMINER JONES: Okay.

4 REDIRECT EXAMINATION

5 BY MR. BRUCE:

6 Q. Mr. Blue, could you identify Exhibit 1 in Case  
7 15523?

8 A. This is a Moe San Andres Exploratory State Fee  
9 Unit.

10 Q. And, again, other than the lands covered, which  
11 are identified in the unit agreement form, it's the same  
12 terms as in the Larry Unit?

13 A. Correct.

14 MR. BRUCE: Mr. Examiner, I'd move the  
15 admission of Exhibit 1 in Case 15523.

16 EXAMINER JONES: Exhibit 1 in Case 15523 is  
17 admitted.

18 (NEMO Fund I, LLC Exhibit Number 1, Case  
19 15523, is offered and admitted into  
20 evidence.)

21 EXAMINER JONES: Can I ask you a question  
22 on this, Mr. Bruce?

23 MR. BRUCE: Yes.

24 EXAMINER JONES: This unit, the Moe Unit,  
25 has some holes in it. Why does that have --

1                   THE WITNESS: I can answer that. Some of  
2 the -- well, for instance, in the lower part of that  
3 unit area, there are four 40-acre tracts that we don't  
4 own. They're currently producing or in some form of  
5 production. And although we have tried to acquire them,  
6 the operator has an outstanding view of the value of  
7 these, so they are outstanding.

8                   The one other open area is excluded because  
9 we already have a horizontal well in the San Andres  
10 there.

11           Q.     (BY MR. BRUCE) The wells in the southern part  
12 of that area are vertical wells, are they not, the  
13 southernmost wells that are excluded?

14           A.     In Section 35 --

15           Q.     The vertical wells.

16                                   REXCROSS EXAMINATION

17 BY EXAMINER JONES:

18           Q.     Okay. So there is another area in Section 2 --  
19 12 between the two units that was not included in either  
20 one of the units?

21           A.     It is a NEMO-operated horizontal San Andres  
22 well.

23           Q.     Okay. So you've already done some exploratory  
24 drilling out here?

25           A.     We've drilled two wells.

1 Q. Okay. And you didn't want to contribute those  
2 two wells to the unit because you wanted to go forward  
3 in time with the unit, not doing a backdating of your  
4 units?

5 A. Correct.

6 REDIRECT EXAMINATION

7 BY MR. BRUCE:

8 Q. And then, Mr. Blue, if you could identify  
9 Exhibit 1 in Case 15524.

10 A. This is the Curly San Andres State Fee  
11 Exploratory Unit.

12 Q. And, again, the same form except different  
13 lands involved?

14 A. Correct.

15 Q. This is maybe the simplest unit agreement  
16 insofar as the land ownership?

17 A. It is. It's almost all state.

18 Q. And, again, this exhibit was prepared by you;  
19 was it not?

20 A. Yes.

21 MR. BRUCE: Mr. Examiner, if I haven't  
22 already done so, I'd move the admission of Exhibit 1 in  
23 Cases 15523 and 15524.

24 EXAMINER JONES: Exhibits 1 in Cases 15523  
25 and Case 15524 are admitted.

1 (NEMO Fund I, LLC Exhibit Number 1, Cases  
2 15523 and 15524, are offered and admitted  
3 into evidence.)

4 CROSS-EXAMINATION

5 BY EXAMINER JONES:

6 Q. For the Curly San Andres Unit, I looked at the  
7 dedicated -- the acreage that you proposed, and it's  
8 2080 acres, but the application said 2241.16 acres.

9 A. There are lots -- I can give you that. The  
10 description of the properties, the state acreage are in  
11 lots, and so you have some odd numbers.

12 Q. Okay. Okay. That's a discrepancy of about 180  
13 acres, but it's irregular sections, I take it?

14 MR. BRUCE: Yeah. I'm pretty sure the  
15 application has the correct acreage. I'll verify that  
16 for you, Mr. Examiner.

17 THE WITNESS: The south half of the north  
18 half of Section 10 is fee. Maybe that's what's throwing  
19 you off. That's 160 acres.

20 EXAMINER JONES: Okay. The south half of  
21 the north half --

22 THE WITNESS: Yes.

23 EXAMINER JONES: -- is fee, because it only  
24 shows -- in the application, it said the north-northeast  
25 quarter of Section 10 of 10 -- 37.

1 THE WITNESS: That is a mistake on my part.

2 EXAMINER JONES: Northeast quarter of 10.

3 EXAMINER BROOKS: So you're saying that  
4 part of the description is incorrect?

5 THE WITNESS: Yes.

6 EXAMINER BROOKS: What should it read?

7 THE WITNESS: It should read the south half  
8 of the north half of Section 10.

9 EXAMINER JONES: That's another 160, so  
10 that just about does it.

11 EXAMINER BROOKS: This is in the  
12 application. So it's the south half of the north half  
13 of Section 10?

14 THE WITNESS: Yes.

15 EXAMINER BROOKS: So the north half of  
16 northwest quarter is not included in the application  
17 then? The north half of the northwest quarter of 10 is  
18 going to be in the unit, but it's not included in the  
19 application.

20 MR. BRUCE: We can remedy that.

21 THE WITNESS: You know, it appears that I  
22 really screwed this up.

23 EXAMINER BROOKS: Okay.

24 THE WITNESS: The whole north half would be  
25 described.

1 EXAMINER BROOKS: Do you want to re- -- do  
2 you propose to re-notice -- re-amend the application and  
3 re-notice it, Mr. Bruce?

4 MR. BRUCE: Sure.

5 EXAMINER JONES: This is the agreement  
6 (indicating).

7 EXAMINER BROOKS: Okay. Very good. So  
8 then instead of taking this case under advisement, we'll  
9 continue it.

10 EXAMINER JONES: Okay.

11 THE WITNESS: In Exhibit B, they're listed.  
12 I missed it on the application.

13 EXAMINER JONES: And the first -- the  
14 second page of the unit agreement only says "northeast  
15 quarter for Section 10."

16 THE WITNESS: Yeah.

17 EXAMINER JONES: I don't think we have any  
18 more questions.

19 EXAMINER BROOKS: I have no more.

20 MR. BRUCE: That's it, Mr. Examiner, with  
21 respect to Mr. Blue.

22 EXAMINER JONES: Okay. Thank you.

23 STEVEN GOHLKE,  
24 after having been previously sworn under oath, was  
25 questioned and testified as follows:

DIRECT EXAMINATION

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BY MR. BRUCE:

Q. Would you please state your name for the record?

A. Steven Gohlke.

Q. And will you spell your last name for the Examiners?

A. It's G-O-H-L-K-E.

Q. And where do you reside?

A. Houston, Texas.

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

A. I work for NEMO Fund I, LLC, and I'm a geologist there.

Q. Have you previously testified before the Division?

A. No.

Q. Would you please summarize your educational and employment background?

A. Yes. I earned my BS in geology from U.T. Austin in 2011. I earned a master in science in geology specializing in sedimentary rocks from the University of Vermont in 2014.

I've also previously worked at Hankey Oil Company in Houston for a year and a half upon graduation, and I've held my current position for one

1 year.

2 Q. Does your area of responsibility at NEMO  
3 include this portion of southeast New Mexico?

4 A. Yes, it does.

5 Q. And have you studied the San Andres geology in  
6 this area, and are you familiar with the geologic  
7 matters involved in these applications?

8 A. Yes, I am.

9 MR. BRUCE: Mr. Examiner, I tender  
10 Mr. Gohlke as an expert petroleum geologist.

11 EXAMINER JONES: Mr. Gohlke is qualified as  
12 an expert in petroleum geology.

13 Q. (BY MR. BRUCE) Mr. Gohlke, first off, without  
14 describing what's in it, what -- what are the exhibit -  
15 what is Exhibit 2 in each of these three cases?

16 A. Exhibit 2 is the geologic write-up for each of  
17 the units.

18 Q. Okay.

19 MR. BRUCE: As you can see, it has the  
20 three units showing contiguous to each other.

21 Q. (BY MR. BRUCE) Mr. Gohlke, could you identify  
22 Exhibit 3?

23 A. Exhibit 3 is a combination of a geologic depth  
24 structure map of the top of the San Andres Dolomite. It  
25 also exhibits the outline of the units in red, as well

1 as the state acreage that contributes to each of the  
2 units in gray.

3 Q. Is the San Andres geology in each unit  
4 essentially the same?

5 A. Yes, it is.

6 Q. Well, why don't I let you go through Exhibits 2  
7 and 3? And first discuss the San Andres geology and  
8 maybe discuss some of the vertical wells that are on --  
9 that are on -- near the unit area and maybe offset  
10 horizontal San Andres development.

11 A. Yes. Let me begin by saying the San Andres is  
12 a combination of evaporite and carbonate units that's  
13 Permian Age and is deposited in shallow water in this  
14 area. Our main target is a dolomite member. And on an  
15 offset well in Section 1 of 10 South, 36 East, the  
16 Cimarex Muddy Waters State #1, I've defined an interval  
17 between 4,665 feet, measured depth at 5,645 feet, as the  
18 interval to be unitized for all substances to be  
19 produced from that interval, between what is known as  
20 the upper Pi Marker in the top of the Glorieta  
21 Sandstone. It's approximately a 1,000-foot-thick  
22 interval. It varies very little in thickness and  
23 lithology across the area.

24 Q. Even though that's the unitized interval,  
25 where -- where would you anticipate most of the wells

1 being -- what's -- what footage would be tested?

2 A. Right around 4,950 feet is where the top of the  
3 San Andres Dolomite, our specific target within that  
4 interval is, but there are other intervals within there  
5 that we are evaluating still. Most of the known  
6 production in the area has come from this field to the  
7 northwest called Sawyer Field. There were approximately  
8 100 wells drilled there between 1969 and the present.  
9 It's produced about 5 million barrels of oil from the  
10 San Andres Dolomite exclusively.

11 We believe that our property that we  
12 propose to unitize has a similar amount of oil in place  
13 but that it can be better extracted through horizontal  
14 drilling technology.

15 One of the other reasons we proposed to  
16 unitize is because of the variability in the San Andres  
17 Formation. There are -- it's a conventional reservoir  
18 with an average porosity of 8.5 percent and an average  
19 permeability of 8.7 millidarcies based on the core we  
20 took in our first well, the William State. And there  
21 are -- however, there are intervals that it's  
22 interbedded with at a scale that's below the mappable  
23 geologic understanding. In other words, it's random.  
24 And these have a much lower average porosity of 3.3  
25 percent and one-tenth of millidarcy.

1           So we believe that through horizontal  
2 drilling, we can average out these nonproductive vents  
3 [sic]. Because in Sawyer Field, there are a number of  
4 examples of large variations in production. An average  
5 well makes 50,000 barrels, but there are wells that have  
6 made over 200,000, as well as wells that have made less  
7 than 10,000 on the same spacing, drilled under  
8 comparable timing.

9           Q. So there is -- there is geologic uncertainty as  
10 to what -- even though you know the San Andres is there,  
11 the uncertainty is what productivity it has?

12          A. Correct. Correct.

13          Q. And will unitization allow interest owners to  
14 share the benefits of participating in multiple wells?

15          A. Yes, it will.

16                 Unitization will also encourage us to  
17 develop the entire acreage within this unit. One of the  
18 other purposes -- or within this area.

19                 One of the other purposes of this map is to  
20 demonstrate that we believe all of this acreage is prime  
21 acreage to be developed. We envision possibly four  
22 horizontal wells per section, and, you know, we don't  
23 believe that there is any fringe acreage. We've leased  
24 it based on this geologic map.

25          Q. Does Apache have some units to the west, San

1     Andres units?

2             A.     Correct.  Correct, to the northwest.  Or I  
3 apologize.  Sawyer is going to the northeast.  Apache  
4 has the Fire Eagle Unit, as well as the -- I believe a  
5 Pacifico Unit, are the names of the two units that were  
6 recently approved.  And they were --

7             Q.     Have they commenced drilling?

8             A.     They have.  They drilled -- they began drilling  
9 the Pacifico State well in Section 15, 10 South, 36  
10 East, which is a mile-and-a-half horizontal well that  
11 goes into Section 21.  They began that in February of  
12 this year, of 2016, and they began the drilling of their  
13 Fire Eagle well in Section 11 and to 10 South, 36 in  
14 July of this year.

15            Q.     Will unitization allow you to use centralized  
16 production facilities?

17            A.     Correct.

18            Q.     And will that minimize the cost of field  
19 operations?

20            A.     Correct.  Yes, it will.

21            Q.     And not to mention the horizontal drilling and  
22 combining production facilities would require  
23 substantially less use of the surface?

24            A.     Correct.

25            Q.     And although -- and this was referenced before.

1 You're hoping to prove up that horizontal development  
2 can be used economically to produce San Andres reserves?

3 A. Correct.

4 In the two wells we have drilled  
5 previously, we have not seen enough production history  
6 to know whether that is the case, but we believe that it  
7 is, and so we would like to move forward with the units.  
8 This is the first true horizontal production from the  
9 San Andres in this region. Yoakum County is about 15 to  
10 20 miles southeast, which geologically speaking is a  
11 very long ways away. So we are taking on that risk that  
12 that this is -- we have a belief this could be similarly  
13 successful, but we are unsure at the current time  
14 whether that is the case.

15 Q. Were Exhibits -- Exhibit 2 in each of the two  
16 cases and Exhibit 3, which is marked as being Exhibit 3  
17 in Case 15522, prepared by you or under your  
18 supervision?

19 A. Yes.

20 Q. And in your opinion, are the granting of these  
21 applications in the interest of conservation and the  
22 prevention of waste?

23 A. Yes.

24 MR. BRUCE: Mr. Examiner, I'd move the  
25 admission of Exhibits 2 and Exhibit 3 in each of the

1 cases.

2 EXAMINER JONES: Exhibits 2 and 3 in all  
3 three cases, 15522, 15523 and 15524, are admitted.

4 (NEMO Fund I, LLC Exhibit Numbers 2 and 3,  
5 Cases 15522, 15523 and 15524, are offered  
6 and admitted into evidence.)

7 MR. BRUCE: No further questions of  
8 Mr. Gohlke.

9 CROSS-EXAMINATION

10 BY EXAMINER JONES:

11 Q. The type of well that you have the vertical  
12 section defined, do you have one in each unit, or you  
13 have just one well for all three units?

14 A. I've used this one well, and I've mapped --  
15 I've submitted an isopach map showing the thickness. It  
16 changed very little in between the proposed area of all  
17 three units.

18 Q. And that well is in which unit -- which  
19 proposed unit?

20 A. It is not in one of the units. It's offsetting  
21 just --

22 Q. Okay.

23 A. -- in Section 1, 10 South, East 36.

24 Q. That was okay with the State Land Office?

25 A. I believe so.

1 Q. Yes, it was.

2 MR. BRUCE: There are geologic plats  
3 attached to Exhibits -- all of the Exhibit 2s,  
4 Mr. Examiner.

5 EXAMINER JONES: Okay.

6 Q. (BY EXAMINER JONES) That core hole that you --  
7 pilot that you cored, was that from the top of the San  
8 Andres? Did you start above the San Andres and go  
9 through the whole San Andres, or --

10 A. We started at the top of the San Andres  
11 Dolomite, which is our primary target that produced  
12 throughout Sawyer Field. And part of this is, we  
13 believe -- like I said, that we have similar oil in  
14 place throughout this entire area based on the structure  
15 map. And the very little stratigraphic variation we see  
16 and part of that core was confirming it, as well as  
17 evaluating it from mechanical purposes for stimulation.  
18 There have been no other complete cores of that member  
19 taken in this area yet.

20 Q. Does that member have -- how far below the top  
21 of the San Andres does it start?

22 A. Below the upper Pi Marker is about 300 feet.

23 Q. Is that a limestone or a sandy loam -- sandy  
24 lime above that or --

25 A. Upper Pi Marker, sir?

1 Q. Yeah.

2 A. It is an anhydrite. It is an evaporative.

3 Q. Okay. So -- and below this -- how thick is  
4 your zone of interest?

5 A. The primary target that we -- we believe is  
6 productive -- that is known to be productive is  
7 approximately 60 feet thick.

8 Q. That was the vertical target?

9 A. Correct, throughout the area that was  
10 previously produced.

11 Q. Is that going to be your horizontal target?

12 A. It is currently.

13 Q. You're not going to go deeper, down to the  
14 residual zone?

15 A. That is part of the exploration program --

16 Q. Okay.

17 A. -- which is why we proposed unitization for a  
18 larger section of the stratigraphic interval.

19 Q. Okay. So what is your gross depth -- gross  
20 thickness, and what is -- you mentioned the dolomite  
21 being a certain thickness, and then below that is maybe  
22 an exploratory target also. How thick is that zone?

23 A. So the zones known to have been produced in  
24 this area can be as much as 15 feet thick within that  
25 1,000-foot interval.

1 Q. 1,000-foot gross?

2 A. Correct. Yes, sir.

3 Q. The unitized interval will be 1,000 feet,  
4 though?

5 A. Yes, sir.

6 Q. That core, was it oriented core? Whole core?

7 A. It was, yes, sir.

8 Q. Any sidewall cores along with it?

9 A. No sidewall cores.

10 Q. So you did orient it. So you saw some  
11 fractures, direction?

12 A. We were suspecting -- we had predicted that we  
13 would see fractures. We did not see significant  
14 fractures that we believe control the production of the  
15 reservoir. We were surprised by that.

16 Q. But you still want to drill your well stand-up,  
17 north-south wells?

18 A. We have planned them north-south for the  
19 reasons of planning facilities, efficient power, gas  
20 lines, saltwater disposal lines because we do not see  
21 any evidence that would discourage us from doing that,  
22 for those reasons, any geologic evidence.

23 Q. Your completion on the wells that you have --  
24 it's just two wells, is that correct, that you have  
25 already?

1           A.    Yes, sir.

2           Q.    Were those -- did those completions go as  
3 planned?  Were there incidents during the frac job that  
4 you screened out or had trouble?

5           A.    We -- we executed two different stimulation  
6 programs.  Our first was a -- we bumped an overall lower  
7 amount of sand, or proppant, into the formation over  
8 a -- in fewer stages, and that appears to have been more  
9 successful than our second wells stimulation program, in  
10 which we pumped a greater amount of proppant over a  
11 greater amount of stages.  So it was sort of  
12 counterintuitive.  But one of the reasons we are asking  
13 for this unit is adapting horizontal drilling and  
14 stimulation to this area is something that's included in  
15 proving that it can be effective.  It falls under that  
16 category.

17          Q.    It's part of the risk?

18          A.    Yes.

19          Q.    Is it similar to -- do you have the same people  
20 working over in Yoakum County as you do here?

21          A.    We are not directly involved in operating or  
22 making geologic recommendations over there.  We are  
23 involved in exchanging data.

24          Q.    So you have interest in that?

25          A.    No, sir.  No.  We do not have interest.

1 Q. Do you have interest in the Apache --

2 A. No, sir.

3 Q. -- units?

4 In the Sawyer Field, any interest?

5 A. No, we do not.

6 Q. There are about three saltwater disposals in  
7 the San Andres out here. Are they -- did you look at  
8 those, or are they in the lower San Andres? Would they  
9 interfere with your operations?

10 A. I do not believe they will. We have evaluated  
11 a number of different zones for saltwater disposal. And  
12 my findings were that the San Andres did not have  
13 significant permeability, and I concluded that from the  
14 mechanical difficulties that these companies have had  
15 from operating these wells. So in other words, where  
16 they have injected is not necessarily connected to --  
17 from a fluid standpoint, to where we plan to produce.

18 Q. Do you know if they're injecting at a lower  
19 depth?

20 A. Oh, sorry. No. They are injecting at the same  
21 depth.

22 Q. Okay. Looks like one of them -- Mr. Goetze  
23 comes up with all this information for me.

24 So one of them was injected, 4 million  
25 barrels, the other one, 2 million barrels. And this is,

1 I believe, into this same acreage that you've got.

2 A. Could you show where on this map those are?

3 Q. It doesn't.

4 A. Okay.

5 Q. You will have some disposal issues; is that  
6 correct? You'll have to -- you'll have to figure out  
7 what to do with your water?

8 A. Yes, sir.

9 Q. Do you know what you're going do with it?

10 A. We do. We have acquired two wellbores that are  
11 outside of the unitized area. They are Devonian  
12 wellbores. One of them is in Section 31, 9 South, 37  
13 East. The other is in Section 25, 9 South, 36 East.

14 Q. Will you operate those?

15 A. Yes, we will.

16 Q. Have you already made application to turn them  
17 into disposals?

18 A. We just acquired operatorship of them, so we  
19 are moving forward with the reentry permitting and the  
20 saltwater disposal permitting. One of them was  
21 previously permitted as a saltwater disposal well but  
22 was never used.

23 Q. Okay. If we receive applications from other  
24 parties to inject -- to dispose into the San Andres  
25 here, will you object to those applications, or would

1 you -- would you not object?

2 A. I do not believe we would object based on the  
3 reasoning I had previously. I do not believe that the  
4 fluid compartments are connected in a way that would  
5 interfere with our production. I've seen -- I've  
6 studied all the wells that are downdip injectors in  
7 Sawyer Field, as well as the ones I'm aware of in 10  
8 South, 37 East, Section 14, as well as the well in --  
9 operated that's excluded from our acreage in the Moe  
10 Unit. And my figures were that they were not able to  
11 dispose of quite as much water as your records had  
12 suggested.

13 Q. Okay. So, basically, as long as they're  
14 laterally separated far enough away from your proposed  
15 production, you'll be okay with it?

16 A. Correct.

17 Our -- our first planned well in the Moe  
18 Unit is actually within about a half mile of this San  
19 Andres well, and we're not concerned about that. It's  
20 currently active.

21 Q. But if this whole area is perspective for San  
22 Andres horizontal drilling, we don't want to mess that  
23 up.

24 A. Correct.

25 Q. So you're proposing to go into the Devonian?

1           A.     Yes.  The capacity -- the daily capacity for  
2 the Devonian is much larger.  The highest injectivity  
3 tests for the San Andres has been approximately 300  
4 barrels of water per day, and the highest injectivity  
5 for the Devonian has been as much as 2,000 barrels per  
6 day or greater.  And that is on par with the daily  
7 production we've seen from our first two exploratory  
8 wells.  They produce somewhere between 1,500 and 2,000  
9 barrels of fluid a day at a 10 to 20 percent oil cut.  
10 So the Devonian is basically required to successfully  
11 explore the San Andres in this area, we believe.

12           Q.     Okay.  The units as they're laid out, did you  
13 pick these for geologic reasons or because they're state  
14 and fee lands?

15           A.     I believe they were chosen through the  
16 advisement of counsel.  I was not directly involved with  
17 why.  So no, they are not chosen for geologic reasons.

18           Q.     If you were going to pick units for geologic  
19 reasons, where would you choose them?

20           A.     I would not change anything in our plans.  I  
21 think we've simply chosen them based on how to best  
22 locate centralized facilities.

23           Q.     Okay.  These maps you have here were drawn at  
24 some stage in the negotiation for tract participation.  
25 So I -- these boundaries that you have here, are they

1 expected to be exactly the unit boundaries, or are they  
2 a bit flexible and the unit should be as the unit  
3 agreement says; is that correct?

4 A. We believe they will stay the same. The only  
5 concern is the amount of fee acreage in the Moe Unit.  
6 That's really our main concern.

7 Q. The one to the east is the Moe?

8 A. The one farthest west.

9 Q. Farther west?

10 A. With the least amount of gray. That's the only  
11 one that could possibly change.

12 Q. Okay. Okay. So that's all the geologic  
13 questions I have.

14 EXAMINER JONES: Mr. Brooks?

15 EXAMINER BROOKS: I do not have any  
16 questions.

17 MR. BRUCE: No further questions,  
18 Mr. Examiner.

19 EXAMINER JONES: Okay. What do you want to  
20 do with these three cases? Do you want to take them  
21 under advisement?

22 MR. BRUCE: 15524 has a mistake. That one  
23 will have to be continued for six weeks. I'll  
24 readvertise -- refile, re-notify --

25 EXAMINER BROOKS: Right.

1 MR. BRUCE: -- I mean publish. But the  
2 other two can be taken under advisement.

3 EXAMINER JONES: So that's September 16th;  
4 is that correct? 15th?

5 The issue of the no preliminary approval  
6 from the State Land Office, it's okay to take the two  
7 under advisement?

8 EXAMINER BROOKS: Well, we've never done  
9 that before that I know of. There is not a rule on it.  
10 If the Land Office wants to have the boundaries changed,  
11 then they'll have to do it over again. But that's kind  
12 of up to you, if you feel like it's set.

13 MR. BRUCE: I mean, the other two could be  
14 continued for two weeks just to see.

15 EXAMINER JONES: Okay. And let's make sure  
16 we check the acreage inside the Moe Unit. I may have  
17 made a mistake.

18 EXAMINER BROOKS: Which is the one that has  
19 the mistake in it?

20 EXAMINER JONES: This one, the Curly.

21 So the actual Moe Unit, I was a bit, I  
22 guess, confused, looking at the application, in Section  
23 35, but I could be totally confused.

24 MR. BRUCE: I'll double-check.

25 EXAMINER JONES: Okay. So we'll continue

1 Case 15522, Case 15523, both of those cases, to the 18th  
2 of August.

3 EXAMINER BROOKS: Okay.

4 EXAMINER JONES: And 15524 continued to --

5 MR. BRUCE: September 15th.

6 EXAMINER JONES: -- to September 17.

7 Thank you.

8 And thank you very much.

9 THE WITNESS: Thank you.

10 EXAMINER JONES: A ten-minute break.

11 (Case Numbers 15522, 15523 and 15524  
12 conclude, 9:49 a.m.)

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1 STATE OF NEW MEXICO  
2 COUNTY OF BERNALILLO

3

4 CERTIFICATE OF COURT REPORTER

5 I, MARY C. HANKINS, Certified Court  
6 Reporter, New Mexico Certified Court Reporter No. 20,  
7 and Registered Professional Reporter, do hereby certify  
8 that I reported the foregoing proceedings in  
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11 were reduced to printed form by me to the best of my  
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14 Record of the proceedings truly and accurately reflects  
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16 I FURTHER CERTIFY that I am neither  
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18 attorneys in this case and that I have no interest in  
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