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APPEARANCES

FOR APPLICANT APACHE CORPORATION:

EARL E. DeBRINE, JR., ESQ.  
MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.  
500 4th Street, Northwest, Suite 1000  
Albuquerque, New Mexico 87102  
(505) 848-1800  
edebrine@modrall.com

FOR PROTESTER COG OPERATING, LLC:

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

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1 (9:00 a.m.)

2 EXAMINER McMILLAN: Good morning. Today's  
3 date is January the 17th, 2018. It is 9:00 a.m. This  
4 is Docket Number 3-18. My name is Michael McMillan, and  
5 today we're going to hear Case Number 15874, application  
6 of Apache Corporation for approval of the Thunderbird  
7 Exploratory Unit, Eddy County, New Mexico.

8 Call for appearances.

9 MR. DeBRINE: Good morning, Mr. Examiner,  
10 Earl DeBrine, with the Modrall Sperling Firm, for Apache  
11 Corporation. And we will be presenting three witnesses  
12 here today.

13 EXAMINER McMILLAN: Any other appearances?

14 MR. FELDEWERT: May it please the Examiner,  
15 Michael Feldewert, from the Santa Fe of Holland & Hart,  
16 on behalf of COG Operating, LLC. Two witnesses today.

17 EXAMINER McMILLAN: If all the witnesses  
18 would please stand up and be sworn in at this time.

19 Thank you.

20 (Ms. Stretcher, Mr. Brian Baker,  
21 Mr. Garcia Vaca, Mr. Tim Baker,  
22 Ms. Pettijohn sworn.)

23 MR. DeBRINE: At this time we would call  
24 our first witness, Laci Stretcher.

25 EXAMINER McMILLAN: Pre-hearing statements?



1 the east of that, including the south half of 36. That  
2 acreage to the east is federal acreage.

3 What we're asking here today is only that  
4 the south half of Section 36 be excluded from the unit.  
5 Because up until today, there has been no input from the  
6 offset operators or lessees on the effects that this  
7 proposed unit boundary will have on their -- on the  
8 development of the area surrounding Section 36.

9 And you'll see that this -- we're going to  
10 show you that this has a profound impact because it's  
11 going to result in the stranding of the southwest  
12 quarter of Section 31 here to the east of 36. Because  
13 if the south half of 36 is included within the unit, we  
14 cannot drill into the south half of Section 36.

15 Now, these sections to the east of the  
16 south half of 36 -- 31, 32 and 33 -- is federal acreage.  
17 It's subject to very limited drilling locations. You  
18 see those squares on there?

19 EXAMINER BROOKS: Yes, sir.

20 MR. FELDEWERT: That's the only drilling  
21 location the BLM has approved for that acreage, 31, 32  
22 and 33, because there are sand dunes out there. There  
23 is habitat constraints. They have challenging  
24 topography. So anyone looking to develop Sections 33,  
25 32 and 31 is limited to the drilling locations by the

1 BLM, and those five squares -- those six squares on  
2 there are the only locations the BLM has approved today.  
3 Okay?

4 EXAMINER BROOKS: Okay.

5 MR. FELDEWERT: So -- and you'll see that  
6 they are right in the middle. Those approved locations  
7 are in the middle of Section 33. And the next approved  
8 locations are middle of Section 31.

9 So COG has put together a drilling plan for  
10 this acreage, which is reflected in this exhibit.

11 EXAMINER BROOKS: These wells have not been  
12 drilled?

13 MR. FELDEWERT: They have not been drilled.  
14 They are planned in the Yeso.

15 And you'll see that it requires the  
16 southwest quarter of Section 31 to be developed with the  
17 south half of Section 36 from the approved locations --  
18 from the drilling locations that the BLM has approved in  
19 Section 31. They seek to develop the southwest quarter  
20 of Section 31, along with the south half of 36, with  
21 one-and-a-half-mile wells. And the remaining acreage in  
22 Sections 33, 32 and 31 can be developed with two-mile  
23 horizontal wells from the limited drilling locations  
24 that the BLM has approved in Section 33.

25 So when you look at these limited drilling

1 locations, the only viable and economic option for  
2 developing the southwest of 31 with horizontal wells is  
3 to include the south half of Section 36 in the drilling  
4 plans. Plus, COG's plans here has the added advantage  
5 of developing acreage normally lost to offsets.

6           Look what we're doing. We're eliminating  
7 the offsets between -- if we start all the way over on  
8 the right, this plan eliminates the offsets between 33  
9 and 32. It eliminates the offsets between 32 and 31.  
10 It eliminates the offsets between 31 and 36. So if you  
11 take 660 feet, which is the normal offsets on each side  
12 of those section lines, times three, their plan is  
13 developing 1,980 feet of additional productive acreage.  
14 None of this can be accomplished if the south half of  
15 Section 36 is included in this unit.

16           Now, we don't know why they included the  
17 south half of 36 in this unit. I guess they'll tell us  
18 today, because COG is not included nor were they  
19 consulted on that decision by Apache. But this  
20 inclusion does not appear necessary to the viability of  
21 the unit. And fortunately today this unit boundary is  
22 now subject to your jurisdiction and review for the very  
23 purpose of determining whether the inclusion of the  
24 south half of 36 will cause waste or negatively impact  
25 correlative rights.

1                   And we are going to show you that the  
2 inclusion of the south half of 36 in this unit will  
3 prevent effective development of the southwest quarter  
4 of Section 31, which by definition is waste and which by  
5 definition negatively impacts COG's correlative rights.  
6 And so we are simply asking that if you approve this  
7 unit today, that you exclude the south half of 36 so  
8 that the offsetting acreage can be efficiently and  
9 effectively developed.

10                   EXAMINER BROOKS: Well, I guess this would  
11 not be appropriate forum to say anything about stranded  
12 acreage, so I will ask you if you have any rebuttal to  
13 Mr. Feldewert's --

14                   REBUTTAL OPENING STATEMENT

15                   MR. DeBRINE: Yes, very briefly.

16                   Apache's spent almost three years putting  
17 this unit together, and the boundaries have been  
18 approved by the BLM. The BLM is in the best position to  
19 determine whether this unit is going to adversely impact  
20 other adjacent acreage that is held in federal leases.

21                   The only reason why Concho is complaining,  
22 they don't have any firm -- firm development plan. It's  
23 all speculative. For them to drill these wells, they  
24 have to come back to the Division and go through the  
25 exercise of a compulsory pooling hour to acquire

1 additional acreage to drill these wells. We're going to  
2 show that they can clearly drill and fully develop  
3 Sections 31, 32 and 33 by drilling mile laterals. We've  
4 offered -- the evidence is going to show today we've  
5 offered to give them pass-through easements so that they  
6 can locate pads in Section 36, which is state acreage,  
7 and they can drill from the west to the east and develop  
8 all of Section 31. They're actually stranding a portion  
9 of 31 in their proposed development plan if you see  
10 this.

11                   And so we're going to show that they have  
12 the ability to economically and efficiently develop  
13 their acreage through drilling plans that would work  
14 much better and would not interfere with Apache's  
15 Thunderbird Unit, and we believe that the Division  
16 should deny their protest and grant Apache's application  
17 and allow the unit to be fully approved and developed.

18                   EXAMINER BROOKS: Who has the lease on  
19 Section 36?

20                   MR. DeBRINE: In the south half?

21                   EXAMINER BROOKS: Yeah.

22                   MR. DeBRINE: That's held by Apache, OXY  
23 and -- and -- I forget the name of the other operator.  
24 It's three operators.

25                   EXAMINER BROOKS: Okay. Okay.

1 MR. DeBRINE: And also, Mr. Examiner, one  
2 of the things about Section 36, there is a JOA in place  
3 for that, the south half, and the parties can, with or  
4 without the approval of this unit, go out and drill  
5 wells that have already been permitted that are a part  
6 of this Thunderbird Unit development plan and start  
7 drilling tomorrow, and there is no basis in the  
8 Division's rules for Concho to complain about that or  
9 prevent that from happening. They shouldn't be allowed,  
10 through a back-door process with regard to unit  
11 boundaries, to prevent the development plan that those  
12 parties have agreed to to taking place. They're asking  
13 the Division, essentially, to abrogate contractual  
14 development plans that are in place, and that would be a  
15 gross abuse of the Division's power to oversee  
16 exploratory or resource development units.

17 EXAMINER BROOKS: Okay. Well, I guess  
18 we'll get started.

19 EXAMINER McMILLAN: Yes. Please proceed.

20 MR. DeBRINE: I'd like to call our first  
21 witness.

22 EXAMINER BROOKS: Have the witnesses been  
23 sworn?

24 EXAMINER McMILLAN: Yes.

25

1 LACI L. STRETCHER,  
2 after having been previously sworn under oath, was  
3 questioned and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. DeBRINE:

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

8 A. Laci Stretcher.

9 Q. Who do you work for, Ms. Stretcher?

10 A. I work for Apache Corporation.

11 Q. And what are your responsibilities with Apache?

12 A. My main responsibilities are the Northwest  
13 Shelf, and I also work some of the waterflood units that  
14 we have in southeastern Lea County, so anything related  
15 to that, whether it's preparing to drill, putting  
16 together operating agreements, processing AFEs.  
17 Anything within that area that's land related is what I  
18 handle.

19 Q. Have you previously testified before the  
20 Division?

21 A. Yes.

22 Q. And were your credentials accepted and made  
23 part of the record in those cases?

24 A. Yes.

25 Q. Are you familiar with the application filed by

1 Apache in Case Number 15874?

2 A. Yes.

3 Q. Are you familiar with the status of the lands  
4 that are included within the proposed unit area that's  
5 the subject of that application?

6 A. Yes.

7 MR. DeBRINE: Mr. Examiner, we'd ask that  
8 Ms. Stretcher be accepted as an expert with regard to  
9 petroleum land matters.

10 MR. FELDEWERT: No objection.

11 EXAMINER McMILLAN: So qualified.

12 Q. (BY MR. DeBRINE) Ms. Stretcher, in front of you  
13 is an exhibit notebook. If you could turn to Exhibit 1,  
14 which is Apache's application in this case, and explain  
15 to the Examiner what Apache is seeking through its  
16 application.

17 A. Apache is seeking from the Division approval  
18 for its Thunderbird Resource Development Unit that's  
19 located in Eddy County, New Mexico. It consists of  
20 approximately 3,198.44 acres, and that acreage is both  
21 federal and state in mineral ownership.

22 Q. If you could turn to what's been marked as  
23 Exhibit 2, which is a locator map, could you explain  
24 where the proposed unit is located?

25 A. Yes. If you look on the locator map, the

1 Thunderbird Unit is right in the middle outlined in  
2 blue, and you can see off to the east is our Cedar Lake  
3 Com. We have quite bit of development there. We've  
4 also developed another com called the Hummingbird that's  
5 further over to the east. Our Thunderbird Unit is north  
6 of Loco Hills. Lovington is 42 miles to the east, and  
7 Artesia is 25 miles to the west.

8 **Q. If you could turn to Exhibit 3, which is the**  
9 **unit agreement for the Thunderbird agreement, it**  
10 **indicates that it's a state and federal resource**  
11 **development unit. Could you please explain to the**  
12 **Examiner what type of lands are included in the unit and**  
13 **the basic outline of the unit agreement?**

14 A. Yes. The Thunderbird resource development  
15 consists of 80 percent federal acreage and 20 percent  
16 state acreage.

17 A resource development is a hybrid form of  
18 the model exploratory unit form and a communitization  
19 agreement. And what it does is it creates one large  
20 participating area, and the operator can have  
21 centralized facilities, which reduces the environmental  
22 footprint of the operator. And there is also an  
23 incentive to get out there and drill as soon as it's  
24 approved. The unit has a five-year term, so we must get  
25 out and drill. Whatever is not drilled within that

1 five-year term falls out of the unitized boundaries at  
2 the end of five years.

3 **Q. In putting together the proposed unit, did you**  
4 **have the opportunity to meet with the BLM and the State**  
5 **Land Office?**

6 A. Yes. This has been a work in progress for  
7 about three years now. We met with the BLM first in  
8 2016 to talk about forming this resource development  
9 unit. We met again with them in 2017, both the Carlsbad  
10 field office and the Santa Fe office. We met with the  
11 NMOCD. At that same time, there was a joint meeting  
12 between the BLM and NMOCD to discuss -- this is a large  
13 unit. There is a lot of work that goes into it, and we  
14 wanted to make sure that at least on the front end, we  
15 could get this done. We also met with the State Land  
16 Office around that same time, around February of 2017.

17 **Q. If you can turn to Exhibit 4 and explain what**  
18 **that is.**

19 A. Exhibit 4 is the preliminary approval letter or  
20 the unit designation letter from the BLM. It's dated  
21 December 19th, 2017.

22 **Q. If you could turn to Exhibit 5 and explain what**  
23 **that is.**

24 A. Exhibit 5 is the preliminary approval given by  
25 the State Land Office. Again, I met with the State Land

1 Office in February of 2017, with Marilyn, who is in the  
2 room today, and Commissioner Dunn and some more of the  
3 State Land Office staff to talk about what this might  
4 look like for the State. And they also granted their  
5 preliminary approval in this letter dated March 13th,  
6 2017.

7 **Q. Are you seeking to have the unit designate a**  
8 **project area under the Division's rules to facilitate**  
9 **the horizontal development of the unit?**

10 A. Yes.

11 **Q. If you could turn back to Exhibit 3 and explain**  
12 **what is the depths of the -- that are being unitized**  
13 **under this agreement?**

14 A. So if you turn to the unit agreement, page 4,  
15 paragraph three, the unitized substances are all oil and  
16 gas from the stratigraphic equivalent of the top of the  
17 Yeso Formation, encountered a measured depth of 4,233  
18 feet, down to the stratigraphic equivalent of the top of  
19 the Tubb Formation at a measured depth of 5,554 feet as  
20 encountered in the Aspen Federal Com #1, Section 31,  
21 Township 16 South, Range 30 East, and that is API  
22 30-15-31656.

23 **Q. What is the target formation that Apache is**  
24 **seeking to develop through the unit?**

25 A. The Yeso Formation.

1           **Q.    If you could turn to Exhibit A to the unit**  
2 **agreement, which shows the -- is a map of the unit**  
3 **boundaries.**

4           A.    Yes.  After page 17, you'll see Exhibit A.

5           **Q.    And please explain to the Examiner the**  
6 **composition of the federal and state acreage within the**  
7 **unit.**

8           A.    Okay.  So Exhibit A shows the section numbers,  
9 township and range.  The unit boundaries are in this  
10 darker, bold line.  The stripes that you're seeing  
11 are -- that's all federal acreage, and then the light  
12 gray that's to the east and west is state acreage.

13          **Q.    And the Examiner previously asked a question**  
14 **with regard to the ownership in the south half of**  
15 **Section 36.  Could you explain who owns those tracts?**

16          A.    Yes.  The south half of Section 36, the  
17 minerals are owned by the State Land Office for the  
18 benefit of the trust.  And the southeast quarter of that  
19 section, what is Tracts 13 and 15, there are three  
20 working interest owners there.  It's Apache, Chisos and  
21 Black Shale minerals.

22                   Chisos farmed out their interest to Apache  
23 last year, so when we talk about them, just remember  
24 that they're -- they farmed out their interest to  
25 Apache.  Tracts 13 and 14 are that same ownership.

1                   And then when you get into 17 and 16, OXY,  
2 I believe, owns Tract 17. Let me double-check.

3           **Q.    Yeah, if you could just confirm that.**

4           A.    Yes. OXY is 100 percent working interest owner  
5 in Tract 17, and Apache is 100 percent working interest  
6 owner in Tract 16.

7           **Q.    And is the percentage of ownership of the**  
8 **different tracts in the unit reflected in Exhibit B to**  
9 **the unit agreement?**

10          A.    Yes, it is.

11          **Q.    Why wasn't the north half of Section 36**  
12 **included within the proposed unit boundaries?**

13          A.    So this particular area is what the BLM calls a  
14 continuous accumulation play, which means that you  
15 could, in theory, unitize whole townships and ranges if  
16 you're only looking at geology. So the next step is to  
17 go to the actual form itself, which requires 100 percent  
18 participation. So we look at what is a reasonable way  
19 to unitize these interests, which ownership is a way to  
20 do that. We'd need to get 100 percent approval so that  
21 we could share in the costs and also the revenue in the  
22 unit. And as part of that process, you also have to go  
23 to BLM and the State Land Office to make sure that there  
24 isn't any stranded acreage.

25          **Q.    Did either the land office or the BLM require**

1 **Apache to include any additional acreage in the unit**  
2 **beyond what was initially proposed?**

3 A. Yes. If you will turn back to the unit map,  
4 Exhibit A, Tract 11 is the southwest quarter of the  
5 southwest quarter of Section 4. That was an unleased  
6 federal tract. It's 40 acres. The BLM said that we  
7 would -- we would be able to unitize here, but we would  
8 need to bring that 40 acres into the unit. They  
9 requested that we nominate it as a federal lease sale,  
10 which we did. That was in September. As part of that  
11 tract being nominated, we had to include -- or the BLM  
12 included a stipulation that Tract 40, that lease, would  
13 be subject to the Thunderbird lease agreement. So when  
14 the lease bulletin came out in August or September, it  
15 showed this tract nominated, and it had a stipulation  
16 that said it's subject to the unit agreement.

17 Apache ultimately was the successful bidder  
18 on that tract, so now it is part of the Thunderbird Unit  
19 and owned by Apache.

20 **Q. Did you provide notice of Apache's application**  
21 **for approval of the Thunderbird Unit to the working**  
22 **interest owners whose lands adjoined the proposed unit?**

23 A. Yes, we did.

24 **Q. Did any of them express any concerns regarding**  
25 **the exclusion or inclusion of lands within the unit or**

1 **the drawings of the unit boundaries?**

2 A. Yes. Concho notified us about two weeks before  
3 our original hearing date. That was November 30th.  
4 They notified us two weeks before that and said that  
5 they had a potential stranded-acreage issue with this  
6 unit.

7 **Q. If you could turn to Exhibit 6, which is an**  
8 **email exchange between you and Adam Reker of Concho, is**  
9 **that the contact you were referring to earlier?**

10 A. Yes. He's the landman. He's my equivalent  
11 over at Concho.

12 **Q. And did you send a copy of the proposed unit**  
13 **agreement to Mr. Reker at that time?**

14 A. Yes. He reached out to me on July 17th. This  
15 is around the time that the federal lease bulletin came  
16 out. And as I mentioned earlier, it had that  
17 stipulation on the lease that it was subject to the unit  
18 agreement. And they asked for a copy of the unit  
19 agreement and the operating agreement, and so I sent  
20 that over. I sent over the unit agreement and Exhibit  
21 A, which is the map. I told them that we couldn't  
22 provide the operating agreement because we were still  
23 negotiating with the partners that are in the  
24 Thunderbird Unit. I did tell them, though, that we were  
25 using the 1989 AAPL long form -- bless you -- with

1 horizontal provisions as a starting point. So that's  
2 what I provided.

3 Q. From the time you provided the proposed unit  
4 boundaries and the unit agreement to Concho up until the  
5 time Apache filed its application in late October, did  
6 they ever raise any objection with regard to the unit  
7 boundaries?

8 A. No, no objections.

9 Q. Did they ever complain that the unit, as  
10 configured, would impede their development plans for any  
11 adjacent acres that they held?

12 A. No. There was no mention of stranded acreage  
13 or development plans until right before the hearing.

14 Q. Has the BLM or the State Land Office indicated  
15 that the north half of Section 36 should be included  
16 within the unit?

17 A. No, they have not.

18 Q. Have they indicated that the adjacent acreage  
19 in Section 31 should be included in the unit?

20 A. No. Neither have communicated that they would  
21 require the southwest quarter of Section 31 to be  
22 included. As part of the preliminary approval process,  
23 if the State or the BLM saw that their acreage was being  
24 stranded, they would not have given us preliminary  
25 approval.

1           Q.    If you could turn to Exhibit 7, which is a  
2 further email exchange you had with Mr. Reker in  
3 November of 2017 --

4           A.    Yes.

5           Q.    -- did Concho express any other concerns  
6 regarding the unit boundary at that time?

7           A.    Yes.  He first reached out to me on November  
8 15th, 2017.  And if you'll flip to page 5 of that email,  
9 it has a map at the top, and this is the map that Concho  
10 provided -- that Adam provided.  And it seemed like  
11 there were two concerns from Concho.  The first was the  
12 north half of Section 36, and we've already -- -- I  
13 don't think we talked about that yet.  But the north  
14 half of Section 36 could be developed east-west, which  
15 is a common one-mile development that's in this  
16 particular area.  And so we didn't really see an issue  
17 there.

18                         The main issue I think that Concho has --  
19 and I think that's what their counsel has already  
20 brought to your attention -- is in their original --  
21 this is the original email from Concho.  It said that  
22 they had successfully staked well pads in Section 33,  
23 and they had planned on drilling two-mile laterals that  
24 extended across the southwest quarter of 33 all the way  
25 across 32 and then across the southeast of 31.  And you

1 could see that that would potentially strand -- that's a  
2 federal acreage -- 160 acres right there in the  
3 southwest quarter of 31. If the Thunderbird Unit  
4 boundaries were here and they developed two-mile  
5 laterals, 160 acres could be potentially stranded.

6 **Q. Do you know what Concho's ownership is in**  
7 **Sections 31, 32 and 33?**

8 A. I do not know what their ownership is in 32 or  
9 33 or even the southeastern quarter of 31. Whenever we  
10 were going back and forth -- and it's in the email chain  
11 if you want to double-check this. But he said that they  
12 owned 80 acres in the southwest quarter of 31, and at  
13 that time, they were looking at farming out another 80  
14 acres. So I don't know -- I don't know exactly if they  
15 have 100 percent working interest. That's never been  
16 conveyed to us if they do have 100 percent working  
17 interest there.

18 **Q. Has Concho permitted any of the wells on its**  
19 **adjacent acreage to the unit that are shown in that map**  
20 **that Mr. Reker sent to you in November?**

21 A. No. They haven't permitted anything. And it's  
22 my understanding that the only thing they've done is  
23 staked the wells -- or staked well pads. I believe the  
24 well pads over here in 33 were staked earlier this year.  
25 I don't know when. And then for sure we know whatever

1 they've staked since they were potentially protesting us  
2 beginning in November. We know that they had a staking  
3 with the BLM as recent as January 4th and 5th.

4 **Q. Do you know if Concho ever staked any wells in**  
5 **Section 36?**

6 A. Yes, they did.

7 **Q. Does Concho own any interest in the south half**  
8 **of Section 36?**

9 A. Concho does not own anything in the south half  
10 of Section 36. It is the ownership that I mentioned  
11 earlier, which is Apache, Chisos, Black Shale and OXY.

12 **Q. Earlier we talked about the north half of**  
13 **Section 36. Why wasn't that tract included within the**  
14 **proposed unit boundaries?**

15 A. I'd like to ask you to flip over to Exhibit 9.  
16 We're going to just jump over for a little bit. There  
17 is a map that's the last page of Exhibit 9, if you'll  
18 just take a look at that. This shows the ownership --  
19 I'm sorry. Well, the ownership that you're seeing here,  
20 the sort of light grayish-blue color is federal acreage.  
21 The tan color is state acreage. You can see where our  
22 Thunderbird Unit is outlined in blue, and then our Cedar  
23 Lake area is also outlined in blue to the east.

24 I also have showing here the horizontal  
25 wells that are in the area, and you can see there is

1 quite a bit of horizontal development, the majority of  
2 the which is east-west orientation and one mile in  
3 length for those particular laterals.

4           So when Concho said that they were worried  
5 about the north half of Section 36, it's one-mile,  
6 east-west orientation all over this area. And so at any  
7 point in time, if Concho wants to drill east-west in the  
8 north half, they would be able to capture that interest  
9 in the same way that they've captured their leasehold in  
10 all of the other horizontal one-miles that you're seeing  
11 in this area.

12           And if anything, as we drill up the  
13 Thunderbird Unit, we would be derisking their future  
14 development in the area because they could see that --  
15 they would see those production numbers.

16           **Q. Looking at Exhibit 9, what does it consist of?**

17           A. Do you -- do you want to hit Exhibit 8 first?

18           **Q. Sure. Let's take a look at Exhibit 8. What is**  
19 **depicted there?**

20           A. Okay. So Exhibit 8 is a picture of where  
21 Concho had previously staked wells in Section 36. So,  
22 again, the south half of Section 36, Concho does not own  
23 any working interest. We went out to stake some of our  
24 wells for the Thunderbird Unit. And when we go out on  
25 location -- this is prairie chicken area -- the CEHMM

1 prairie chicken representative from Carlsbad comes out  
2 to make sure that we are in compliance with where they  
3 want us to put locations. And the CEHMM person said,  
4 Concho's been out here; we've approved locations for  
5 them.

6 So if you look at the picture, this is  
7 their stakes that they placed out there. From our  
8 understanding, they staked these Whitetail Federal wells  
9 in Section 36 in early 2017. And as I mentioned  
10 earlier, they don't own anything in Section 36. So our  
11 belief is that they had planned on doing off-lease  
12 surface locations in 36 and then drilling east to  
13 capture their leasehold in Section 31.

14 **Q. Have you had any additional correspondence with**  
15 **Concho leading up to this hearing in order to try and**  
16 **facilitate the development of the wells that they had**  
17 **originally staked?**

18 A. Yes. Just as a side note, we're partners with  
19 Concho in the Cedar Lake area. We own that at 60  
20 percent, and they have 40 percent. We're a partner with  
21 Concho in so many wells, whether we're the operator or  
22 they're the operator. So the point here is never to  
23 leave Concho high and dry. We would like to work with  
24 them in such a way that we are all successful in  
25 drilling our leasehold.

1           So that is what the purpose of Exhibit 9  
2 was, is an offer letter to Concho saying that we would  
3 grant them a subsurface easement in our leasehold that's  
4 located in the east half of the southeast quarter of  
5 Section 36, and it would allow them to develop their  
6 Whitetail Federal wells that they staked in early 2017.

7           So if you are looking back at that map in  
8 Exhibit 9, if you look in the east half of the southeast  
9 quarter of Section 36, I have some well pads that are  
10 there. Again, this is where Concho stakes their own  
11 potential wells back in 2017. So we would grant them a  
12 subsurface easement to begin their Whitetail Federal  
13 wells in Section 36, and they could drill one mile east.  
14 And then they could also start from their well pads over  
15 in 33 that they already -- they already have those well  
16 pads approved and drill west a mile and a half. And  
17 those lateral lengths would be interchangeable depending  
18 on, I mean, what they wanted to do. It could be a mile  
19 and a half east or a mile west. Either way, you could  
20 interchange those.

21           So with that option -- again, Concho had  
22 previously staked the Whitetail Federal wells -- they  
23 could capture all of their leasehold from 33, 32, 31,  
24 and then Apache could also maintain its Thunderbird Unit  
25 boundaries as they currently are.

1           **Q.    When did you send the letter of the easement**  
2 **proposal off to Concho?**

3           A.    I sent the letter on January 9th.

4           **Q.    Has Concho responded to your offer?**

5           A.    They have not responded.

6           **Q.    Let's take a look at Exhibit 10.  And what is**  
7 **that?**

8           A.    So Exhibit 10 is further efforts on Apache's  
9 part to try to make this work with Concho.  As I  
10 mentioned earlier, the ownership in that particular part  
11 of Section 36 is Apache and Black Shale.  Chisos is the  
12 third one who gave us -- or farmed out their working  
13 interest to us.

14                       I reached out to Black Shale and gave them  
15 some information on what was going on here.  Black Shale  
16 has signed the Thunderbird Unit agreement and operating  
17 agreement.  And I asked if they would grant -- if they  
18 would join Apache in granting this subsurface easement,  
19 and they said yes.  So this is just an email  
20 correspondence with Andy Scott, their vice president,  
21 and it's saying that Black Shale, the only other working  
22 interest owner in Section 36, would join us in granting  
23 that subsurface easement.  And just in case, if you're  
24 looking at the email signature here, Buffco Production,  
25 they're a brother-sister company to Black Shale.  So --

1           **Q.    Have you received any response to that letter?**

2           A.    No.

3                        I forwarded this email over to Concho on  
4 the 12th just to say, you know, here's some more  
5 information, that both parties that would be necessary  
6 for a subsurface easement would grant that. And they  
7 still would need to go to the State Land Office because  
8 that's state acreage there. And the actual lateral of  
9 their producing part in Section 31 would be federal. So  
10 they'd still have to get approval from those two  
11 agencies. But from the working-interest side, they have  
12 a subsurface easement.

13           **Q.    This case was originally scheduled to be heard**  
14 **back in November of 2017, and Concho had requested and**  
15 **was granted two continuances --**

16           A.    Yes.

17           **Q.    -- of the case. Do you know what the basis for**  
18 **the requests were?**

19           A.    Yes. So both of the motions for continuance  
20 say that Concho was attempting to move their locations  
21 in such a way that it could accommodate Apache so that,  
22 best-case scenario, they get to develop their leasehold,  
23 we get to develop ours. And that's what they mentioned  
24 both times.

25           **Q.    Has Concho provided any maps or correspondence**

1 with the BLM that shows they attempted to move their  
2 locations into Section 32 or to another place that  
3 wouldn't require the exclusion of the south half of  
4 Section 36 from the unit?

5 A. No. We have received no maps or correspondence  
6 with the BLM that said that they were trying to actually  
7 move anything. It's just what they've said in their  
8 continuance.

9 Q. Have you asked them for that information?

10 A. We have. We wanted to see good-faith efforts  
11 because we feel like we're so far along in the process  
12 and they reached out two weeks before the hearing, after  
13 we had given them this unit agreement back in July and  
14 didn't say anything, and now, all of a sudden, it's a  
15 big deal. And so we just asked, Could we have anything  
16 that shows good-faith efforts? And we haven't received  
17 anything.

18 Q. If you could turn to what's marked as Exhibit  
19 11 and please explain what that consists of?

20 A. Yes. Exhibit 11 is a screenshot of the units  
21 that are active in New Mexico. And this is pulled from  
22 the Division's Web site. You can see the Thunderbird is  
23 outlined in red in the middle. The West Square Lake  
24 Unit, which is -- it was previously operated by J. Cleo  
25 Thompson and now it's the Bureau Oil and Gas. That's

1 the San Andres Unit that's above the proposed  
2 Thunderbird Unit, and the North Square Lake Unit is  
3 directly offset to the east. And the point of showing  
4 you this is just to look at what the units look like  
5 here in New Mexico. You've got some big ones. You've  
6 got some small ones. If you look at the actual unit  
7 boundaries, you can see they're kind of choppy,  
8 depending on what unit it is.

9           If you flip to that second page, this is  
10 the same map. It's just zoomed in more. And my point  
11 here again is just to show, you know, you have  
12 quarter-quarter sections, half sections. The  
13 Thunderbird Unit boundaries are not anything unusual if  
14 you're looking at what's already out in New Mexico.  
15 We're not putting out 40-acre tracts or 80-acre tracts.  
16 This is what's normal in New Mexico. I wanted to show,  
17 again, this kind of goes to the BLM's continuous  
18 accumulation play idea, is that if we only looked at  
19 geology, you could, in theory, unitize this whole area  
20 if that's the only factor that's being used.

21       **Q. If you could turn back to Exhibit B of the unit**  
22 **agreement, which is Exhibit 3, which shows the breakdown**  
23 **of the ownership by tract and acreage.**

24       A. Yes. If you are back in Exhibit 3, past page  
25 17, there is Exhibit A and then Exhibit B. And I just

1 have the tract numbers listed, description of lands,  
2 acres, serial number and expiration date, basic royalty  
3 and percentage, the lessee of record and percentage,  
4 overriding royalty and percentage, and then the working  
5 interest and percentage.

6           And just a small note, on the lessee of  
7 record, as I mentioned earlier, J. Cleo Thompson  
8 operates the West Square Lake Unit, which is above us in  
9 the San Andres. They sold to Seguro Oil and Gas just, I  
10 guess, about five months ago now, and so they're still  
11 in the process of switching over the lessee of record.  
12 But J. Cleo Thompson did convey all record title to  
13 Seguro. So that's who has actually signed our unit  
14 agreement.

15           **Q. Are there any uncommitted working interest**  
16 **owners for the unit?**

17           A. No. We have 100 percent working interest owner  
18 participation.

19           **Q. And you also indicated that all lessees of**  
20 **record are also committed to the unit?**

21           A. All lessees of record have signed.

22           **Q. And as you mentioned earlier, this is a**  
23 **voluntary resource development unit?**

24           A. Yes. We spent at least a year working on  
25 working interest owners and getting them on board to

1 this unit. The unit agreement itself is probably the  
2 most non-op friendly that we could possibly negotiate  
3 with them. We went to Deming. We met with Sue Ann  
4 Craddock. The team met with Sue Ann that day and  
5 pitched her this unit. And they ended up wanting to  
6 farm out their interest because it was such a large  
7 commitment to develop.

8 Black Shale Minerals is out of Tyler, and  
9 they actually flew down and came to us, and we gave them  
10 that -- gave them the pitch.

11 And then OXY as well, they have about 1  
12 percent in the unit, and we were able to just email back  
13 and forth with them.

14 But we do have 100 percent participation.

15 **Q. If you could turn to Exhibit 12 and explain to**  
16 **the Examiner what that document consists of.**

17 A. Yes. Exhibit 12 is the model form reporting  
18 supplement to the operating agreement, and this is just  
19 to show that you all of the working interest owners have  
20 signed the operating agreement that covers the unit  
21 boundaries, and that includes, of course, Apache, Black  
22 Shale Minerals and OXY.

23 **Q. Are there any overriding royalty interests in**  
24 **the state and federal leases being unitized?**

25 A. Yes, they are.

1           **Q. Did Apache provide notice of its application to**  
2 **the overriding royalty owners?**

3           A. Yes, we did.

4           **Q. And what did you do in order to identify the**  
5 **overriding royalty owners who were entitled to notice of**  
6 **these proceedings?**

7           A. We spent a lot of money trying to make sure  
8 that we knew everyone that was possibly tied to this  
9 particular unit. We know how important that is to the  
10 Division. We know how important it is on the Division  
11 order side once we have production, make sure that  
12 everyone's getting paid. Once we had the original title  
13 opinions, we spent a lot of money on curative, and then  
14 we did one more run-through to try to pick up anyone who  
15 didn't have their title clean.

16                       So for any people that we couldn't find  
17 originally, we used sources like Accurint, which is a  
18 LexisNexis search tool. We did a lot of ancestry.com  
19 and other Web sites like that to try to nail down the  
20 heirs to interests that were conveyed earlier like in  
21 the '40s and '50s.

22           **Q. If you could turn to Exhibit 13 and explain**  
23 **what that consists of.**

24           A. Yes. Exhibit 13 is a stack of 59 ratifications  
25 that are from working interest owners. We sent out at

1 least two rounds to every overriding royalty interest  
2 owner to try to get them signed up, and this is the  
3 stack that we have.

4 **Q. With regard to the instruments that created**  
5 **overriding royalty interests in some of the leases, have**  
6 **you examined those documents to determine whether they**  
7 **have a formal unitization clause for the unit**  
8 **assignment?**

9 A. I did examine those. We had a few that did not  
10 have a pooling clause. They were grants from the '40s,  
11 '50s. These are old leases. Some of these wells  
12 have -- not our wells, but some of the wells in this  
13 area have been producing for a very long time. So there  
14 were some overriding royalty interest grants that did  
15 not include pooling language.

16 **Q. Have you confirmed that notice of Apache's**  
17 **application was given to those overriding royalty**  
18 **owners?**

19 A. Yes. We tried very hard to make sure that  
20 anyone with an interest in this unit received  
21 notification.

22 **Q. Have you had any correspondence or**  
23 **conversations with overriding royalty owners regarding**  
24 **the units since you proposed it?**

25 A. Yes. We had three different types, no

1 objections. The first was a group that just wanted  
2 their title information. You know, they received it  
3 from their grandfather, and they wanted to actually see  
4 the grant, so they wanted a copy of the documents. So  
5 we would send that out.

6 We had a few that were confused as to what  
7 a ratification was and didn't understand what the  
8 Thunderbird Unit meant to them, so it was kind of  
9 walking them through the unit process.

10 And then the third was a group of people  
11 who currently have interest in the West Square Lake  
12 Unit, again the San Andres Unit that's above. And so  
13 they were concerned that if we're drilling the  
14 Thunderbird Unit, what happens to their check. And so  
15 it was a good day for them when I explained if we're  
16 both producing the San Andres Unit and then Apache's  
17 producing the Thunderbird Unit, then they could get two  
18 checks. So it was a good day for them.

19 EXAMINER BROOKS: (Laughter.)

20 **Q. (BY MR. DeBRINE) How will production be**  
21 **allocated from the unit?**

22 A. Production will be allocated by surface. So an  
23 example -- if you go back to Exhibit 3 and Exhibit A  
24 that's attached to it, a good example here -- and,  
25 again, the tract participation is mandated by the BLM

1 and the State Land Office in their form. But it's the  
2 most simple form for a unit, which is surface.

3           So if you take that -- consider Tract 11,  
4 which is the 40 acres we picked up in that lease sale.  
5 We divide 40 acres by the total acreage in the unit,  
6 3,198.44, and then you have the tract participation,  
7 which for a 40-acre tract is just a little over 1  
8 percent. And if you wanted to go into the specifics for  
9 tract participation, it's going to be at the very end of  
10 Exhibit B, where each tract is listed with its  
11 participation.

12           **Q. With regard to Concho's request that the south**  
13 **half of Section 36 be excluded from the unit, I've just**  
14 **got a few questions for you concerning Section 36.**

15           A. Okay.

16           **Q. Have all the owners in south half of Section 36**  
17 **joined and ratified the unit agreement?**

18           A. Yes. They've signed both the unit agreement  
19 and the operating agreement.

20           **Q. Has Apache already obtained permits to drill**  
21 **wells in Section 36 from the Division?**

22           A. Yes. We've received two permits for the south  
23 half of Section 36. We've also received a permit for  
24 the 5H over in Section 33. That's where the initial  
25 well is going to be drilled. And we also paid for

1 permits -- nine other permits in that same section, 33.  
2 Those are about 10,000 apiece. So total we spent about  
3 \$100,000 on federal permits for those units.

4 **Q. Does Apache currently have the right to drill**  
5 **those wells today?**

6 A. Yes.

7 **Q. Do you believe that Apache has offered Concho a**  
8 **reasonable subsurface easement, in a place where it had**  
9 **previously staked wells, that would allow it to drill**  
10 **wells to develop with Section 31?**

11 A. Yes. We tried to make this work in such a way  
12 that we're able to continue. Like I said, this is a  
13 three-year process, putting this together. It's not  
14 that we don't want Concho to develop their acreage, but  
15 we're just so much further along in the process as far  
16 as permits, operating agreement, unit agreement.  
17 They've only just staked wells. That's where they're at  
18 in the process.

19 **Q. Do you have an opinion whether the exclusion of**  
20 **the south half of Section 36 in the Thunderbird Unit**  
21 **would adversely affect the correlative rights of the**  
22 **working interest owners in the south half of Section 36?**

23 A. It would. They've already signed the unit  
24 agreement and the operating agreement. We drilled the  
25 5H well, just the vertical portion, in October of 2017.

1 We took core and ran logs in that particular well. We  
2 want to make sure we have the best landing zone. This  
3 is a big project. We want to make sure we do it right.

4 If we were to amend the unit boundaries in  
5 any way, we would have to consult with the working  
6 interest owners that have already signed the operating  
7 agreement and the unit agreement at this point in time.  
8 So their interest would be directly impacted on whether  
9 or not we change the unit boundaries as they are right  
10 now.

11 **Q. How much time and money has Apache spent in**  
12 **putting the Thunderbird Unit together?**

13 A. So about \$700,000, and that is truly not an  
14 exaggeration.

15 We started with the additional working  
16 interest acquisition from J. Cleo Thompson in 2015 to  
17 bulk up our working interest in this area. We then  
18 approached the BLM, the State Land Office. We had to go  
19 speak with other working interest owners to get their  
20 approval to join the unit. We had to identify all of  
21 the overriding royalty interest owners, so a lot of  
22 title was done. And then we sought their ratification.  
23 We did a deal with Chisos so that they could farm out  
24 their interest with us. We nominated and then  
25 subsequently purchased Tract 11 in the unit. And then

1 at the very end of last year, again we spent about  
2 1.5 -- \$1.6 million drilling the vertical portion of the  
3 initial well to take that core and get the logs. So,  
4 again, it's not something that we just decided yesterday  
5 to do. It's something very important that's been in the  
6 works for a while.

7 **Q. Is Apache prepared to develop the Thunderbird**  
8 **Unit once it's approved by the Division?**

9 A. Yes. We're ready to go. And this resource  
10 development form is designed in such a way to  
11 incentivize the opportunity to do that. With that  
12 five-year term, we have to get out there and go. We  
13 drilled over 70 wells in the Cedar Lake area that's  
14 right next door starting in 2012, so we're fully capable  
15 of doing that. And that is our intention here.

16 We've received approval from every party  
17 that's necessary, so the State Land Office, BLM, working  
18 interest owners. The Division is the last group that  
19 needs to approve this. And if we are granted approval,  
20 then it's full steam ahead on our development plan for  
21 2018, 2019.

22 **Q. If you could please turn to Exhibit 14 and**  
23 **explain what that consists of.**

24 A. Yes. Exhibit 14 is the Affidavit of Notice  
25 that was prepared by our attorney, and it shows all of

1 the notices that were sent out to the various parties:  
2 The working interest owners, the overriding royalty  
3 interest owners, the lessees of record and also offsets.  
4 The certified numbers are listed here. And then I  
5 believe at the very back -- let's see. It's at the very  
6 back. Yes. The very back has a copy of the  
7 notification that went out and in the newspaper, the  
8 "Artesia Daily Press."

9 **Q. Were Exhibits 1 through 14 prepared by you or**  
10 **compiled under your direction and supervision?**

11 A. Yes, they were.

12 MR. DeBRINE: We would ask that Exhibits 1  
13 through 14 be admitted into the record.

14 MR. FELDEWERT: No objection.

15 EXAMINER McMILLAN: Exhibits 1 through 14  
16 may now be accepted as part of the record.

17 (Apache Corp. Exhibit Numbers 1 through 14  
18 are offered and admitted into evidence.)

19 MR. DeBRINE: I'll pass the witness.

20 EXAMINER McMILLAN: Cross-examination?

21 CROSS-EXAMINATION

22 BY MR. FELDEWERT:

23 **Q. Ms. Stretcher, looking at your Exhibit 3 --**

24 A. Yes.

25 **Q. -- now, this particular -- it's a resource**

1 development unit, is what you described it as, correct?

2 A. Yes.

3 Q. Is this for horizontal development only?

4 A. This is for horizontal development only.

5 Q. So not vertical wells?

6 A. That's correct.

7 Q. So I assume, then, that the company agrees that  
8 the best way to develop the Yeso both within the unit  
9 and in this general unit is horizontal wells when  
10 possible?

11 A. That's correct, yes.

12 Q. And I think you said that that is the common  
13 and majority way of developing area today?

14 A. Yes. There is -- there is -- definitely is  
15 some vertical Yeso production, but I think most  
16 operators are moving toward horizontal whenever  
17 possible.

18 Q. All of your development is going to be  
19 horizontal?

20 A. That's correct.

21 Q. And this boundary that you've put together,  
22 this is not based on geology. It's based on ownership?

23 A. That's correct.

24 Q. Okay. One of the things when I was looking at  
25 Exhibit 3 is I did not see any -- an attachment or

1 **Exhibit A to the unit agreement. Do you know why that's**  
2 **not in here?**

3 A. After page 17, which the final signature page,  
4 there is an Exhibit A.

5 Q. Okay. What exhibit -- let me ask you this  
6 because I don't see it in here. Is there an exhibit  
7 that identifies Apache's ownership percentage in the  
8 proposed unit?

9 A. Yes. That's Exhibit B.

10 Q. And where is that total ownership identified?

11 A. Well, it lists it by tract only.

12 Q. Right.

13 A. So you would have to go in and -- but basically  
14 without Chisos, we're about 75 percent working interest.

15 Q. In the entire unit?

16 A. That's correct, yes.

17 Q. So the unit would be 75 percent Apache?

18 A. And then with Chisos, which is the other  
19 working interest owner, we have about 12 and a half  
20 across the whole unit. It's more like 12, so we're at  
21 about 85-ish with Chisos.

22 Q. So 85 percent of the unitized of the proposed  
23 unit area is owned -- or controlled by Apache?

24 A. By Apache, that's correct.

25 Q. And with respect to the south half of Section

1     **36 --**

2           A.    Uh-huh.

3           **Q.    -- how much -- what is Apache's ownership**  
4 **percentage or control percentage?**

5           A.    Well, let's see.  So if you're just looking at  
6 the north half of the south half of Section 36 --

7           **Q.    Let's take the whole south half of Section 36.**

8           A.    Okay.  So the reason I would split the two is  
9 because in the south half of the south half of Section  
10 36, you have one 40-acre tract that's 100 percent OXY  
11 and one that's 100 percent Apache that dilutes our  
12 interest there so it would be a little bit less.

13                         The 85 percent that I've been mentioning  
14 that's across the unit would be the same for the north  
15 half of the south half because that ownership there is  
16 just those three parties, Apache, Chisos, Black Shale,  
17 Chisos having farmed out their interest to Apache.  So  
18 85 percent in the south -- or I'm sorry -- the north  
19 half of the south half, and then -- I mean, if you want  
20 me to get a calculator, I could calculate what's going  
21 on there.

22           **Q.    Just roughly.**

23           A.    Lowers 80s, upper 70s.  Let's go with that.  
24 We're still the majority.

25           **Q.    80, 85 percent?**

1           A.    Yes, the majority in the south half across the  
2 whole.

3           Q.    Is Apache?

4           A.    Is Apache. That's correct.

5           Q.    Just like the vast majority of the unit -- of  
6 the proposed unit is Apache?

7           A.    That's correct.

8           Q.    Okay. All right. And this is an undivided  
9 unit, right? There are no participating areas?

10          A.    It's one large participating area.

11          Q.    One of the things -- if I look at your Exhibit  
12 Number 1, which is your application -- you've reviewed  
13 this, right?

14          A.    Yes, I have.

15          Q.    Did you take a look at it before it was filed?

16          A.    Yeah. I think I did.

17          Q.    Okay. All right. Because I see in the first  
18 paragraph of the application, you're asking for an order  
19 approving your Thunderbird Resource Development Unit.  
20 Do you see that?

21          A.    Yes.

22          Q.    If I go to paragraph six on the next page, if  
23 I'm reading and just looking at what you're asking the  
24 Division to do here, okay, you're asking the Division  
25 to -- and I'm quoting here -- "to approve the combining

1 of continuous spacing units into a unitized area." Do  
2 you see that?

3 A. Uh-huh.

4 Q. That's what you're asking the Division here to  
5 approve?

6 A. We're unitizing. Yes.

7 Q. To approve the unit boundaries and the  
8 combination of this acreage?

9 A. Yes. So you get all of your leases, because  
10 there are multiples leases within this area. That's  
11 what unitizes it. It combines it all into one pot,  
12 basically.

13 Q. And if I look at paragraph seven, you suggest  
14 that this unit boundary is in the best interest of  
15 conservation, the prevention of waste and the protection  
16 of correlative rights.

17 A. That's right.

18 Q. That's what Apache is asking them to examine?

19 A. Yes, asking them to approve.

20 Q. And as part of that process, you'll agree with  
21 me, the Division needs to consider thereof the impact  
22 the proposed unit boundary will have on the ability of  
23 operators to develop offsetting tracts with horizontal  
24 wells?

25 A. I think the Division should definitely consider

1 the amount of time and the approval that's already been  
2 received for this particular unit, especially when you  
3 consider Concho just now went out and staked wells on  
4 January 4th and that we're already -- I don't know.  
5 Maybe if you were numbering the steps of moving towards  
6 development, we're way down the road compared to where  
7 Concho is. We have permits, and then we've received  
8 approval from the working interest owners that are part  
9 of the south half of Section 36, which is, I think,  
10 where you're going, you know, with the issue here that  
11 Concho has.

12 **Q. Well, my question to you is: You would agree**  
13 **with me that Apache is asking the Division to approve**  
14 **the unit boundaries and that they should consider the**  
15 **impact that that unit boundary will have on the ability**  
16 **of offsetting operators and lessees to develop their**  
17 **acreage?**

18 A. Absolutely.

19 MR. DeBRINE: And I'll object. This calls  
20 for a legal conclusion.

21 EXAMINER BROOKS: Well, I think it's an  
22 acceptable statement -- acceptable question for this  
23 witness, so I'll advise the Examiner to overrule the  
24 objection.

25 EXAMINER McMILLAN: Okay. I'll overrule

1 it, whatever he said.

2 Q. (BY MR. FELDEWERT) Indeed, Ms. Stretcher, if  
3 you look at your notice letters that went out for this  
4 unit --

5 A. Yes.

6 Q. -- did you provide notification to the lessees  
7 of the tract?

8 A. Yes, we did.

9 Q. Did you provide the unit boundaries?

10 A. Absolutely.

11 Q. All right. And to determine what impacts that  
12 will have on the issue such as waste, correlative rights  
13 and whether you're going to be stranding acreages?

14 A. Yes. But we also sent Concho notice in July of  
15 2017. I think that should be noted as well.

16 Q. And that was with respect to the question they  
17 had about Section 4, correct?

18 A. Yes. So the Tract 11 in the 40-acre tract in  
19 the southwest quarter there was nominated in the lease  
20 sale, so Concho asked, Can we see a copy of the unit  
21 agreement? So they did receive it, as well as a map of  
22 the unit boundaries that you see today.

23 Q. Did you invite Concho to the meeting with the  
24 BLM so you could go over with them the proposed unit  
25 boundaries?

1           A.    No.  Apache doesn't invite Concho to meetings  
2  with the BLM or the State Land Office to develop our  
3  acreage.  One thing that's important to be noted here is  
4  these are legal locations.  It's not -- it's not like  
5  we're closer than 330 feet to a leaseline or anything  
6  like that.  We typically don't consult with Concho  
7  whenever we're going to develop legal locations in an  
8  area.  It's more of going through the normal permitting  
9  process to make sure we have approval from the mineral  
10 owners and then, of course, the Division.

11           **Q.    Right.**

12                               **But the point of my question is that**  
13 **process of the meeting with the BLM and the State Land**  
14 **Office, that's not a forum in which you invite**  
15 **offsetting operators or lessees to address any concerns**  
16 **they would have about your proposed unit boundaries?**

17           A.    No.  We don't invite Concho to our unit  
18 formation meetings with the BLM and the State Land  
19 Office.  And I don't think they've invited us to any of  
20 theirs either.

21           **Q.    When did the company last visit the BLM about**  
22 **its logical [sic] designation letter?**

23           A.    Let's see.  The most recent -- they submitted  
24 their most recent preliminary approval -- I believe it  
25 was dated December 19th.

1 Q. Uh-huh. Did you have a conversation with the  
2 BLM prior to that?

3 A. We've had multiple conversations with the BLM  
4 about this unit.

5 Q. Okay. So the last time you visited with them  
6 about the logical designation letter, preliminary  
7 approval letter, was December 19th?

8 A. It would have been early December was the most  
9 recent that I would have spoken with them about the  
10 destination letter. I did speak with them again  
11 yesterday about this particular Thunderbird Unit.

12 Q. And you mentioned the fact that Concho had  
13 sought extensions of this hearing from the Division,  
14 right?

15 A. I'm sorry. Can you repeat that?

16 Q. You mentioned the fact that Concho, COG, had  
17 requested extensions of the Division -- from the  
18 Division for this hearing?

19 A. Yes. I believe there were two motions for  
20 continuances, and then a potential third one ended up on  
21 this date.

22 Q. And were you made aware that the purpose of  
23 that meeting was to determine what surface locations the  
24 BLM would actually approve in this area for the  
25 development of the offsetting acreage?

1           A.    Yes.  That's what Concho -- or that's what was  
2    in the motion for the continuance.

3           Q.    Okay.  And were you aware that the BLM didn't  
4    make final decisions on what locations they would  
5    approve for the development of the offsetting acreage  
6    until sometime around January 5th?

7           A.    I believe January 4th and 5th were their  
8    on-site location -- their on-site visits with the BLM.

9           Q.    All right.  And you mentioned the fact that you  
10   had -- that Concho had actually staked, I think you  
11   said, wells in the eastern part of Section 36.

12          A.    The Whitetail Federal.

13          Q.    Was it just the one well?

14          A.    Yes.  We only saw one stake out there.

15          Q.    So it wasn't four.  It was one stake?

16          A.    One stake.

17          Q.    And are you aware of the results of the meeting  
18   with the BLM about Concho's ability to drill from the  
19   eastern part of this Section 36 into the joining  
20   acreage?

21          A.    It's -- what we were told when we staked our  
22   locations was that Concho was approved for those  
23   locations from the BLM.

24          Q.    Who told you that?

25          A.    The CEHMM representative that was out there,

1 because we were also staking locations. If you look  
2 at --

3 Q. Let me ask -- let me say this. You're not  
4 aware of the fact that the BLM has not approved those  
5 locations?

6 A. No. We haven't sought any information from the  
7 BLM about this location.

8 Q. You also mentioned that you had sent your  
9 letter, your Exhibit 9, I believe it is.

10 A. Yes.

11 Q. And you were suggesting that Concho could use  
12 some locations in the eastern part of Section 36 to  
13 drill in the adjacent acreage?

14 A. That's correct.

15 Q. So at that time -- or at least what you said  
16 now, you're not aware of whether the BLM even allow that  
17 to occur?

18 A. So if you'll read my letter, it actually  
19 says -- I think it's on page 2, first paragraph. Oh,  
20 I'm sorry. It's the second paragraph. I said, "The  
21 State Land Office as the surface owner would be a  
22 required party to this solution, but we are hopeful that  
23 approval would be granted given that both parties wish  
24 to develop their acreage in the area." We knew that  
25 it's not just Apache that would need to approve this.

1 It would need to be the BLM. The surface, there is  
2 State Land Office. So for sure they'll need to be  
3 consulted. And then I believe because that well would  
4 be going into federal minerals, the BLM would also have  
5 to sign off --

6 **Q. Correct.**

7 A. -- on the subsurface -- I'm sorry -- off-lease  
8 locations.

9 **Q. Correct.**

10 **And you're not aware -- or you did not**  
11 **investigate whether the BLM would approve those**  
12 **locations?**

13 A. No. And the reason for that is we were able to  
14 obtain approved locations for our two wells that are in  
15 the south half of Section 36. So the idea was if Apache  
16 can find locations that are suitable for development,  
17 then so can Concho.

18 **Q. And your two wells in the south half of 36 will**  
19 **be developing federal minerals?**

20 A. Those are state.

21 **Q. So you don't need --**

22 A. Section 36 --

23 **Q. You did not need BLM approval for --**

24 A. No. As far as the surface out there, you  
25 know -- I think you mentioned that earlier -- so there's

1 lizard and there's chicken out there. And typically  
2 whenever you're staking, you're going to have your BLM  
3 representative and your -- the CEHMM representative out  
4 there. So if the CEHMM representative says, Yes, this  
5 location works, most of the time, the BLM is going to  
6 agree and vice versa. It's kind of like CEHMM defers to  
7 the BLM most of the time.

8 **Q. Are you aware that didn't happen here?**

9 A. I'm sorry, what?

10 **Q. Are you aware that did not happen here?**

11 A. I'm aware that there was a CEHMM representative  
12 out for the staking of the Whitetail well for Concho  
13 because they mentioned that.

14 **Q. All right. We'll call a witness because he's**  
15 **aware -- that's why we delayed. He's aware of what the**  
16 **BLM would or would not allow.**

17 A. Okay.

18 **Q. Okay. Secondly, you mentioned that when you**  
19 **sent this letter, that you didn't receive any kind of**  
20 **response from Concho. Is that your testimony?**

21 A. There was -- there was no response from Concho.

22 **Q. You didn't receive a phone call from**  
23 **Ms. Chatterton that you directed this letter and this**  
24 **email to?**

25 A. I got a phone call yesterday from Jackie.

1           **Q.    Okay.  So you had a conversation with her about**  
2 **this case?**

3           A.    Yes.  Basically, what she mentioned was that  
4 the BLM would be willing to look at our unit again to  
5 take out the south half and that there had been  
6 conversations with the State Land Office.  There was no  
7 response to our offer, which that's the point of this  
8 letter, in regards to the subsurface easement in the  
9 south half of Section 36.

10          **Q.    Okay.  But you made it sound like the**  
11 **communications -- there had absolutely been no**  
12 **communication, and that's not true.**

13          A.    There wasn't an answer to our offer here.  It's  
14 a continued effort by Concho for us to remove the south  
15 half of Section 36.

16          **Q.    All right.  And in the meantime, are you aware**  
17 **that the BLM made it clear that they would not approve**  
18 **locations in the eastern part of Section 36?**

19          A.    I've not been made aware of that.  No.

20          **Q.    Okay.  All right.  Now, if the south half of**  
21 **Section 36 is actually removed from this unit, you're**  
22 **going to retain effective control of unit operations,**  
23 **correct?**

24          A.    Yes.

25          **Q.    And it's not going to impact your ability to**

1 **act as unit operator?**

2 A. That's correct.

3 **Q. And you'll retain majority of the ownership?**

4 A. We would have to start the unit process again.

5 **Q. Now, that assumption -- that's an assumption**  
6 **made on your part again?**

7 A. It's actually the truth.

8 **Q. Are you aware that the -- so are you suggesting**  
9 **that the Division does not have the authority to exclude**  
10 **the south half of Section 36 if they deem that necessary**  
11 **to prevent waste --**

12 A. No, absolutely not. The Division is the last  
13 step -- I'm sorry. Were you done?

14 **Q. You deem that as necessary to prevent waste and**  
15 **protect correlative rights?**

16 A. Absolutely not. The Division is the last step  
17 in this process. As I mentioned earlier, you have to  
18 obtain State Land Office approval, BLM approval --  
19 which, by the way, the first time we got a preliminary  
20 approval, it took about a year, and this most recent one  
21 for the Thunderbird Unit was about eight to nine months.  
22 And I can tell you, you know, we sit in the meeting  
23 sometimes with the BLM and you tell them your plan and  
24 it sounds good and everyone's on board. It just takes  
25 them a while to process on their end what they need to

1 do to give you the unit designation letter.

2                   So after we get BLM, State Land Office  
3 approval, you're also going to have to renegotiate the  
4 JOA with the working interest owners that would be in  
5 the new unitized boundaries. So those people you'd have  
6 to renegotiate the operating agreement, look at the unit  
7 agreement again. You'd have to send notice to all of  
8 the overriding royalty interest owners that are part of  
9 the new unit.

10                   Chisos also farmed out their interest to  
11 us. Again, Chisos is the 12-and-a-half percent working  
12 interest in the unit. They farmed out their interest to  
13 us based on what you see as the current boundary. So if  
14 this -- if the unitized boundaries change, if we take  
15 out the south half, we're going to have to go back to  
16 Chisos and renegotiate that deal to figure out -- I  
17 mean, honestly --

18           **Q. So you made a deal with Chisos that assumed the**  
19 **Division would just rubber-stamp your unit boundaries?**

20           A. No, absolutely not.

21           **Q. All right. So that's a risk that you-all took,**  
22 **making that deal before you had your unit boundaries**  
23 **finally approved?**

24           A. We do have to renegotiate, though. That's the  
25 point here.

1           **Q. All right. But you have no indication, for**  
2 **example, that the BLM would not approve this unit if the**  
3 **Division determines that it's appropriate to exclude the**  
4 **south half of Section 36?**

5           A. No. My understanding from James Glover -- he's  
6 over at the BLM. He's the units guy now. My  
7 understanding from him is that if we wanted to take out  
8 the south half of Section 36, we would have to go back  
9 and discuss that with the BLM, and then we would need  
10 to -- whenever you submit your unit packet to the BLM,  
11 you also have to show your plan of development. So we  
12 would need to revise our plan of development and submit  
13 that with the new unit boundaries and unit agreement for  
14 their approval. And as I mentioned before --

15           **Q. Have you looked at your plan of development?**

16           A. I have looked at our plan of development.

17           **Q. Okay. If I'm looking at it correctly,**  
18 **according to your plan of unit development, which is**  
19 **Exhibit 20 --**

20                           EXAMINER BROOKS: Exhibit 20?

21                           MR. FELDEWERT: Yes.

22                           EXAMINER BROOKS: You may continue.

23           **Q. (BY MR. FELDEWERT) -- the south half of Section**  
24 **36 is going to be developed independently from the other**  
25 **acreage in the proposed unit, correct?**

1           A.     There's one-mile laterals in the south half of  
2     Section 36.

3           Q.     So if the Division excluded the south half of  
4     36 from the unit area, that would not impact the  
5     development plans for the remaining areas of the unit?

6           A.     So we have --

7           Q.     Is that correct?

8           A.     This is our -- this is our Plan A, as it's  
9     mentioned at the top there. I said that, you know, we  
10    drilled our 5H well, where we took our core and ran  
11    logs.

12          Q.     Ms. Stretcher, my question is: If you exclude  
13    the south half of 36, that would not impact the  
14    remaining development shown --

15          A.     This is --

16          Q.     -- on this exhibit?

17          A.     This is our current plan of development that  
18    can be revised as we learn more from our 5H, our initial  
19    well.

20          Q.     Okay. And that initial well, that 5H, is not  
21    in the south half of 36. That obligation well is  
22    located where?

23          A.     It's in Section 33 --

24          Q.     Okay.

25          A.     -- where the red star is -- or I'm sorry -- the

1 red triangle.

2 Q. Okay. If I look at your ownership percentage,  
3 the exclusion of the south half of 36 is not going to  
4 impact that. You're going to roughly have the same  
5 percentage, correct?

6 A. If we took out the south half, we would lose  
7 some working interest, yes.

8 Q. You'd still roughly have roughly 85 of the  
9 percent of the unit?

10 A. It would be in that neighborhood. Yes.

11 Q. Okay. And if you exclude the south half of  
12 Section 36, you could continue on with your remaining  
13 development plan as reflected in your exhibit, correct,  
14 including your initial obligation well?

15 A. Well, as I mentioned, we evaluate as we go  
16 along. So we could always drill mile-and-a-halves from  
17 that particular Section 36 if we wanted to. The idea  
18 is --

19 Q. That would not impact your current plan?

20 A. The current plan is always subject to change as  
21 long as the BLM approves it.

22 Q. And if the Division excluded the south half of  
23 36 to prevent waste and protect correlative rights, as  
24 you've asked them to examine here today, the BLM has not  
25 told you that they would not approve the remaining

1     **acreaage in the unit, have they?**

2           A.    No.  They have not said that.

3           **Q.    And the State Land Office has not said that?**

4           A.    No.  The State Land Office has not.

5           **Q.    In fact, all they've given so far is**  
6 **preliminary approval subject to this hearing before the**  
7 **Division to address the unit boundary?**

8           A.    That's correct.

9           **Q.    Okay.**

10                   MR. FELDEWERT:  That's all the questions I  
11 have.

12                   EXAMINER McMILLAN:  Let's take a 15-minute  
13 break.

14                               (Recess, 10:12 a.m. to 10:31 a.m.)

15                   EXAMINER McMILLAN:  I'd like to call this  
16 hearing back to order.

17                   EXAMINER BROOKS:  Mr. Feldewert passed the  
18 witness, right?

19                   MR. DeBRINE:  Yes.

20                   MR. FELDEWERT:  Yes, I did.

21                                       CROSS-EXAMINATION

22   BY EXAMINER McMILLAN:

23           **Q.    Okay.  My question is:  In the unit agreement,**  
24 **where does it expressly state a contraction clause?**

25           A.    Let's turn back to Exhibit 3.

1           **Q.    Okay.**

2                           EXAMINER BROOKS:   Exhibit 3.   Okay.   What  
3   paragraph?

4                           THE WITNESS:   So page 3 at the very bottom,  
5   letter E, and this particular language is very similar  
6   to what's in the exploratory unit form and the five-year  
7   term and lease -- acreage falling out.

8           **Q.    (BY EXAMINER McMILLAN) A lot of these, quote,**  
9   **"resources" expressly state a contraction clause, and**  
10 **the problem we've got --**

11           A.    Yes.

12           **Q.    -- is the northwest got 13,000 acres being held**  
13 **by one well.**

14           A.    Absolutely.   The BLM actually required us to  
15   add an additional language that made sure to address  
16   contraction.   And also the BLM and the State Land  
17   Office, they're -- both the BLM and the State Land  
18   Office's authority to enforce the contraction clauses,  
19   because you're right, there were some that I guess the  
20   operator took it out.   But that's never been the case  
21   here.   We've always had the contraction clause in this  
22   form.

23           **Q.    Okay.   The next question is:   I didn't**  
24 **understand your -- I didn't understand why the north**  
25 **half of 36, why you excluded, I guess I should have**

1 **said.**

2 A. Right. So like I mentioned, the BLM says this  
3 is a continuous accumulation play, so you could include  
4 multiple sections, township and ranges. You could just  
5 keep going if you're only looking at the geology. So at  
6 the end of the day, you have to go to what's next, which  
7 is ownership. And Apache has something here that could  
8 be reasonably developed in a unit form. We have -- you  
9 know, it's Apache, Black Shale, Chisos and OXY. We have  
10 to get 100 percent working interest contribution to the  
11 unit. So if you had 1 percent working interest owner  
12 that refused to sign, you couldn't form your unit. So  
13 what we've done here is we've got these unit boundaries  
14 where everyone has agreed to participate and share in  
15 the costs and also the revenue for the unit.

16 **Q. Okay. So essentially what you're saying is**  
17 **that there are working interest owners in the north half**  
18 **of 36 who would not agree -- did not agree to the**  
19 **boundaries of the unit?**

20 A. We didn't seek anyone from the north half of  
21 36. From my understanding, Concho is up there and  
22 Conoco, and there may be some other working interest  
23 owners. But according to the BLM and the State Land  
24 Office, if that was considered stranded acreage, that  
25 particular tract -- that section is state. So if the

1 State Land Office thought that that was being stranded  
2 in any way, they wouldn't have given us the preliminary  
3 approval. If they had wanted it in the unitized  
4 boundaries, they would have required that from us in the  
5 very beginning before granting their preliminary  
6 approval.

7 **Q. Okay. So the government agencies believe that**  
8 **the north half of 36 can be fully developed and, quote,**  
9 **"not stranded"?**

10 A. That's correct.

11 And if you look at the other acreage that's  
12 out there, they're east-west one-mile wells. So we can  
13 develop ours as a unit. Concho and Conoco and whoever  
14 the other working interest owners are in that north half  
15 can also develop their acreage east-west one-mile.  
16 There is nothing preventing them from developing their  
17 acreage because we've unitized.

18 **Q. Okay. My next question is: The unitized**  
19 **interval is from the Yeso to the top of the Tubb?**

20 A. That's correct.

21 **Q. Has everyone in the mineral interest estate in**  
22 **their proposed unit within the entire Yeso been properly**  
23 **noticed?**

24 A. You mean offsets --

25 **Q. No.**

1           A.    -- or just anyone in that pool?

2           **Q.    Have all -- has everyone who gets a check**  
3 **who -- within the boundaries of the unit within the Yeso**  
4 **been properly notified?**

5           A.    Yes.  Yes, sir.

6           **Q.    To rephrase:  Did you notice the working and**  
7 **royalty interest owners for a portion of the Yeso that**  
8 **is being excluded?**

9           A.    Yes.  The ownership is the same between the  
10 two.  So whenever we noticed what the unitized  
11 substances -- so the top -- I guess it's the top of the  
12 Yeso -- or I'm sorry.

13          **Q.    Top of the Yeso -- it's the Yeso to the top of**  
14 **the Tubb.**

15          A.    Yes, that's correct.  Those people were  
16 properly notified.  The ownership is the same for the  
17 actual Tubb Formation, so they were all notified.

18          **Q.    And below that?**

19          A.    Yes, sir.

20          **Q.    So the ownership is, quote, "identical**  
21 **throughout the Yeso"?**

22          A.    Yes, sir.

23          **Q.    Now, do you know the status of -- was it the 5H**  
24 **well?**

25          A.    Yes.  So that well, we've only drilled the

1 pilot hole, taken core and ran logs. It's not on  
2 production. We haven't drilled the lateral portion of  
3 it. It's purely for science purposes right now. And I  
4 think both Juan and Brian will speak to the science that  
5 was conducted on that in October, explain why we did it  
6 and what we're using it for.

7 **Q. And do you have a map of -- essentially,**  
8 **they're drill islands out here?**

9 A. I do not have a map of the drill islands that  
10 are out here.

11 **Q. And do you have approved drill islands or**  
12 **whatever you want to call it?**

13 A. We do have approved pad locations for Phase 1,  
14 which is in Section 33. I don't have a map of those.  
15 If you look at -- let me turn over to the plan of  
16 development map. I think it's 20. Yes. If you're  
17 looking at the Development Plan A map, the green wells  
18 that are listed here are part of Phase 1, and we do have  
19 approved well-pad locations from the BLM for the  
20 locations that you're seeing there that are in green.  
21 Those are the ones I mentioned we paid for the permits  
22 already.

23 And you can also see on here -- I -- I  
24 didn't mention this earlier, but you can see where the  
25 facilities are placed centrally there for the unit there

1 in the southwest quarter of Section 34.

2 Q. So those are the only -- so you have pads in  
3 Section 4. But do you have any idea of where your  
4 future pads are going to be located? Like you said, are  
5 they going to be at the batteries?

6 A. So the pads would the wells for Phase 1 that  
7 start in Section 33, those are going to be right there  
8 in the middle of Section 33. We also have approved pads  
9 and permits for wells that are in the south half of  
10 Section 36. So you can see those dots on the eastern  
11 part of that Section 36. Those are approved well-pad  
12 locations as well.

13 The well pad for the facilities that's on  
14 the map there in Section 34, that location has also been  
15 approved by the BLM for those facilities. I think they  
16 kind of did all of Phase 1 for the facilities and the  
17 green wells that you're looking at at the same time.

18 Q. Yeah. But I believe it would be helpful if you  
19 supplied a map to all the affected parties of approved  
20 pads and proposed pads --

21 A. Okay.

22 Q. -- and certainly apply it -- give the  
23 information to the OCD and to the Concho attorney.

24 A. Okay.

25 MR. DeBRINE: We'd be happy to do that,

1 Mr. Hearing Examiner.

2 EXAMINER McMILLAN: Thank you.

3 THE WITNESS: I know we have a good areal  
4 map that our surface landman put together with all the  
5 approved locations. Right now it's just not in this  
6 notebook, so we'll make sure we get that to you.

7 EXAMINER McMILLAN: Go ahead.

8 CROSS-EXAMINATION

9 BY EXAMINER BROOKS:

10 Q. That pilot hole you drilled, where is that?

11 A. If you still have that map opened to Exhibit  
12 20 --

13 Q. Yes, I do.

14 A. -- it's the red triangle that's located in the  
15 middle of Section 33. The BLM wanted us to place the  
16 initial well sort of in the middle of the unit.

17 Q. Okay.

18 A. And that's where we've drilled it.

19 Q. Okay. Let's see what else I have for you.

20 I was going to ask you about the north half  
21 of 36, but Mr. McMillan already did, so I think that's  
22 covered.

23 The bottom line on Whitetail locations is  
24 that you do not know whether the BLM has approved or  
25 would approve them for drilling into federal minerals in

1     **Section 31?**

2           A.     My understanding is that in order to have  
3     off-lease surface locations, if you're going to go and  
4     stake wells where you're going to drill into federal  
5     minerals, you need to have a BLM rep out on location.  
6     When we went and staked our wells, which are in the same  
7     place as this Whitetail Federal well, the CEHMM  
8     representative -- and, again, that's the prairie chicken  
9     biologist people that go out -- they said that these  
10    well locations -- or this well location has already been  
11    approved by CEHMM.

12           **Q.     What agencies do they -- are they representing?**

13           A.     CEHMM is the Center of Excellence for Hazardous  
14    Materials Management. They're based out of Carlsbad,  
15    and they are the --

16           **Q.     So they're a consultant?**

17           A.     They're a nonprofit that administers the  
18    Candidate Conservation Agreement for operators of oil  
19    and gas here in New Mexico.

20           **Q.     Okay.**

21           A.     They have to approve any location that's within  
22    the lesser prairie chicken habitat. And they work very  
23    closely with the BLM. You know, the BLM has their  
24    environmental division, and CEHMM is basically very  
25    similar in their goals.

1           **Q. Does that approval have any stature under some**  
2 **sort of agreement that has to do with enforcement of the**  
3 **lesser -- lesser prairie chicken conservation?**

4           A. Yes. So both Concho and Apache both  
5 participate in those agreements. Those are voluntary.  
6 Both companies have signed up and said that we will  
7 defer to CEHMM when we're out on location. If they say,  
8 Hey, there are too many dunes out here, or, You're too  
9 close to where the chickens mate so let's move it  
10 somewhere else, then that's what we do when we're out  
11 there.

12           **Q. Okay. But the BLM is not bound by that**  
13 **determination?**

14           A. They are not bound. It's very rare that the  
15 BLM will say, This is a good one -- this is a good  
16 location, and CEHMM will say, No, it's not. Normally  
17 they're both out on location at the same time. They're  
18 both biologists talking about where the best places are  
19 to conserve habitat and to not interfere with the  
20 chicken or the lizard.

21           **Q. Okay. I had an ambition to get this -- to**  
22 **check on this when I was on break and I didn't, and I**  
23 **don't remember what exactly is in it. But are you aware**  
24 **that Mr. Glover sent an email to the Division, to**  
25 **Mr. McMillan and myself, yesterday?**

1           A.    No, I was not aware.

2           Q.    Okay.  I don't believe he comments on any of  
3   the issues that have been aired so far other than the  
4   fact that the BLM does not object to the exclusion of  
5   Section 36 from this -- from this unit if we decided to,  
6   but I don't think it committed themselves to approve it,  
7   the truncated unit.  They just said they don't object to  
8   our jurisdiction to make that determination.  But it's  
9   not for me -- really I shouldn't be summarizing because  
10  the email is the best evidence of its own -- of its  
11  contents, and I think we probably should print it out  
12  and put it in the record in this case.

13                       EXAMINER McMILLAN:  Okay.

14                       EXAMINER BROOKS:  It will speak for itself,  
15  when we get it.  We'll do so at the next break.

16           Q.    (BY EXAMINER BROOKS) Now, what is the status of  
17  the unit operating agreement?  I was a little confused  
18  because you offered this lease -- this recording  
19  memorandum into evidence, and I thought you said the  
20  unit operating agreement was not yet fully negotiated,  
21  which I assume means it's not fully executed.

22           A.    No.  It is fully executed.  Yes.

23           Q.    The parties are renegotiating, you said?

24           A.    No, sir.  We've -- we negotiated the joint  
25  operating agreement throughout 2017, and towards the

1 end, we received full execution from 100 percent of the  
2 working interest owners.

3 Q. So the unit operating agreement is in place?

4 A. It is in place.

5 Q. Okay. Now, on your notice, you noticed all  
6 override owners and working interest owners in the unit?

7 A. That's correct.

8 Q. But you noticed only working interest owners in  
9 the offsetting tracts; is that correct?

10 A. What we searched is any of the operators that  
11 were around the unit.

12 Q. Yeah.

13 A. Anyone that operated within there, they were  
14 the first people that were listed. And then if there  
15 weren't operators, we went with the lessee of record for  
16 any of the tracts that touched the Thunderbird Unit.

17 Q. Yeah.

18 Okay. Now, the operator would be if there  
19 is a well, right, or a unit?

20 A. That's correct.

21 Q. And if there is not a well or a unit, you don't  
22 know if there is an operating agreement covering that  
23 tract or not?

24 A. That's right. We went with the lessee of  
25 record for tracts that fell into that category.

1           Q.    And you didn't make any attempt to research  
2   operating rights owners in those tracts -- in the  
3   offsetting tracts?

4           A.    No.  We did not run working interest reports in  
5   the offsetting tracts.  We went with operators of the  
6   wells and then lessee of record for anyone else.

7           Q.    Well, I believe the situation is -- and the  
8   attorneys can correct me if I'm overlooking something.  
9   But I believe on the unit approval, there is no  
10   provision as to who has to be notified such that it  
11   means that -- defaults into the last provision of  
12   Section 4.12 of our rules, where you have to notify  
13   whoever we tell you to (laughter).  So unless we tell  
14   you to notify -- so unless we decide you should notify  
15   someone, send some further notices, I assume you're  
16   going to be okay.  But that's what -- and that has  
17   happened.  We did have one case recently where we did  
18   order the applicant to send notice to additional people.

19                    Did you have good addresses for everyone  
20   you sent notice to?

21           A.    We had a few that returned, and those, we,  
22   again, worked very hard to try to get the best  
23   addresses.  And for those that we did receive returns  
24   on, we posted a notice in the Artesia newspaper.

25           Q.    But do you have an Affidavit of Publication in

1 **this exhibit binder?**

2 A. Yes, sir. I believe it's 14.

3 Yes, sir, Number 14.

4 **Q. Okay. Well, I'm not going to go through**  
5 **everything and verify what you said about everybody**  
6 **being included, not today anyway. So I'll take your**  
7 **word for it.**

8 EXAMINER BROOKS: I believe that's all my  
9 questions.

10 EXAMINER McMILLAN: Okay. Actually, I do  
11 have one more question for you.

12 RE CROSS EXAMINATION

13 BY EXAMINER McMILLAN:

14 **Q. Are there any depth severances for the working**  
15 **interest owners or anything?**

16 A. No, sir.

17 **Q. And even your voluntary agreements, they were**  
18 **strictly for the Yeso?**

19 A. That's correct.

20 EXAMINER BROOKS: Oh, I had -- that reminds  
21 me of one other thing.

22 RE CROSS EXAMINATION

23 BY EXAMINER BROOKS:

24 **Q. You said something about the sale from J. Cleo**  
25 **Thompson to Seguro.**



1           A.     That's correct.

2           **Q.     Have they ever proposed any wells to Apache or**  
3 **any other working interest owners in the south half of**  
4 **Section 36?**

5           A.     We haven't seen any well proposals.  I mean,  
6 really, the most recent thing we know is that they, I  
7 believe, were successful in staking some wells in the  
8 middle -- hold on a second.  Let me pull up a map so I  
9 can talk from it.

10                         I believe they were successful in staking  
11 some of their locations in the middle of Section 31,  
12 with the idea of drilling west into the southwest  
13 quarter of 31 and then across into the south half of 36.  
14 But we haven't seen any plats, no proposals.  It's just  
15 kind of what we know based off of, you know, their  
16 motion for continuance and what they've shown up today  
17 with.

18           **Q.     And for those wells, Apache and the other**  
19 **working interest owners in the south half of Section 36**  
20 **would essentially own 2/3 of those proposed wells?**

21           A.     That's correct.

22           **Q.     And would Apache still own a majority of the**  
23 **working interest of those wells?**

24           A.     We would.  Even if we -- even if we took out  
25 the south half and we wanted to do one-and-a-half miles

1 from 31 where Concho has their proposed locations,  
2 Apache would still have the majority interest in those  
3 wells.

4 **Q. And, again, if Section 36 were excluded by the**  
5 **Division, Apache can go out and start drilling the wells**  
6 **it's already permitted in Section 36 tomorrow?**

7 A. Yes. We have permitted locations in the south  
8 half of Section 36 that we could drill.

9 **Q. Would the exclusion of Section 36 from the unit**  
10 **affect the economics of the unit?**

11 A. Yes, it would. So you go back to the whole  
12 point of unitizing here, and it's to have those  
13 centralized facilities, where you're not having to put  
14 facilities all over, you know, if you're doing a lease  
15 basis or a com or surface commingling.

16 But whenever you take out the south half of  
17 Section 36, that affects the economics then of the  
18 remaining part of the unit. So those facilities and the  
19 remainder -- if we took out the south half of Section  
20 36, the working interest owners in the unit, as amended,  
21 would have more facilities costs. The costs would not  
22 be shared across the entire unit as we've proposed right  
23 now. So basically it's more expensive. That's what I'm  
24 trying to say.

25 And it also means that there is another set

1 of facilities over in the area of Section 31 versus of  
2 having just one across the unitized boundaries of the  
3 Thunderbird Unit.

4 MR. DeBRINE: I've got a map that I'm going  
5 to mark as Exhibit 22, and I've only got one copy. And  
6 I believe it shows some of the well pads in Section 33.  
7 I would just ask the witness to go ahead and use this  
8 map to accommodate the Hearing Examiner's request for a  
9 map showing the well locations. I'm going to have her  
10 draw on there real quick.

11 MR. FELDEWERT: Can I see it real quick?

12 EXAMINER McMILLAN: Do you have any  
13 objections to it?

14 MR. FELDEWERT: Well, I'm not sure what a  
15 lot of things -- what's depicted on there. I'm not sure  
16 what it represents.

17 EXAMINER McMILLAN: I mean, if there is a  
18 question, why don't we take a two-minute break, and I'll  
19 make a quick copy and go from there.

20 MR. FELDEWERT: That would be fine with me,  
21 so we all have copies.

22 EXAMINER McMILLAN: That way we're not --

23 MR. DeBRINE: That's fine.

24 (Recess, 10:55 a.m. to 10:58 a.m.)

25 Q. (BY MR. DeBRINE) Ms. Stretcher, I've handed you

1 **what is marked as Exhibit 22. Could you explain what**  
2 **that exhibit is?**

3 A. Yes. Exhibit 22 is areal shot of the  
4 Thunderbird Unit area. It was prepared by our surface  
5 landman. So you can see it gives the grazing lease  
6 information on here. That's what some of the colors  
7 represented are. And then it looks like it has a name  
8 and address of the grazing lessee that's linked to  
9 those, just so you know what's listed there.

10 If you look into Section 33, you will see  
11 our approved well pads that the BLM has given approval  
12 for earlier in 2017, and that's part of our Phase 1  
13 development that we have also depicted in Exhibit 20.

14 **Q. Now, this shows all of Section 32. It's not**  
15 **the true unit boundaries, which is -- it's only the east**  
16 **half of Section 32.**

17 A. That's correct, yes.

18 **Q. Could you also show on there with your pen the**  
19 **location of the approved wells in Section 36 that have**  
20 **already been approved by the Division?**

21 A. Yes. The Section 36 wells that have been  
22 approved are over here on the eastern boundary. Both of  
23 them have their approved well pad over in the east half  
24 of the southeast quarter, and then they extend one mile  
25 to the west.

1 Q. If you could just draw the --

2 A. Oh, sure.

3 Q. -- or put a location for those well pads on  
4 there.

5 A. (Witness complies.)

6 Q. And what I'd also like you to do is show the  
7 location of the Whitetail Fed Com well that you  
8 referenced earlier in your testimony that's shown on the  
9 photographs on Exhibit 8.

10 A. I had to look at the footage calls that are  
11 listed here in Exhibit 8. So it is close to that -- the  
12 southern location here (indicating). I'm going to do an  
13 X on my map that shows where that is. And if you look  
14 at the picture that's on Exhibit 8, you can see the  
15 stake here, and then the stake for our Thunderbird well  
16 is just right there in the background. So these are  
17 very close to one another.

18 Q. And I believe the only other well you mentioned  
19 was a pilot well in Section 33. Is that shown on the  
20 exhibit already, or do you need to -- if you could show  
21 that.

22 A. Yes. It's there. The wells that are listed  
23 here in 33 are all red, except there is a bluish-black  
24 one that's right there on that third well pad, and it is  
25 the 5H, the initial well in the unit.

1 MR. DeBRINE: I'll pass the witness.

2 EXAMINER BROOKS: I had -- did (indicating)  
3 you have more questions? I have one cross.

4 RE CROSS EXAMINATION

5 BY EXAMINER McMILLAN:

6 Q. Just for clarity purposes, can you show where  
7 you drew the COG --

8 MR. DeBRINE: Sure.

9 THE WITNESS: Do you want me to write  
10 "Whitetail" next to that?

11 MR. DeBRINE: If you could.

12 EXAMINER McMILLAN: Yes, please.

13 MR. DeBRINE: We would move for the  
14 admission of Exhibit 22.

15 MR. FELDEWERT: No objection.

16 EXAMINER McMILLAN: Okay. Exhibit 22 may  
17 now be accepted as part of the record.

18 (Apache Corp. Exhibit Number 22 is offered  
19 and admitted into evidence.)

20 MR. DeBRINE: And I will pass the witness.

21 RE CROSS EXAMINATION

22 BY MR. FELDEWERT:

23 Q. Ms. Stretcher, is that well that you identified  
24 as being staked on your exhibit by COG, that is in the  
25 very southeast quarter of the southeast quarter of

1     **Section 36?**

2           A.     Yes.

3           **Q.     And I believe the well pads that you have**  
4 **yourselfes staked includes at least two well pads?**

5           A.     There are two well pads there.   Yes.

6           **Q.     So you would acknowledge that you need at least**  
7 **two well pads to fully develop the south half of the**  
8 **section?**

9           A.     I think that's more of a question for geology,  
10 as far as development plans.

11          **Q.     But they told you to stake two well pads?**

12          A.     We had two.   Yes, that's correct.

13          **Q.     For the purpose of developing the south half of**  
14 **the section?**

15          A.     You could do at least two, yeah, for sure.

16          **Q.     And I think you testified to this, but I might**  
17 **have gotten confused.   And that is that those well pads,**  
18 **because they're going to be utilized to only be**  
19 **developed with state lands, they did not require BLM**  
20 **approval, correct?**

21          A.     Oh, no.   What I said was that it was my  
22 understanding that whenever -- if you are going to do --

23          **Q.     My question is:   They do not require BLM**  
24 **approval for well pads developed on state lands?**

25          A.     It's my understanding that the BLM will go out

1 there if it's for federal minerals that you're  
2 producing.

3 Q. But you're not producing federal minerals with  
4 those two well pads.

5 A. I'm sorry. I thought you were talking about  
6 Concho.

7 Q. No. I'm talking about your two locations that  
8 you have in the eastern part of 36. Those did not have  
9 to be approved by the BLM?

10 A. That's correct.

11 Q. Okay.

12 A. State surface and state minerals there.

13 Q. All right. Now, in terms of looking at COG's  
14 development plan, which is Exhibit Number 1 --

15 A. Okay.

16 Q. -- you're aware, are you not, that before they  
17 could put that plan together, they had to get BLM  
18 approval for those well locations in Section 31?

19 A. Yes. It's my understanding that they went out  
20 and staked those recently. Right.

21 Q. And that approval occurred sometime around  
22 January 5th?

23 A. Yes. That's what we understood.

24 Q. And you would agree with me that they would not  
25 be able to proceed with this development plan so long as

1 the south half of 36 remains within the unit?

2 A. No. They can't drill these wells as is if we  
3 keep our unit boundaries.

4 Q. So there is no reason at this point to propose  
5 those wells until we get those --

6 A. Concho hasn't sent us hardly anything regarding  
7 this.

8 Q. And I believe Mr. Brooks mentioned a letter he  
9 had gotten from the BLM -- or an email he had gotten  
10 from the BLM yesterday?

11 A. Yes. He did mention that.

12 Q. Isn't that what Ms. Chatterton relayed to you  
13 in her conversation with you yesterday --

14 A. Uh-huh. Yes.

15 Q. -- that the BLM would allow the unit to proceed  
16 if the south half of Section 36 was excluded?

17 A. Yes.

18 MR. DeBRINE: I'll object as hearsay.

19 EXAMINER BROOKS: Well, again, I think  
20 neither the witness nor I should testify about what the  
21 email says. I think the best evidence would be the  
22 email itself, and we intend, as the Division, since it  
23 was sent to us, to put it into the record.

24 MR. FELDEWERT: I understand. I  
25 understand.

1           **Q.**    **(BY MR. FELDEWERT) And in terms of this**  
2    **development plan, Apache could likewise, could it not --**  
3    **if the south half of Section 36 is excluded, Apache**  
4    **could actually drill those wells from those approved BLM**  
5    **surface locations in Section 31 if they so choose,**  
6    **correct?**

7           A.    I don't know what the ownership is in the  
8    southwest quarter of Section 31. I've always been a  
9    little confused as to whether or not Concho has that 100  
10   percent. So there is an analysis there as to what the  
11   ownership is.

12           **Q.**    **But you would own the south half of 36?**

13           A.    We would own the south half of Section 36, but  
14    if --

15           **Q.**    **So you could propose the well?**

16           A.    We could propose wells in the south half of  
17    Section 36.

18                         What I'm getting at is that if the  
19    southwest quarter of Section 31 has people that might  
20    have to be compulsory pooled, that's a different  
21    analysis for Apache than I think it is for Concho.

22           **Q.**    **Understand.**

23                         I guess my point is either Apache or COG  
24    could drill from those surface locations in Section 31  
25    into the south half of 36, right?

1           A.    If they're approved locations and the operator  
2 has the economic approval, then yes, we could drill  
3 those.

4           **Q.    And that would develop not only the southwest**  
5 **quarter of 31, right, but also the 330-foot offsets on**  
6 **each side of the line between 36 and 31?**

7           A.    I'm sorry. I'm not following what you're  
8 saying there. You're just saying that the lateral  
9 length is longer there? Is that what you're saying?

10          **Q.    Yes.**

11          A.    Yes. It's different from a mile lateral.

12          **Q.    And it's not interrupted by the 330-foot**  
13 **setbacks that are normally required by the Division for**  
14 **horizontal wells?**

15          A.    I think you would still have the 330 setback at  
16 the beginning, right, right there in the middle of 31 --

17          **Q.    No.**

18          A.    -- so the toe of the -- what are those --  
19 two-mile laterals that you have coming from Section  
20 33 --

21          **Q.    Let me ask you this: You're aware, are you**  
22 **not, as a landman, that normally there is a 330-foot**  
23 **setback on the eastern side of Section 31, right?**

24          A.    Yes. That's what I just asked.

25          **Q.    And normally there is a 330-foot setback on the**

1 eastern -- that side of 36? I'm sorry. I messed up.

2 A. Okay.

3 Q. It would be a 330-foot setback on the western  
4 side here of 31 normally?

5 A. Yeah. I understand what you're getting at, is  
6 that in drilling mile-and-a-halves, you're picking up  
7 more reservoir. Is that what you're kind of --

8 Q. Yes. Thank you.

9 A. -- going for?

10 Yes. I understand what you're saying.

11 Q. And avoiding that waste.

12 A. Yes. That is Concho's proposal.

13 Q. Okay. And in terms of your economics for this  
14 unit, Apache's going to have 85 percent of this unit,  
15 and, therefore, the 85 percent responsibility for the  
16 costs, whether you include or exclude Section 36, right?

17 A. Well, I mean, when we take out the south half  
18 of Section 36, that's changing our ownership slightly,  
19 so there is an impact there.

20 Q. Roughly 85 percent remains?

21 A. I wish I could give you an exact number for  
22 taking out the south half.

23 Q. Okay.

24 MR. FELDEWERT: That's all the questions I  
25 have.

1 EXAMINER BROOKS: Nothing further.

2 THE WITNESS: Okay. Thank you.

3 EXAMINER McMILLAN: Thank you very much.

4 You may be excused.

5 THE WITNESS: Oh, sorry.

6 MR. DeBRINE: At this time we'd like to  
7 call Brian Baker.

8 EXAMINER McMILLAN: Okay. Since we've  
9 talked about Exhibit 20, that technically may be  
10 accepted as part of the record. It just shows the  
11 development plan because previously we had been  
12 discussing it.

13 MR. DeBRINE: Yeah. We would move for its  
14 admission, if there is no objection.

15 MR. FELDEWERT: 22?

16 MR. DeBRINE: 20. There was reference to  
17 Exhibit 20.

18 EXAMINER McMILLAN: Numerous times.

19 MR. FELDEWERT: I'm sorry. I have no  
20 objection.

21 EXAMINER McMILLAN: Okay. Exhibit 20 now  
22 be accepted as part of the record.

23 Please proceed.

24 (Apache Corp. Exhibit Number 20 is offered  
25 and admitted into evidence.)

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BRIAN BAKER,

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

DIRECT EXAMINATION

BY MR. DeBRINE:

**Q. Please state your name for the record.**

A. Brian Baker.

**Q. Who do you work for, Mr. Baker?**

A. Apache Corporation.

**Q. And could you give the Examiner a brief summary of your educational background and work experience at Apache and in the oil industry in general?**

A. Yes. I have a master's from the University of Texas Permian Basin in geology. I've been working for Apache for approximately five years now as a geologist.

**Q. And what are your responsibilities at Apache with regard to the Yeso Formation development in Eddy County?**

A. Mapping and evaluating -- evaluating the Yeso in and around the proposed unit.

**Q. Are you familiar with the application filed by Apache in this case?**

A. Yes, I am.

**Q. Are you familiar with the status of the lands that are included within the proposed unit area that's**

1     **the subject of the application?**

2             A.     Yes, I am.

3                     MR. DeBRINE:   We would tender the witness  
4     as an expert in petroleum geology.

5                     EXAMINER McMILLAN:   First question:   Have  
6     you ever testified before the Oil Conservation Division?

7                     THE WITNESS:   No, I have not.

8                     EXAMINER McMILLAN:   Please proceed.

9                     MR. FELDEWERT:   No objection.

10                    EXAMINER McMILLAN:   Do you listen to Eric  
11     Cummins?

12                    THE WITNESS:   Do I what?

13                    EXAMINER McMILLAN:   Do you listen to Eric  
14     Cummins?

15                    THE WITNESS:   Yes.   He's my boss.

16                    MR. CUMMINS:   He better (laughter).

17                    EXAMINER McMILLAN:   Well, I guess we'll  
18     have to accept you, but I -- (laughter).

19                    Please proceed.

20                    **Q.     (BY MR. DeBRINE) Mr. Baker, have you conducted**  
21     **a geological study of the target Yeso Formation**  
22     **underlying the Thunderbird Unit area --**

23                    A.     Yes.

24                    **Q.     -- to be developed if Apache's application is**  
25     **approved?**

1           A.    Yes, I have.

2           **Q.    Has Apache drilled any Yeso wells within the**  
3 **proposed unit area?**

4           A.    Yes.  We have drilled a pilot well with a full  
5 suite of -- a full suite of logs and a core.  We've also  
6 drilled 70 horizontals in our Cedar Lake Com just to the  
7 southeast that have been very successful.

8           **Q.    Have you prepared some exhibits as part of your**  
9 **study?**

10          A.    Yes, I have.

11          **Q.    If you could turn to Exhibit 15 and please**  
12 **describe for the Examiner what is represented in this**  
13 **exhibit.**

14          A.    This is a geologic description and overview of  
15 the unit.  We have the marker well, the Aspen Federal  
16 Com, on the right side there that shows the proposed  
17 unitized interval from the Paddock to the top of the  
18 Tubb.  This play concept is going to be to complete  
19 horizontal wells in the Blinebry, stepping into the  
20 Lower Blinebry and the Paddock.  And based on the core  
21 of the wells and the offsets, there appears to be  
22 economic reserves in this area.

23          **Q.    Could you explain the characteristics of the**  
24 **Yeso Formation within the unit?**

25          A.    Yes.  It's a shallow marine

1 siliciclastic-carbonate evaporite reservoir that's been  
2 dolomitized.

3 **Q. If you could turn to Exhibit 16 and explain to**  
4 **the Examiner what we're looking at here.**

5 A. This is a structure map on the top of the  
6 Paddock and subsea, and it shows the proposed unit in  
7 the blue outline in the middle. What we see here is a  
8 dip to the east-southeast, and the dip is relatively  
9 continuous throughout the proposed unit.

10 **Q. And what are the black dots that are shown on**  
11 **the exhibit?**

12 A. That's the well control for the map.

13 **Q. Did you discover any structural impediments to**  
14 **the development of horizontal wells within the unit area**  
15 **based on your study?**

16 A. No. I see no evidence of faulting or major  
17 structural anomalies.

18 **Q. Do you believe that the Yeso Formation extends**  
19 **fairly continuously across the unitized lands?**

20 A. Yes, I do.

21 **Q. Have you prepared a cross section of logs of**  
22 **the wells that are the basis for your study to determine**  
23 **the sections of porosity of the Yeso Formation within**  
24 **the unit?**

25 A. Yes, I have. The cross sections are shown on

1 the structure map from A to A prime, and it also goes  
2 west to east and B to B prime north to south.

3 **Q. If you could turn to Exhibit 17, which is, I**  
4 **believe, the west-east cross section that you described**  
5 **and explain what it depicts.**

6 A. The west-east cross section goes from A to A  
7 prime. We have -- from the Aspen Federal, which is the  
8 marker well, through the Thunderbird 5H pilot hole  
9 centrally located in the unit to the NFE Federal 14,  
10 which is in the Cedar Lake Com, we have logged the gamma  
11 ray, resistivity and neutron porosity here. The  
12 proposed tops are shown for the proposed unitized  
13 interval from the Paddock to the Tubb. What we can see  
14 here is a relatively consistent porosity within the  
15 Paddock, in the Thunderbird and the NFE Federal. As you  
16 move to the west in the Aspen Federal, you get a little  
17 bit diminished porosity. In the Blinebry, the porosity  
18 is relatively consistent between all three wells.

19 **Q. And do you consider the wells that were**  
20 **included in your cross section to be representative of**  
21 **the Yeso Formation within the unit area?**

22 A. Yes, I do.

23 **Q. And how did you select these wells?**

24 A. We have limited control in the area, so these  
25 were the wells that had the most north-south and

1 west-east orientation with good logs.

2 **Q. Are there any faults or pinch-outs or geologic**  
3 **impediments to development of the unit area?**

4 A. I have not seen evidence of that.

5 **Q. I'd like you to turn next to Exhibit 18 and**  
6 **explain to the Examiner what that exhibit is showing.**

7 A. This is a north-south cross section. It goes  
8 from B to B prime. You can see that the thickness is  
9 relatively consistent, and it has the same logs and the  
10 same tops as the previous cross section.

11 A couple of things of note here is we see  
12 the Paddock porosity does increase as we move south of  
13 the proposed unit. That's kind of offset by the  
14 Blinebry porosity that increases as you move north of  
15 the proposed unit. So both the Blinebry and the Paddock  
16 porosity is present within the Thunderbird pilot hole,  
17 which is centrally located in the unit.

18 **Q. And are there any faults, pinch-outs or**  
19 **geological impediments to development of the unit area**  
20 **as shown by your north-south cross section?**

21 A. I have seen no evidence of faults or  
22 pinch-outs.

23 **Q. If you could next turn to Exhibit 19 and**  
24 **explain to the Examiner what is depicted by that**  
25 **exhibit.**

1           A.     This is a SoPhiH.  It's oil saturation  
2 multiplied by porosity, multiplied by the height  
3 function, and that's at net height.  We do have limited  
4 well control because of the logs that are necessary for  
5 this map.  However, we can see some trends on the map.  
6 We see that the reservoir quality is a little bit better  
7 to the southeast and a little bit less quality reservoir  
8 to the west.  The Thunderbird Unit as proposed is --  
9 lies in a relatively consistent SoPhiH value, though.

10           **Q.     How did you calculate the average porosity oil**  
11 **saturation and gross -- in order to develop the map?**

12           A.     The oil saturation is one minus water  
13 saturation, so I had to calculate the water saturation.  
14 That was calculated using an Rt equation that takes into  
15 account the resistivity.  The porosity was calculated  
16 with a lithology-corrected porosity that was based on  
17 density and neutron.  And the high function, basically I  
18 excluded all nonpay intervals by using a cutoff of 4  
19 percent porosity and 60 percent water saturation.

20           **Q.     Based on your study of the area, what**  
21 **conclusions have you drawn from your geological study?**

22           A.     The area will be best developed with horizontal  
23 wells.  There are no impediments to drilling those  
24 horizontal wells.  The entirety of the unit will be able  
25 to be produced with those horizontal wells, and they

1 should produce in a relatively equal manner.

2 Q. Do you believe that horizontal drilling is the  
3 most efficient method for developing the area?

4 A. I do.

5 Q. Is there any particular characteristics of the  
6 geology that would require the drilling of -- or the  
7 orientation of those horizontal wells either east to  
8 west or north to south?

9 A. I believe, based on the stress regime -- I  
10 believe the max stress is going northwest-southeast, so  
11 I believe you could drill wells either east-west or  
12 north-south.

13 Q. Will the completed intervals for all of the  
14 wells be orthodox and meet the 330-foot setbacks for the  
15 exterior boundaries of the unit?

16 A. Yes, they will.

17 Q. Do you have an opinion as to whether the entry  
18 of an order approving the unit area will prevent waste?

19 A. I believe that the unit will be the most  
20 efficient way to produce this resource.

21 Q. And will it also prevent waste?

22 A. Yes. I believe it will.

23 Q. Do you have an opinion whether correlative  
24 rights would be impaired if the Division grants Apache's  
25 application?

1           A.    I believe correlative rights will remain  
2 intact.

3           **Q.    Will the owners of each committed tract in the**  
4 **unit receive their fair and equitable share of**  
5 **production if the unit is approved?**

6           A.    I believe so.

7           **Q.    Do you have an opinion whether the exclusion of**  
8 **the south half of Section 32 of the unit will adversely**  
9 **impact the correlative rights of the owners within the**  
10 **Thunderbird Unit?**

11          A.    No.  I don't believe they will.  I believe that  
12 the south half or the north half will be able to be  
13 produced with one-mile wells east-west.

14          **Q.    Were Exhibits 14 through 19 prepared by you or**  
15 **compiled under your direction and supervision?**

16          A.    Yes, they were.

17                   MR. DeBRINE:  We would ask that Exhibits 14  
18 through 19 be admitted into the record.

19                   MR. FELDEWERT:  No objection.

20                   EXAMINER McMILLAN:  Exhibits 14 through 19  
21 may now be accepted as part of the record.

22                           (Apache Corp. Exhibit Numbers 14 through 19  
23 are offered and admitted into evidence.)

24   CROSS-EXAMINATION

25   BY MR. FELDEWERT:

1 Q. Mr. Baker, I'm looking at Exhibit 19 --

2 A. Okay.

3 Q. -- which is your -- I'll call it a reservoir  
4 quality map.

5 A. Yup.

6 Q. Is that fair?

7 A. Yes.

8 Q. If I'm reading this correctly and I look over  
9 here at the northwest -- or the southwest quarter of  
10 Section 31 and the south half of 36, there is no real  
11 depreciable difference in the reservoir quality in those  
12 areas, correct?

13 A. That is correct.

14 Q. And so your testimony about the best way to  
15 develop this area is with horizontal wells. And I think  
16 you also said that that's the most efficient method that  
17 would equally apply to the acreage in Section 31?

18 A. Yes.

19 Q. And isn't it -- isn't it true, Mr. Baker, that  
20 the preferred orientation to date in this area has been  
21 lay-down horizontal wells?

22 A. If you're referring to east-west?

23 Q. Sorry. East-west.

24 A. Yes.

25 Q. Okay.

1           A.     That's been the preferred orientation.  There  
2     have been some examples of north-southwest.  Concho has  
3     drilled some north-south also.

4           **Q.     But in this particular area here, focusing on**  
5     **whatever's here on your map, right?**

6           A.     The majority of wells have been east-west.

7           **Q.     Vast majority; would you say?**

8           A.     Yes.

9           **Q.     (Indicating.)**

10          A.     Yes.

11          **Q.     And continuing east-west would -- orientation**  
12     **would continue the existing development pattern?**

13          A.     Yes, that's true.

14          **Q.     Okay.  And do you agree that there is a**  
15     **productive fairway in this area that starts with the**  
16     **shelf to the south and then extends into the north?**

17          A.     Yes.  That is the consensus.  Yes.

18          **Q.     Do you know where that fairway ends?**

19          A.     Yes.  I don't have any maps depicting that.  
20     However, we are well within that fairway here.  It might  
21     be towards the northern extent, but there is no evidence  
22     of the reservoir degrading within this proposed unit.

23          **Q.     Okay.  But at this point, the unit area would**  
24     **essentially be on the very northern part of the**  
25     **developed area, correct?**

1 A. Yes.

2 Q. A step-out to the north?

3 A. Yes.

4 Q. Same way with respect to the offsetting acreage  
5 in 31, that would be a step-out to the north?

6 A. Slightly, yes.

7 Q. Okay. All right.

8 MR. FELDEWERT: That's all the questions I  
9 have.

10 CROSS-EXAMINATION

11 BY EXAMINER McMILLAN:

12 Q. The question I've got is -- I'm essentially  
13 looking at Exhibit 17. I'm looking at, for clarity  
14 purposes, the Thunderbird 5H. Where are your target  
15 intervals? What depth?

16 A. Okay. So we target the Paddock, and it's going  
17 to be upper -- the upper portion of the Paddock, at  
18 around the depth of 4,651. And then the other target  
19 would be the Blinebry in kind of the top of the Lower  
20 Blinebry, and that would be approximately 5,200.

21 EXAMINER McMILLAN: Do you have any  
22 questions?

23 EXAMINER BROOKS: No, I don't think so.

24 EXAMINER McMILLAN: Thank you.

25 MR. DeBRINE: Call our next witness at this

1 time, Mr. Juan Garcia Vaca.

2 EXAMINER McMILLAN: Okay. Let's see. How  
3 long is this going to take?

4 MR. DeBRINE: 15, 20 minutes.

5 EXAMINER McMILLAN: Okay. Let's finish.  
6 Let's go.

7 JUAN GARCIA VACA,  
8 after having been previously sworn under oath, was  
9 questioned and testified as follows:

10 DIRECT EXAMINATION

11 BY MR. DeBRINE:

12 Q. Could you please state your name for the  
13 record?

14 A. Juan Garcia Vaca.

15 Q. Where do you work, Mr. Garcia Vaca?

16 A. Apache Corporation.

17 Q. Could you give the Examiner a brief summary of  
18 educational background and work experience in the oil  
19 and gas industry?

20 A. Yes. I have a petroleum engineering degree  
21 from the Buenos Aires Technological Institute in Buenos  
22 Aires, Argentina. That's a five-year degree, three  
23 years of applied sciences and two years with a  
24 specialization in petroleum engineering. And I did my  
25 internship with Chevron. And then I started working for

1 Apache as a reservoir technician, and I've been working  
2 for Apache since the last nine years. I was moved first  
3 to Tulsa, and then I came to New Mexico.

4 Q. Have you previously testified before the  
5 New Mexico Oil Conservation Division?

6 A. Yes.

7 Q. And were your credentials as an expert accepted  
8 as a matter of record in those proceedings?

9 A. Yes.

10 MR. DeBRINE: We would ask that Mr. Garcia  
11 Vaca be admitted as an expert in petroleum engineering.

12 MR. FELDEWERT: No objection.

13 EXAMINER McMILLAN: So qualified.

14 Q. (BY MR. DeBRINE) Are you familiar with the  
15 application filed by Apache in this case?

16 A. Yes.

17 Q. Are you familiar with the status of the lands  
18 that are included within the proposed unit area --

19 A. Yes.

20 Q. -- as the subject of the application?

21 A. Yes, I am.

22 Q. If you could, just give the Hearing Examiners a  
23 brief summary of Apache's development plan for the  
24 Thunderbird Unit and how it was put together.

25 A. Okay. Based on our experience in Cedar Lake --

1 Cedar Lake was not mentioned before, but it's the field  
2 offsetting the Thunderbird Unit to the southeast where  
3 we drilled 70 wells so far. And once we had the  
4 proposed unit boundaries defined, we identified the area  
5 for -- the best suitable area for our pilot well. We  
6 wanted to drill a pilot well to gather core data and  
7 logs so we can, in the most efficient way, develop the  
8 unit afterwards. We drilled that pilot in October of  
9 2017. Right now we are in the process of analyzing all  
10 of the data.

11           Once we finish that, our plan is to drill  
12 one -- at least one in 2018 and another one later,  
13 depending on the landing zones that we identified in  
14 what we call the deliverability test. So that's -- when  
15 we have the core, we can have an idea what the wells can  
16 produce, but then we drill wells to see if the  
17 one-and-a-half-mile lateral is producing what we think  
18 it should be producing. And once we have that data and  
19 all of the pressure behavior data, too, we would define  
20 spacing and more optimally define the development for  
21 the entire unit.

22           **Q. You mentioned the Cedar Lake com --**

23           A. Yes.

24           **Q. -- agreement. Were you involved in the**  
25 **proceedings before the Division to approve that com**

1 **agreement?**

2 A. No. I started working with the Cedar Lake com  
3 agreement a year and a half ago, right after that was  
4 approved.

5 **Q. And how long have you been working with the**  
6 **Cedar Lake?**

7 A. A year and a half.

8 **Q. Just so it's clear -- if you could turn to**  
9 **Exhibit 9, I believe there is a map at the end of**  
10 **Exhibit 9 that shows the location of the Cedar Lake and**  
11 **the Thunderbird Unit.**

12 A. Yes.

13 **Q. And if you could just describe for the**  
14 **Examiners and point that out.**

15 A. So here is the Thunderbird Unit, the outline,  
16 that we've been talking. And here to the southeast  
17 (indicating), you can see the Cedar Lake Com. And the  
18 Cedar Lake, we started development in 2012. We've since  
19 drilled 70 wells, more or less. We have identified at  
20 least two -- two landing zones throughout the field, and  
21 that has been -- that development was completed in  
22 December of 2017. So we have fully developed with the  
23 original spacing for the Cedar Lake. We identified some  
24 infill opportunities that we are going to be drilling in  
25 the future. And, basically, this is the -- the place

1 that we are gathering most of our data to extrapolate  
2 into the Thunderbird.

3 Q. Has Apache filed any APDs for any wells within  
4 the proposed Thunderbird Unit?

5 A. Yes. We have a permit to drill the Thunderbird  
6 5H. We also have permits to drill two wells in the  
7 southern half of Section 36. And as Ms. Stretcher  
8 mentioned before, we have nine more permits to go  
9 through our Phase 1 development, but those have not been  
10 filed. We have just paid for them so far.

11 Q. If you could turn to Exhibit 20 --

12 A. Yes.

13 Q. -- in your notebook, this is denominated  
14 "Development Plan A" for the Thunderbird Unit. Could  
15 you just describe for us what is depicted on this  
16 exhibit -- developed it?

17 A. First, before I go into it, I want to note that  
18 I made a mistake here. The total well count for the  
19 six-wide spacing would be 48 instead of 47, just to note  
20 it.

21 And here we have the layout of the  
22 Thunderbird Unit. We can see what we call Phase 1,  
23 Phase 2 and Phase 3.

24 Phase 1 is all of the one-and-a-half-mile  
25 laterals being drilled from north to south in -- from

1 the half -- from the middle of Section 33 into Section  
2 4. And then we have mostly horizontal wells drilled  
3 east-west for Phase 2 and Phase 3. We believe that we  
4 can drill -- depending on our study for the initial  
5 deliverability test in the first well, we can drill  
6 somewhere between 32 wells and 48 wells depending on the  
7 spacing that we have. That would be depending if we  
8 have four wells per bench or six wells per bench  
9 throughout the unit -- per section.

10 **Q. And what is the relative portion of federal and**  
11 **state acreage within the proposed unit?**

12 A. It's 80 percent federal and 20 percent state.

13 **Q. Did you work with the BLM and State Land Office**  
14 **in seeking their approval for the development plan for**  
15 **the unit?**

16 A. Yes. I participated in some meetings where we  
17 showed our development plans to them and we discussed  
18 them.

19 **Q. If you could, just give the Examiners a summary**  
20 **of the meetings that were held and the work that went**  
21 **into developing the plan and proposing it and seeking**  
22 **the approval of the BLM and the State Land Office.**

23 A. Okay. For some part of the process, I was not  
24 working this, but for what I know, everything started in  
25 2015 when Apache picked up J. Cleo Thompson's acreage in

1 this area. And then we started working with the BLM on  
2 their R2D form. And once we got a preliminary -- we  
3 were granted preliminary approval for that, we started  
4 running title and curative work for all five sections,  
5 and that was done through 2016. In 2016, I was already  
6 working with this.

7           And we met with the NMOC [sic] and the BLM  
8 and the State Land Office to show our plans. We changed  
9 some things based on the accommodations that we  
10 received. And what else? Then, also, we had meetings  
11 with all of our working interest partners in the unit.  
12 We show in detail why we thought that this was a good  
13 plan and so on. Chisos said that they could not afford  
14 this financially, so they gave us -- we got their  
15 acreage through a deal that we made with them. And once  
16 we had agreement from all of the working interest  
17 partners, we defined the JOA, we signed it, and we  
18 drilled our first well.

19           **Q. If you look at Exhibit 20, it shows that the**  
20 **plan for development consists of drilling horizontal**  
21 **wells both north-south orientation and east-west**  
22 **orientation?**

23           A. Yes.

24           **Q. And what is the basis for the proposed drilling**  
25 **that you depict in the plan of development?**

1           A.     Based on the pilot wells that we drilled in  
2 Cedar Lake and also the results from our Thunderbird 5H  
3 well, we -- we see that the maximum stress direction was  
4 from northwest to southeast, and that direction, in a  
5 way, it's basically the same to drill wells in the  
6 north-south direction as it is in the east-west  
7 direction even though most of the drilling was done  
8 east-west in the area. But when you analyze the image  
9 logs, the breakouts, you can see that the stress  
10 orientation should allow us to drill. That's why we are  
11 doing the Phase 1, and once we evaluate the results from  
12 Phase 1, we will know better about the development for  
13 the rest of the unit.

14           **Q.     In your opinion, will the proposed plan of**  
15 **development shown on Exhibit 20 be successful?**

16           A.     Yes, it will. Based on our experience in Cedar  
17 Lake and the results we've gotten so far from our pilot  
18 wells, I think that it's going to be successful.

19           **Q.     Would you turn now to page 2 of Exhibit 20,**  
20 **Development Plan B without unitization? Could you**  
21 **explain to the Hearing Examiner what you're showing on**  
22 **that page of Exhibit 20?**

23           A.     Basically, on this page, I'm showing what would  
24 be the impact of not having the unit in this area. And  
25 that's basically a lot more facilities that we need to

1 build to develop everything on a lease basis. That  
2 means that we need to drill up to nine more satellite  
3 batteries that will be connected to the central battery,  
4 and that would increase significantly our cost of  
5 development. That's one of the reasons that we want to  
6 have the unit because by reducing the cost of the  
7 facilities, you reduce the allocated cost of the wells,  
8 and that makes this data -- might be more marginal here,  
9 more economical and we can drill economically.

10 Q. And so the difference between Plan A and Plan B  
11 with respect to the south half of Section 36 is you are  
12 eliminating two batteries that would necessary --

13 A. Yes, two batteries.

14 Q. -- to develop those wells?

15 A. Yes.

16 Q. Is there anything unusual about the wells that  
17 Apache has already staked and permitted within the unit?

18 A. No. They are all legal locations, and the  
19 sections -- the wells in the south of Section 36 are  
20 what the Division calls stand-up horizontal project  
21 area.

22 Q. If you look at the Concho exhibit book that's  
23 in front of you there --

24 A. Yes.

25 Q. -- on Exhibit 1, which shows their plan of

1     **development --**

2           A.     Yes.

3           **Q.     -- what do you understand that their**  
4     **development plan is for the south half of Section 36?**

5           A.     From what I see here, they want to drill wells  
6     into our minerals and minerals that are inside the unit  
7     and where we will have a majority working interest at  
8     the same time.

9           **Q.     What is your understanding of the basis for the**  
10    **protest by Concho as to why those lands should be**  
11    **excluded from the unit?**

12          A.     I understand that Concho states that because of  
13    the unit boundaries that we have and the two-mile wells  
14    that they are drilling from Section 33 into 31, the  
15    south -- southwest quarter of Section 31 is going to be  
16    stranded acreage.

17          **Q.     Based on your experience in Cedar Lake and in**  
18    **developing the Yeso in Eddy County, what is your opinion**  
19    **of the proposal to drill the two-mile wells in Sections**  
20    **31, 32 and 33 that are shown on Concho's plan of**  
21    **development?**

22          A.     I think that the two-mile wells are risky.  If  
23    you look at all of the wells drilled, I think, within  
24    the four townships around this, there are no wells  
25    longer than a mile -- one to two miles.  That's what

1 I -- what I saw from public data. So from what we see,  
2 a one-and-a-half mile is something that we want to test,  
3 and that's what we have in our Phase 1, to see if we can  
4 get that extra production. But from our operational  
5 experience, we see that a two-mile well would be very  
6 risky, especially to complete the well near the toe.  
7 And what could happen is that we would not have the  
8 ideal access to the reserves near the toe of the well.

9 So we would consider a two-mile well in an  
10 area that you have no other way of reaching those  
11 resources at the toe, but if you have an option to drill  
12 a mile or a mile-and-a-half, that would be the preferred  
13 option. And you can see that when you see the  
14 development of most of the wells in this area.

15 **Q. If you could turn to Exhibit 21 and please**  
16 **explain to the Hearing Examiner what information is**  
17 **shown on this exhibit.**

18 A. This is what I was just mentioning about all of  
19 the Yeso horizontal wells drilled in the area. So we  
20 are going here from Township 17 South, 29 East to 17  
21 South, 32 East. And we see that practically all of the  
22 wells here were a mile or under a mile, except for the  
23 wells in the blue outline, that those are with an  
24 average perforated length of 5,374 feet for what we  
25 could see in the public data. And that's less than 1.2

1 miles. So most of the development in this area has been  
2 around a mile. So two miles is not the normal thing to  
3 do here.

4                   And in the two logs to the bottom, I have  
5 all of the production of the wells shown in these logs.  
6 You have on the y-axis the cumulative oil production,  
7 and on the x-axis, the months -- the effective months of  
8 production. And on the plot to the left, you see the  
9 difference between the wells operated by Concho and the  
10 wells operated by Apache. And in the plot to the right,  
11 you see what are the results from the wells that Concho  
12 drilled, and they are slightly longer than one mile.  
13 And you see that the results from those wells are not  
14 much better than the one-mile wells that we have drilled  
15 in Cedar Lake.

16                   And they're also in the north-south  
17 direction. That's something good to note, that wells in  
18 the north-south direction in this area are -- are  
19 producing the same way that the -- or very similarly to  
20 the wells in the east-west direction, and even the  
21 wells -- the best wells that Concho drilled, according  
22 to public data, again in this area, are in the  
23 north-south direction. So that's something that  
24 actually we look at this because it encourages us to go  
25 and drill in the north-south direction, too.

1           **Q. Do you have an opinion as to whether Concho**  
2           **could effectively and efficiently develop its reserves**  
3           **in Section 31 through an alternative plan of**  
4           **development?**

5           A. Yes. I understand that we -- we offered to use  
6           off-lease locations in Section 36 to drill one mile from  
7           Section 36 to the east into Section 31. And if they  
8           drill instead of the two miles, which I believe are too  
9           risky, if they drill a mile and a half, they would be  
10          able to develop that. You can also develop in the  
11          north-south direction, if they still want to go with the  
12          two-mile laterals, and they are going to see the results  
13          from our north-south wells to see that that might be  
14          viable.

15          **Q. Have you made an estimate of Apache's**  
16          **recoverable reserves from the Thunderbird Unit?**

17          A. Yes. Since we are in an appraisal phase, we  
18          have -- so we have -- which is what you could call the  
19          most probable case of 7.1 million barrels of oil  
20          equivalent for the entire unit as it is, a P90 of 1.5  
21          and a P10 of 12.5 million barrels of equivalent oil.

22          **Q. Do you have an opinion as to whether the entry**  
23          **of an order by the Division approving the unit will**  
24          **prevent waste?**

25          A. Yes.

1           **Q.    What's that opinion?**

2           A.    I believe that by creating the unit would  
3 prevent waste because -- by reducing the cost of  
4 facilities and making these wells economically more  
5 viable. We -- yes. We can drill more economic  
6 locations. And also by having the possibility to drill  
7 one-and-a-half-miles, that can improve the economics and  
8 make these more viable.

9           **Q.    Do you have an opinion whether correlative**  
10 **rights would be impaired if the Division grants Apache's**  
11 **application?**

12          A.    Yes. My opinion is that they won't be  
13 impaired. Actually, by granting the application, the  
14 correlative rights are protected because all of this  
15 acreage is HBP. And if the unit gets approved, we have  
16 an incentive to develop all of these in five years. And  
17 if you look at what we did in Cedar Lake, that we  
18 drilled -- in a very adverse economic environment, we  
19 drilled 70 wells in five years, it's something that we  
20 can do. We're not just saying it.

21          **Q.    Do you have an opinion whether the owners in**  
22 **each committed tract in the unit will receive their fair**  
23 **and equitable share of production if the unit is**  
24 **approved?**

25          A.    Yes. Yes. The unit boundaries were -- were

1 defined in a way that all of the owners will receive  
2 their fair share.

3 Q. Do you have an opinion as to whether the  
4 exclusion of the south half of Section 36 from the unit  
5 will prevent Concho's adjacent acreage from being  
6 developed?

7 A. North half of the south half.

8 Q. If Concho's protest --

9 A. Oh.

10 Q. -- is to exclude the south half of Section  
11 36 --

12 A. Okay.

13 Q. Let me rephrase that.

14 Do you have an opinion whether including  
15 sections of the south half of Section 36 in the unit  
16 will impair Concho's ability to develop its land  
17 adjacent to the unit in Section 31?

18 A. Yes. I have an opinion that it won't deter  
19 Concho's ability to develop Section 31. It will just  
20 need to adopt their development plan to something that  
21 can be done.

22 MR. DeBRINE: I'll pass the witness.

23 EXAMINER McMILLAN: Please proceed.

24 CROSS-EXAMINATION

25 BY MR. FELDEWERT:

1           Q.    Mr. Garcia Vaca, would you turn to Exhibit  
2 Number 9 and, in particularly, the last page that shows  
3 your Cedar Lake development?

4           A.    Exhibit Number --

5           Q.    Exhibit Number 9.

6                        This map essentially shows three different  
7 things. It shows the development in the area, correct?

8           A.    Yes.

9           Q.    It outlines your Cedar Lake Federal CA in blue  
10 there. That's what you were talking about earlier  
11 today?

12          A.    Yes.

13          Q.    And it also submits to the Division a proposed  
14 alternative plan to develop Section 31?

15          A.    Yes.

16          Q.    And that proposed alternative plan is dependent  
17 upon being able to get BLM-approved locations on the  
18 eastern side of 36 as you propose here?

19          A.    Yes.

20          Q.    And it shows four locations, correct?

21          A.    Yes. If you want to drill four wells in the  
22 south half, yes.

23          Q.    And isn't it true that a lot of development out  
24 here is four wells to develop the south halves of the  
25 sections?

1           A.    Depending on -- if you are talking four wells  
2 per landing zone, it's not the common thing. It would  
3 be two wells, maybe three wells per landing zone just in  
4 the south half.

5           **Q.    So you have the Blinebry --**

6           A.    You would have four wells but considered in two  
7 landing zones, and you can drill two landing zones from  
8 one pad.

9           **Q.    Okay.  So you've got the Blinebry --**

10          A.    And the Paddock.

11          **Q.    -- and the Paddock --**

12          A.    Yeah.

13          **Q.    -- that you need to develop?**

14                        **And you said, even with those separate**  
15 **zones, you may develop those zones with up to six wells?**

16          A.    Depending on the area, you could develop up to  
17 six wells.

18          **Q.    How large a pad do you need to develop those**  
19 **two or three wells?**

20          A.    That depends on the drilling rig that we would  
21 be using. I don't know the exact size of the pad.

22          **Q.    What pads do you use?**

23          A.    I don't have a number with me because I'm not  
24 involved in that part of the process. I don't -- I  
25 would have difficulty --

1 Q. Greater than 400-by-400?

2 A. I could ask my surface landman. Maybe he would  
3 know.

4 Q. That's all right. If you don't know, that's  
5 fine.

6 And if I look at this, you would agree with  
7 me that all of the development in this area has been  
8 primarily -- almost exclusively with lay-down horizontal  
9 wells, right?

10 A. Yes.

11 Q. In fact, your development of the Cedar Lake  
12 Federal CA has been exclusively with -- if I'm reading  
13 this correctly -- lay-down horizontal wells?

14 A. Yes. We have 14 vertical wells. And I think  
15 originally the plan was to keep going with vertical  
16 wells. That was in 2012 with a different environment,  
17 but because of surface limitations and environmental  
18 limitations, it was decided to go horizontal.

19 Q. Okay. And if I'm looking at Cedar Lake, it  
20 looks like lay-down horizontal wells and, as you  
21 testified, two to three wells per half section --

22 A. Yes.

23 Q. -- from at least two different --

24 A. Per bench. Per landing zone, yes.

25 Q. And then there are two different pads in each

1    **half section?**

2           A.    That depends, again, on where you put the pad,  
3    the limitations for the drilling site.

4           **Q.    Well, if I look at your lines here on the**  
5    **Federal -- Cedar Lake Federal CA, Section 6 -- let's**  
6    **just use the south half of Section 6.  I see a number of**  
7    **laterals there, correct?**

8           A.    Uh-huh.

9           **Q.    And those would be from at least two separate**  
10   **pads; would it not?**

11          A.    Yes.  But if you go to Section 7, we can go --  
12    we have a pad there.  That way we're more to the south,  
13    so you can reach farther down south or north from one  
14    pad.  It's just that it increases the drilling time and  
15    so on.

16          **Q.    And so that increases the risk, right?**

17          A.    Not the risk, but it's just more time.

18          **Q.    But you have to have a large enough drilling**  
19   **pad to be able to do that?**

20          A.    No.  That depends more on the drilling rig than  
21    the pad.

22          **Q.    Okay.  But at least with your -- now, at least**  
23   **with Apache's proposed plan for developing Sections 31,**  
24   **32 and 33, it would be with lay-down horizontal wells?**

25          A.    That's one option.  I believe that you can also

1 drill north-south wells in the west half of Section 31,  
2 based on the data that we got from NFE 12 in Section --  
3 Cedar Lake, and also from the Thunderbird 5H.

4 Q. Now, I want to go, then, from conceptual to  
5 more reality based on the approved BLM locations. Okay?

6 A. Uh-huh.

7 Q. If you turn to what's been marked as COG  
8 Exhibit Number 1 --

9 A. Yes.

10 Q. -- if these are the only approved BLM  
11 locations, Mr. Garcia Vaca, wouldn't you agree with me  
12 that this is the most efficient development plan for the  
13 33, 32 and 31?

14 A. If those were the only approved locations,  
15 maybe. To be honest, I will look for an alternative for  
16 those locations. To get the --

17 Q. But if the BLM has said these are the only  
18 approved locations, this would be the best alternative  
19 for 32, 33 and 31, correct?

20 A. 33, 32 -- again, I don't know. I don't believe  
21 that the two-mile horizontal would be very beneficial to  
22 the development in this area.

23 Q. I think you said, though, the company utilizes  
24 two-mile horizontal wells when it is required, right?

25 A. Yeah. We would consider it. We have not done

1 it yet.

2 Q. You've permitted some?

3 A. Yes.

4 Q. You've permitted some?

5 A. We are in the process of permitting.

6 Q. In this case, if the BLM says the approved  
7 surface locations are in the midsection of Section 33 --

8 A. Yes.

9 Q. -- and if the BLM says the approved locations  
10 are in the midsection of 31, this is going to be one of  
11 those circumstances where I guess you have to try a  
12 two-mile lateral, correct?

13 A. Yeah, unless you can drill the wells from  
14 Section 36 to the west or north-south. Yes.

15 Q. If I go to Exhibit Number 20, if I look at the  
16 first page and I'm looking at Exhibit Number 36 -- I'm  
17 sorry. I'm looking at the first page of Exhibit 20, and  
18 I'm looking at the south half of 36.

19 A. Yes.

20 Q. You're showing at least two -- how many well  
21 pads are you showing there?

22 A. We have two.

23 Q. Two there. Okay.

24 But you don't know how large those are?

25 A. Huh? No. I don't know how large those are.

1 Q. But they would have to be large enough to  
2 accommodate the drilling of two wells each?

3 A. Yes.

4 Q. All right. And also then in Section 36 --  
5 south half of Section 36, under your development plan  
6 here as part of the unit, those well locations would  
7 actually be 330 feet from the outer boundary of -- or  
8 eastern boundary of Section 36?

9 A. Yes.

10 Q. Because you've got the setback?

11 A. Yes.

12 Q. Okay. On the second page of this exhibit, I  
13 want you to have that out and also look at Exhibit  
14 Number 1. Look at both of them.

15 A. Yes.

16 Q. Okay?

17 Now, you're focusing on the south half of  
18 36 and the north -- southwest quarter of Section 31.  
19 Are you with me?

20 A. Yeah.

21 Q. If I look at your exhibit, those tank locations  
22 that you show there in Section 36 --

23 A. Yes.

24 Q. -- those would essentially be moved to about  
25 the midline of Section 31 where the approved locations

1 are, correct?

2 A. Yes.

3 Q. Okay. And then if I look at COG's plan from  
4 that approved location, it would drill into Section 36  
5 and develop that 330-foot setback on both sides?

6 A. Uh-huh. Yes.

7 Q. And you would agree that that prevents waste,  
8 right, because you're developing those intervals?

9 A. Yes, if you do it that way. Again, this is our  
10 preliminary plan of development. Once we have the data  
11 from our pilot and our deliverability test wells, we  
12 could change --

13 Q. I understand.

14 A. One of the options that we have is to change  
15 the development plan for Phase 2 and have  
16 one-and-a-half-mile wells drilled in that area, and we  
17 would be preventing the same waste that you are  
18 mentioning.

19 Q. And so this is a preliminary plan. Another  
20 option would be to exclude the south half of 36 and then  
21 drill it in connection with the southwest quarter of 31  
22 just as COG proposes, right?

23 A. If the south part of Section 36 is excluded,  
24 that would be an option.

25 Q. Okay.

1           A.    Again, that would be a delay of a couple of  
2 years of development of the entire thing.  By the time  
3 that gets approved, we could have done -- we could have  
4 most of these already drilled.

5           **Q.    Okay.**

6                         MR. FELDEWERT:  That's all the questions I  
7 have.

8                                 CROSS-EXAMINATION

9           BY EXAMINER McMILLAN:

10           **Q.    Okay.  So there are no -- so all the wells in**  
11 **Apache's Cedar Lake are one-mile, right?**

12           A.    Yes, some shorter, but --

13           **Q.    I'm not totally clear on 21 -- Exhibit 21.**

14           A.    Okay.  Okay.  Again, showing how is the normal  
15 development in the area where we see that -- I think  
16 this is close to 120 wells that both Concho and Apache  
17 drilled, and they're all one-mile wells.  And that's  
18 what we are showing.

19           **Q.    Okay.  So going to your graphs --**

20           A.    Yes.

21           **Q.    -- your cumulative oil --**

22           A.    Yes.

23           **Q.    -- for Apache and COG, are those just**  
24 **cumulative reserves?  Do they take into account -- are**  
25 **they normalized for one-mile?**

1           A.    No.  I didn't want to manipulate the data in  
2 any way, so that's just what you can get from public  
3 data.

4           **Q.    Okay.  So for lack of a better word, it's**  
5 **essentially raw data?**

6           A.    Uh-huh.  Yeah.  It's raw data.

7           **Q.    It's raw data.**

8           A.    Because if I started normalizing everything,  
9 that might have some interpretation on what's lateral  
10 length and so on.  It's not normalized to lateral  
11 length, but I think that 99 percent of these wells are  
12 one mile, or they tried -- everybody tried to drill one  
13 mile within a section, except for six wells, I think,  
14 that they are less than one mile and five wells that are  
15 slightly longer than one mile.  So most of the wells  
16 here are around one mile.

17          **Q.    Okay.  So what does the -- what does -- I'm**  
18 **totally not clear on the cumulative -- on the right-hand**  
19 **graph.**

20          A.    On the right-hand graph, those are the five  
21 wells that I've circled in the blue to the west.  So  
22 those are north-south wells that -- as you can see, they  
23 are performing on par with the other one-mile wells, and  
24 those are the only wells that were slightly longer than  
25 one mile, at 1.14 miles, if you look at perforated

1 lateral length. So the only thing that I want to show  
2 is that it's another -- based on public data, another  
3 piece of information that shows that the north-south  
4 wells also perform, and the -- and the development in  
5 this area has been the majority of one-mile wells.

6 **Q. Okay. But then you said it's on par -- you**  
7 **said these greater-than-one-mile are on par with the**  
8 **one-mile?**

9 A. It's slightly more than one mile. It's 1.1  
10 mile, and that's -- yeah, that's what I said.

11 **Q. Okay. So you're saying that there's not only**  
12 **increased reserve with the slightly greater one-mile**  
13 **than one mile?**

14 A. Again, it's not a significant increase from the  
15 one mile to say that it's -- that's why we wanted to  
16 test a full one-and-a-half mile. But at least from what  
17 we see here, it is not a significant difference.

18 **Q. Okay. So are there any two-mile laterals**  
19 **within your top map?**

20 A. No, no two-mile laterals.

21 **Q. Okay. Do you believe that COG's getting some**  
22 **extra reserves by excluding the 330-foot setbacks?**

23 A. In the first mile and a half of the well, you  
24 could get some extra reserves. I think when you go to  
25 the two miles, you start having too much risk in the toe

1 of the well.

2 **Q. Okay. In terms of what?**

3 A. The risk --

4 **Q. The proppant?**

5 A. Yeah. The risk would be in the completion of  
6 the well, to get all of the plats drilled after the  
7 completion and get the well cleaned out so the well is  
8 going to be contributing entirely. And that's -- as it  
9 was mentioned, we have permitted two wells, and that's  
10 because we have no other way of accessing to two-mile  
11 wells, of accessing resources in the second mile of the  
12 well. But that's -- from our studies, that's the big  
13 risk that we have in those wells, that it's going to be  
14 difficult to get production from the toe.

15 EXAMINER McMILLAN: Go ahead, David.

16 CROSS-EXAMINATION

17 BY EXAMINER BROOKS:

18 **Q. Is your preference for shorter wells, like**  
19 **one-half to one-and-a-quarter miles -- one mile to**  
20 **one-and-a-quarter-miles over longer wells than that, is**  
21 **that due to specific conditions in this area, or is that**  
22 **a general view?**

23 A. No. I think that in other plays that you have  
24 more upper pressure, like in the Wolfcamp play or the  
25 Delaware Basin, that you have more gas in the system and

1 you have more pressure, it's easier to clean out the  
2 wells while you are completing them or finishing the  
3 completion. But in this case that you have lower  
4 pressures in the reservoir, it's difficult to get the  
5 wells cleaned afterwards.

6 Q. So it's an opinion based --

7 A. Yes.

8 Q. --- mainly on local conditions?

9 A. Exactly.

10 Q. Okay. I wanted to clarify something because I  
11 believe Mr. Feldewert asked you were the pads 330  
12 feet -- if I understood it, were the pads in the west  
13 half of Section 36, were they 330 feet from the east  
14 line, and you assented to the fact that they were  
15 because of setbacks. And I wanted to ask you: Is  
16 that -- it your understanding -- well, first of all, do  
17 you know exactly where those well pads are?

18 A. I don't know the exact location of the pads. I  
19 know that this being all legal locations, the wells are  
20 not going to be drilled closer to the 330 feet.

21 Q. Yes. But are you aware that OCD regulations,  
22 anyway, do not require that a well pad be --

23 A. Yeah.

24 Q. -- 330 feet from the -- or that the actual  
25 surface location of the well be less than -- be more

1     **than 330 feet from the leaseline?**

2           A.    I was just thinking about the bottom-hole  
3     location, not the surface.

4           Q.    **Yes. Okay. But I think -- that's what I**  
5     **thought. And I think Mr. Feldewert's question was**  
6     **addressed to the surface locations.**

7           A.    Okay. Sorry.

8           Q.    **That's why I wanted to be sure your response --**  
9     **his question and your response were properly matched.**

10          A.    Okay.

11          Q.    **Thank you.**

12          A.    Thank you.

13          Q.    **That's all I have.**

14                   MR. DeBRINE: Nothing further.

15                   MR. FELDEWERT: If I may, Mr. Brooks, I  
16     appreciate that. I meant to ask and maybe I should.

17                   RE CROSS EXAMINATION

18     BY MR. FELDEWERT:

19           Q.    **If I look at your development plan on Exhibit**  
20     **Number 20 --**

21          A.    Yes.

22           Q.    **And I think Mr. Brooks may be correct. I**  
23     **misspoke.**

24                   **If I look at the south half of Section**

25     **36 --**

1 A. Yes.

2 Q. -- the perforated interval for those wells will  
3 not commence any closer than 330 feet --

4 A. No.

5 Q. -- to the outer boundary, right?

6 A. No.

7 Q. And then also if I look at this, I see up there  
8 in the northern part of your unit that you colored  
9 through some of Phase 3. Do you see that?

10 A. Yes.

11 Q. I see up there that you are proposing to drill  
12 a mile-and-a-half horizontal well.

13 A. Yes. Again, that's our preliminary development  
14 plan. Yes.

15 Q. So that would be the same length as what is  
16 shown on COG Exhibit Number 1 in order to develop the  
17 southwest quarter of 31 with the south half of 36?

18 A. Yes.

19 Q. So you do see some benefits, I assume, then?

20 A. It was not tested. I do not see benefits from  
21 production data, but in theory, it's a valid test. We  
22 are going to be doing that in Phase 1. All of our wells  
23 in Phase 1 are mile-and-a-half.

24 Q. Uh-huh.

25 A. And after we see the results from those wells,

1 we are going to define the development plan for Phase 2  
2 and 3 and see if we drill mile-and-a-halves or one-mile.

3 Q. So at this point, you see enough of a benefit  
4 to do it?

5 A. That would be --

6 Q. That's all the questions.

7 A. And that's one of reasons why we wanted to have  
8 the flexibility to drill one or the other depending on  
9 the results.

10 EXAMINER McMILLAN: David, anything else?

11 RE CROSS EXAMINATION

12 BY EXAMINER BROOKS:

13 Q. Well, after you get Phase 1 done, I don't quite  
14 see how you -- well, you could drill mile-and-a-half  
15 laterals in the south half of 34, 35 and 36 if you  
16 were -- if you were going from state --

17 A. Yeah. That's our other option, do  
18 one-and-a-half-miles down there.

19 EXAMINER BROOKS: Thank you.

20 MR. DeBRINE: No further questions.

21 EXAMINER McMILLAN: Be back at 1:30. And  
22 also clarify the pool designation, and I will bring  
23 copies for all affected parties.

24 (Recess, 12:05 p.m. to 1:30 p.m.)

25 EXAMINER McMILLAN: I'd like to call Case

1 Number 15874 back to order.

2 MR. DeBRINE: Mr. Examiner, we have no  
3 further witnesses, and we rest at this time.

4 EXAMINER McMILLAN: Okay. Please proceed.

5 MR. FELDEWERT: Mr. Examiner, I'd call our  
6 first witness who I believe has already been sworn.

7 EXAMINER McMILLAN: Correct. Please  
8 proceed.

9 TIM BAKER

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

12 DIRECT EXAMINATION

13 BY MR. FELDEWERT:

14 **Q. Would you please state your name, identify by**  
15 **whom you're employed and in what capacity?**

16 A. Tim Baker, COG Operating, LLC, senior surface  
17 landman.

18 **Q. And what are your responsibilities as a senior**  
19 **surface landman for the company?**

20 A. To make sure that we get surface locations for  
21 oil and gas activities, tank batteries, drilling pads,  
22 roads, locations; company liaison for state agencies and  
23 federal agencies, as well as fee ownership.

24 **Q. Okay. Have you previously testified before**  
25 **this Division?**

1 A. No.

2 Q. Would you outline your educational background?

3 A. I have a bachelor's from Texas Tech University  
4 in 2012.

5 Q. And where did you go to work after you  
6 graduated in 2010?

7 A. Devon Energy.

8 Q. And did your respons- -- were your  
9 responsibilities at that time with Devon the same as  
10 they are now with COG?

11 A. Yes, sir, they are.

12 Q. You were in charge of obtaining surface  
13 locations for drilling sites?

14 A. Yes, sir.

15 Q. How long did you work in that capacity for  
16 Devon?

17 A. Five years.

18 Q. And did your responsibilities include the  
19 Permian Basin in New Mexico?

20 A. Yes.

21 Q. Are you a member of any professional  
22 affiliations or associations?

23 A. I'm a member of the AAPL, and I hold an RPL  
24 certification through them.

25 Q. How long have you been a member of the AAPL?

1 A. Since 2011.

2 Q. And then how long have you had your -- what did  
3 you call it?

4 A. RPL.

5 Q. Is that the -- what's that?

6 A. Registered professional landman, 2014.

7 Q. How long have you had --

8 A. Since 2014.

9 Q. How long have you had that certification?

10 A. Since 2014.

11 Q. Are you -- as a result of your work, Mr. Baker,  
12 are you familiar with the surface-use restrictions on  
13 state and federal lands in New Mexico that impact oil  
14 and gas development?

15 A. Yes, sir, I am.

16 Q. And what type of stuff are we talking about, in  
17 particular with the acreage that's at issue here today?

18 A. You have dune issues, protected species,  
19 protected habitats, topography issues, things of that  
20 nature.

21 Q. And in the course of your work history, have  
22 you regularly met with the BLM and the State Land Office  
23 to address surface-use restrictions for oil and gas  
24 projects?

25 A. Yes, sir, I have.

1 Q. And you've dealt with these types of issues?

2 A. Yes, sir.

3 Q. Are you familiar with the application filed by  
4 Apache for its proposed Thunderbird Unit?

5 A. Yes, I am.

6 Q. And are you familiar with the status of the  
7 lands and the oil and gas rights offsetting the proposed  
8 unit boundaries?

9 A. Yes, I am.

10 Q. And in preparation for this case and in your  
11 general capacities for COG, did you meet with the BLM to  
12 discuss the surface-use restrictions for the lands  
13 offsetting the south half of Section 26 -- or 36?

14 A. Yes, sir, I did.

15 MR. FELDEWERT: Mr. Examiner, I would  
16 tender Mr. Baker first as an expert witness in petroleum  
17 land matters, and then secondly as an expert witness in  
18 oil and gas surface-use restrictions on state and  
19 federal lands in New Mexico.

20 MR. DeBRINE: No objection.

21 EXAMINER McMILLAN: So qualified.

22 Q. (BY MR. FELDEWERT) Mr. Baker, would you turn to  
23 what's been marked as COG Exhibit Number 1?

24 A. Yes, sir.

25 Q. And you have seen this before. This is a

1 development map that the company has put together --

2 A. Yes.

3 Q. -- is that correct?

4 Is this -- does this identify the surface  
5 locations that the BLM has approved in Sections 33 and  
6 31?

7 A. Yes, sir, it does.

8 Q. And does this identify how the company can  
9 utilize those surface -- approved surface locations to  
10 develop the acreage offsetting the south half of Section  
11 36?

12 A. Yes, sir, it does.

13 Q. And does this plan likewise then include using  
14 the approved surface locations in the middle of Section  
15 31 to develop not only the southwest quarter of 31 but  
16 the south half of 36?

17 A. Yes, sir, it does.

18 Q. In order to implement this plan, what  
19 relief does the company think there will be?

20 A. To exclude the south half of Section 36.

21 Q. So this plan that you've drawn here assumes  
22 that that red rectangle does not exist around the south  
23 half of 36?

24 A. That is correct.

25 Q. Okay. Now, why is it necessary to develop the

1 south half of 36 in conjunction with the south half-west  
2 quarter of 31?

3 A. It would be difficult to develop the southwest  
4 quarter of 31 without extending the laterals into the  
5 south half of 36.

6 Q. Has the BLM limited the approved surface  
7 locations in this area to the midlines of Sections 31  
8 and 33?

9 A. Yes, sir, they have.

10 Q. And utilizing those approved surface locations,  
11 will the company, with this drilling plan, be able to  
12 develop the 330-foot setbacks that would normally extend  
13 between Sections 36, 31, 32 and 33?

14 A. Yes, sir. It will reduce the waste.

15 Q. So, for example, if I look at this development  
16 plan using the BLM-approved locations in the midpoint of  
17 Section 31, by extending the lateral into the south half  
18 of 36, you would be able to eliminate the setbacks on  
19 both sides of Sections 36 and 31, correct?

20 A. Yes, sir.

21 Q. And you would be able to develop that 660 feet  
22 of reservoir?

23 A. Yes, that is correct.

24 Q. And, likewise, using the approved development  
25 pads that the BLM has identified in the midline of

1 Section 33, you would also be able to develop the  
2 setbacks between Sections 33 and 32?

3 A. Yes.

4 Q. As well as the setbacks between 32 and 31?

5 A. Correct.

6 Q. Is this plan possible, Mr. Baker, if the south  
7 half of 36 remains within the proposed unit?

8 A. No, it is not.

9 Q. And will the company drill a horizontal well  
10 from the -- from the surface locations in 31 into the  
11 northwest quarter if they cannot extend the lateral into  
12 the south half of 36?

13 A. No, they cannot.

14 Q. Why is that?

15 A. It's uneconomical.

16 Q. Would you turn to what's been marked as Apache  
17 Exhibit Number 9 in that black notebook? Okay. I want  
18 you to go to Exhibit Number 9 and go to the last page,  
19 please. It should be a map that looks like this  
20 (indicating). Now, this was a proposal that Apache sent  
21 to COG after COG informed them of the impact at the  
22 conclusion of the south half of 36 would have on the --  
23 setting acreage?

24 A. Correct.

25 Q. Has the company explored with the BLM -- first

1 off, has the company explored the possibility of  
2 developing the southwest quarter of 31 from surface  
3 locations on the eastern side of the south half of 36?

4 A. Yes, that is correct.

5 Q. Okay.

6 A. In early 2016, I met with the BLM. We were  
7 informed that the area was very sensitive because of the  
8 dunes and the protected habitats and the species that  
9 were out there, also just the elevation changes because  
10 of the dunes, 80-, 60-foot drops in that area. In  
11 looking all around, we were only granted one location,  
12 which was in the southeast quarter of the southeast  
13 quarter in Section 36, which would -- which at that  
14 time -- at our time, the Whiptail location.

15 Q. Okay. Before we get to the BLM, let me ask you  
16 this. Just conceptually, to develop the south half of  
17 31 with the proposed -- looks like four drill sites they  
18 have on here in Section 36, you'd have to get approval  
19 from the State Land Office, correct?

20 A. Yes, sir. So since that's state surface, as  
21 was stated earlier, you would have to get a New Mexico  
22 State office business lease for any pads or tank  
23 batteries on there.

24 Q. Let me stop you right there. Why?

25 A. Because you're using the surface for

1 penetrating federal minerals. There is no benefit to  
2 the State.

3 Q. Okay. As opposed to Apache who was able to get  
4 the surface location there because they would be  
5 developing the state acreage in the south half of 36?

6 A. That is correct.

7 Q. When you're dealing now with the BLM or  
8 offsetting federal acreage, you have to go to the State  
9 Land Office and get a different type of permission?

10 A. That is correct.

11 Q. You'd have to get a business lease?

12 A. Correct.

13 Q. In addition to the business lease, who has to  
14 sign off on that business lease, in addition to the  
15 State Land Office?

16 A. You have to get consent from your grazing  
17 lessees because they're consenting to lease lands that  
18 are currently leased, which can sometimes be very  
19 tricky.

20 Q. They can say no?

21 A. They can say no.

22 Q. And if you're going to utilize that state  
23 acreage to develop the federal minerals in the north --  
24 southwest of 31, would you also have to get  
25 rights-of-way to roads?

1           A.    Indeed.  Any roads and any pipelines, any  
2  disturbances that are happening on state lands for the  
3  benefit of federal or fee minerals will require some  
4  kind of application or business-lease right-of-way in  
5  any kind of capacity like that.

6           Q.    Now, with respect to the BLM -- and you touched  
7  on this -- you actually met with them first to ascertain  
8  whether this was even possible, correct?

9           A.    Correct.

10          Q.    And you said you were uniformed that it was a  
11  very sensitive area.  Why is that again?

12          A.    The dunes that are in the area, the vegetation  
13  that are on the dunes, the -- as stated previously by  
14  other people that have testified today, the chickens'  
15  and the lizards' habitats are all around there, and the  
16  elevation changes.  You're going to have 20-, 30-foot  
17  cuts in some of the areas along that eastern side.

18          Q.    So the BLM would have to approve the locations?

19          A.    Correct.

20          Q.    And the BLM considers this to be a very  
21  sensitive area?

22          A.    Correct.

23          Q.    Okay.  As a result, you said they only approved  
24  one location in the south half of 36?

25          A.    Correct.

1           Q.    And that was in the southeast quarter of the  
2 southeast quarter?

3           A.    Yes, sir.

4           Q.    Okay.  Is that -- was that area already  
5 disturbed?

6           A.    It was next to an existing disturbance, which  
7 helped out, which is why they weren't allowing some --  
8 the rest of the pads along the eastern side of there,  
9 because in the middle part of the majority of the  
10 section, there were no disturbances.  And so they didn't  
11 want to allow us to go in there and bulldoze, since  
12 there was nothing there already.

13          Q.    So you checked, and they would not approve any  
14 of the surface location on the eastern half of the south  
15 half of 36 except that one --

16          A.    That is correct.

17          Q.    -- in the southeast of the southeast?

18          A.    Yes, sir.

19          Q.    Okay.  Now, if I turn to what's been marked  
20 as -- we can leave this open if you'd like.  But also  
21 turn to what's been marked as COG Exhibit Number 2.  Is  
22 this the surface location that was -- the only surface  
23 location that was approved by the BLM that you were just  
24 discussing?

25          A.    That is correct.

1 Q. Identified as the Whiptail?

2 A. Yes, sir.

3 Q. And you see that road going in there?

4 A. Yes.

5 Q. That's what you were talking about, right?

6 A. Correct, next to an existing disturbance.

7 Q. And you asked -- you checked with the BLM, and  
8 none of the other disturbances in the area in the south  
9 half of 36 were sufficient to allow for the company to  
10 put in any other surface location?

11 A. That is correct.

12 Q. With respect to the size of the well pad, did  
13 the company, when they met with the BLM, request a large  
14 pad size?

15 A. Yes. And they --

16 Q. What did the BLM say?

17 A. They downsized our pad to 270-by-320.

18 Q. They wouldn't go any larger than that?

19 A. No, sir.

20 Q. And have you checked with the engineering  
21 department and ascertained whether that could be  
22 utilized for more than one well?

23 A. I have, and it is not big enough for multiple  
24 wells.

25 Q. You can just drill one well?

1 A. One well.

2 Q. From that one location?

3 A. Correct.

4 Q. In the southeast of the southeast of 36?

5 A. That is correct.

6 Q. Is there a sufficiently approved BLM surface  
7 location available in the south half or eastern part of  
8 the south half of 36 to efficiently develop the  
9 southwest quarter of 31?

10 A. No, sir, there is not.

11 Q. You can only drill one well?

12 A. One well.

13 Q. If that's where you start?

14 A. Right.

15 Q. Okay. But the BLM did approve surface  
16 locations in the midline of Section 31?

17 A. Correct.

18 Q. They would allow you, then, to go from those  
19 locations across the southwest quarter into the south  
20 half of 36?

21 A. And those pads are big enough for two wells  
22 each on each pad.

23 Q. Okay. In your opinion, Mr. Baker, what will  
24 occur if the south half of 36 remains within the  
25 proposed unit boundary?

1           A.    The southwest quarter of Section 31 will remain  
2    undrilled.

3           Q.    The company will not develop it if they cannot  
4    extend the lateral into the south half of 36?

5           A.    That is correct.

6           Q.    If the south half of 36 is removed from the  
7    unit, will that allow the company to proceed with its  
8    drilling plans to develop not only the southwest quarter  
9    but also the south half of 36?

10          A.    Yes, sir.

11          Q.    And in the course of that, will you also be  
12   able, then, to develop the six -- 330-foot setbacks on  
13   each side?

14          A.    That is correct.

15          Q.    Now, at this point, your plan only includes the  
16   locations in the south half of the southwest quarter; is  
17   that right?

18          A.    Correct.

19          Q.    Was the company exploring -- attempting to  
20   acquire acreage in the north half of the southwest  
21   quarter?

22          A.    Yes, sir, we were.

23          Q.    Okay.

24          A.    We stopped after this unit came up because we  
25   didn't know how it was going to go forward.

1 Q. I see. I see.

2 So it wouldn't make any sense for the  
3 company to acquire different acreage if they could not  
4 develop the southwest quarter in conjunction with the  
5 south half of 36?

6 A. That is correct.

7 Q. Absent that, you would be putting together a  
8 development plan to acquire the acreage and put together  
9 a development plan to develop the entire southwest  
10 quarter, as well as the south half of 36?

11 A. That is correct.

12 Q. Okay. In your expert opinion, is the inclusion  
13 of the south half of 36 in the unit -- in other words,  
14 if it remains in the unit, does that negatively impact  
15 COG's correlative rights in the southwest quarter of 31?

16 A. Yes, sir. I believe it does.

17 Q. In your expert opinion, does the inclusion of  
18 the south half of 36 within the unit result in the  
19 stranding of minerals in the southwest quarter of 31?

20 A. Yes, sir. I believe it does.

21 Q. And in your opinion, will the inclusion of the  
22 south half of 36 in the unit result in the waste of  
23 recoverable oil and gas reserves in the southwest  
24 quarter of 31?

25 A. Yes, sir, it does.

1           Q.    And, likewise, would it result in the waste of  
2 recoverable reserves in the 660 feet of setbacks that  
3 would otherwise apply to these two sections?

4           A.    Yes, sir.

5           Q.    Were COG Exhibits 1 and 2 prepared by you or  
6 compiled under your direction and supervision?

7           A.    (No response.)

8           Q.    Were Exhibits 1 and 2 compiled under your  
9 direction and --

10          A.    Yes, sir. I'm sorry. Yes, sir, they were.

11                   MR. BRUCE: Mr. Examiner, I would move  
12 admission into evidence of COG Exhibits 1 and 2.

13                   MR. DeBRINE: No objection.

14                   EXAMINER McMILLAN: Exhibits 1 and 2 may  
15 now be accepted as part of the record.

16                           (COG Operating, LLC Exhibit Numbers 1 and 2  
17 are offered and admitted into evidence.)

18                   MR. FELDEWERT: That concludes my  
19 examination of this witness.

20                                   CROSS-EXAMINATION

21 BY MR. DeBRINE:

22           Q.    With respect to the south half of Section 31,  
23 what is Concho's ownership interest in the south half  
24 currently?

25          A.    You would have to get with our mineral landman

1 on that on the exact numbers.

2 Q. Does it own an interest in all of the south  
3 half, or are there some leases or tracts that it owns no  
4 interest?

5 A. You'd have to get with our mineral landman.

6 Q. Does Concho currently have a right to drill a  
7 well that starts in the middle of Section 31, going from  
8 east to west, into the south half of Section 36?

9 A. I believe we do. Yes, sir.

10 Q. You don't own any interest in the south half of  
11 Section 36.

12 A. Oh, I'm sorry. I thought you met 31. I  
13 apologize. I wasn't --

14 Q. So do you have a right to drill the wells that  
15 are shown on Exhibit 1 currently?

16 A. You'd have to get with our mineral team.

17 Q. But you don't own any interest in Section 36,  
18 right?

19 MR. FELDEWERT: Object. You mean the  
20 entire Section 36 or the south half?

21 MR. DeBRINE: The south half of 36.

22 THE WITNESS: You'd have to get with our  
23 mineral team.

24 Q. (BY MR. DeBRINE) You were here earlier in the  
25 testimony where the landman for Apache described the

1 ownership of the south half of Section 36, correct?

2 A. Correct.

3 Q. And Concho doesn't own any interest in there,  
4 does it?

5 A. From prior testimony.

6 Q. When you met with the BLM or the -- it's the  
7 Whiptail well?

8 A. Whip.

9 Q. Whiptail well.

10 -- back in 2016, who else participated in  
11 those meetings?

12 A. The BLM main RSs [sic] and other Concho  
13 employees.

14 Q. Why were you looking at well locations in  
15 Section 36 at that time if you didn't own any interest  
16 in Section 36?

17 A. We were already denied a location in Section 31  
18 for development in there, so we were looking at the  
19 outside boundaries.

20 Q. What locations had you proposed to the BLM in  
21 Section 31 that had been denied?

22 A. Standard locations.

23 Q. What do you mean by standard locations?

24 A. The standard locations that the -- the 330,  
25 660, 990 and 2,310, so on.

1 Q. Where would they be located within Section 31?

2 A. Either on the west end or the east end of the  
3 section line.

4 Q. And is there any correspondence between Concho  
5 and the BLM with respect to the dialog that took place  
6 concerning proposed locations and rejection locations?

7 A. Not that I'm aware of in an email or something.

8 Q. If the south half of Section 36 were excluded  
9 from the unit, Concho couldn't prevent Apache from  
10 drilling the wells that have already been permitted  
11 there, could it?

12 MR. FELDEWERT: Object. Calls for a legal  
13 conclusion.

14 EXAMINER BROOKS: Well, if he has an  
15 opinion, he can express it.

16 THE WITNESS: I'll defer to counsel.

17 EXAMINER BROOKS: Okay.

18 Q. (BY MR. DeBRINE) Are you familiar with Concho's  
19 development in this area adjacent to the Thunderbird and  
20 Cedar Lake that was depicted on Exhibit 22, I believe?

21 A. That's the one you added last second?

22 Q. I guess it's 21.

23 MR. FELDEWERT: You're talking about --

24 Q. (BY MR. DeBRINE) It shows the map of all the  
25 Yeso wells that have been drilled in the area.

1 MR. FELDEWERT: I'll object to the  
2 characterization of the exhibit, but you're talking  
3 about Exhibit 21?

4 MR. DeBRINE: Correct.

5 MR. FELDEWERT: I don't think it shows all  
6 the --

7 Q. (BY MR. DeBRINE) With respect to the COG plan  
8 of development shown on Exhibit 1, has the 2008 capital  
9 drilling budget included funds to drill those wells in  
10 2018?

11 A. Which wells are you referring to?

12 Q. The ones shown that are on Exhibit 1 of  
13 Concho's exhibit, drilling from Section 31 to Section  
14 36?

15 A. I would say right now that the plan is all been  
16 put on hold by just seeing what the pending unit is  
17 going to happen.

18 Q. I'm not asking whether it's been put on hold.  
19 Has Concho approved capital to drill those wells in  
20 2018?

21 A. I don't know.

22 Q. Has Concho proposed the drilling of those wells  
23 to all the of the working interest owners who would own  
24 an interest in those horizontal wells?

25 A. I don't know.

1 Q. Who would be the person who would know that?

2 A. The landman.

3 Q. When do you expect Concho to drill the wells  
4 that are shown in its plan of development in Exhibit 1?

5 A. That's a question I can't answer.

6 Q. You're not aware of any current plans to drill  
7 those wells this year?

8 A. I believe that it all depends how this works  
9 out with the unit.

10 Q. You're not aware of any plans to drill those  
11 wells this year is the question?

12 A. I think what happens with the unit affects the  
13 plan.

14 Q. Okay. Let's assume it's excluded -- Section 36  
15 is excluded. Are you aware of any plan to drill those  
16 wells if the Commission denies -- or grants Apache's  
17 application but excludes the south half of Section 36?

18 A. I believe that we would move forward with  
19 permitting and, going forward, acquiring more acreage.  
20 Yes.

21 Q. And when you say acquiring more acreage, what  
22 additional acreage do you need to acquire?

23 A. We would need to acquire more acreage like we  
24 were doing before we stopped when the unit came up.

25 Q. So you couldn't drill these wells today. You

1 would have to --

2 A. I was referring to the north half of the south  
3 half of the southwest -- north half of the southwest  
4 quarter.

5 Q. The north half of the southwest quarter.

6 In order to drill the wells that are shown  
7 in -- from Section 31 to Section 36, you would have to  
8 force pool the acreage shown in Section 36, is that  
9 correct, in order to drill those wells?

10 A. You'd have to talk to the mineral landman. I  
11 don't force pool.

12 Q. Do you know if Concho has contacted any other  
13 working interest owners --

14 A. I do not know.

15 Q. -- in Section 31?

16 Do you know if it's proposed any kind of  
17 JOA or any other development agreement for the drilling  
18 of the wells that are shown on this plan of development  
19 in Exhibit 1?

20 A. That would be a mineral landman question.

21 Q. Does Concho own the interest in the southwest  
22 quarter of Section 33 -- I mean southeast quarter?

23 A. Of 33?

24 Q. Yes.

25 A. In 17 South, 31 East?

1 Q. Correct.

2 A. I'm not sure what the exact ownership is, no.

3 MR. DeBRINE: I'll pass the witness.

4 CROSS-EXAMINATION

5 BY EXAMINER McMILLAN:

6 Q. I'm confused about Exhibit Number 1.

7 A. Okay.

8 Q. Are you developing the north half and the south  
9 half of Section 31 and the north half of the southwest  
10 of Section 36, because I see two wells there?

11 A. The two wells in 31 going into 36?

12 Q. Yes.

13 A. Yeah. That would be our plan. That's the  
14 south half of the south half of Section 31 for  
15 mile-and-a-half laterals in the 36.

16 Q. Okay. So what about the north half of the  
17 south half?

18 A. So that was our plan going forward, to develop  
19 in full development four pads for the half section. We  
20 stopped leasing and acquiring rights as the unit came up  
21 because we didn't want to be stuck with all of it.

22 Q. So -- okay.

23 A. We were stranded.

24 Q. Looking at this map, you are not -- it doesn't  
25 appear that you're developing the north half of the

1 south half of Section 36 and 31. It appears you're only  
2 developing the south half of the south half; is that  
3 correct?

4 A. This depiction, that's all -- we only got two  
5 BLM locations at this time because that's the acreage  
6 that we had. We plan to go forward with the north half  
7 of the south half if the section -- if the south half of  
8 36 is kicked out of the unit.

9 Q. Okay. And do you have acreage or do you  
10 possess the rights to drill in the north half of the  
11 south half of Section 31?

12 A. I'm not sure of that question. The north half  
13 of the south half of 31?

14 Q. Yes.

15 A. At this time I'm not sure, Mr. Examiner.

16 Q. Well, I think -- that's a -- that's a huge  
17 question.

18 EXAMINER BROOKS: Mr. Feldewert, are you  
19 going to present a witness that can testify to COG's  
20 ownership?

21 MR. FELDEWERT: We can, yes.

22 EXAMINER BROOKS: This witness obviously  
23 can't, so --

24 MR. FELDEWERT: Yes.

25 EXAMINER BROOKS: Pardon me?

1 MR. FELDEWERT: Yes. I think what he's  
2 been able to testify to to Examiner McMillan is about  
3 this exhibit right now. The plan as developed is based  
4 on the surface locations that they were able to receive  
5 from the BLM --

6 EXAMINER BROOKS: Yeah. He can testify to  
7 the surface locations, but he's not willing to  
8 testify -- or he's unable, according to his testimony,  
9 to testify to oil and gas lease ownership. So I was  
10 wondering if you were going to have a witness who would  
11 testify to that matter.

12 MR. FELDEWERT: I think we'll have a  
13 witness. Yeah.

14 EXAMINER BROOKS: Okay. Very good. Then  
15 we can proceed with this witness, what he has testified  
16 to.

17 Are you through?

18 EXAMINER McMILLAN: Yeah.

19 CROSS-EXAMINATION

20 BY EXAMINER BROOKS:

21 Q. You testified that Concho, as I understood  
22 it -- well, first of all, I need to clarify one thing.  
23 I'm pretty sure of this, but I think the way the  
24 question was framed to you did not involve this.

25 BLM will not approve any location -- any

1 surface locations in Section 32; is that correct?

2 A. We looked around the edges of 31, you know,  
3 inside and outside of 31 to develop 31 and were not  
4 granted any locations.

5 Q. Okay. Well, my understanding was from prior  
6 witnesses' testimony or -- no, not from prior witnesses.  
7 From what Mr. Feldewert said in his opening statement, I  
8 believe is where I heard it, that there were no -- no  
9 locations would be approved in Sections 31, 32 or 33  
10 other than those in the middle of Section 33 and the  
11 middle of Section 31. Is that a correct statement?

12 A. Yes, it was.

13 Q. Okay. Very good.

14 So no surface locations would be approved  
15 in Section 32, right?

16 A. That is correct.

17 Q. Okay. Now, you testified that COG would not  
18 drill from the pads in the south half -- in the south  
19 half-south half -- or in the center of the east-west  
20 center of Section 31, that COG would not drill from  
21 those pads into the west half of 31. And you testified  
22 that they would not do that because it's uneconomic.  
23 Now, is that -- are you able to testify to the reasons  
24 why it's not economic, or should we address that to an  
25 engineer?

1           A.    You should probably address that to an  
2 engineer.

3           Q.    That's what I assumed was the --

4           A.    I don't think that there are very many  
5 half-mile laterals in that area, though.

6           Q.    Okay.  But it would be technologically feasible  
7 and it has been done, I believe, in a number of places I  
8 have seen -- I don't know by what operators -- to drill  
9 from -- to drill north-south wells from those locations  
10 certainly in the east half of the west half and perhaps  
11 in the west half of the west half, if I'm not mistaken.  
12 But I think that's a question for an engineer.

13          A.    Are you saying so going from those mid  
14 locations, going up and --

15          Q.    Yes.

16          A.    -- to the north?  That would be something that  
17 I've never seen before.

18          Q.    Well, I have seen that done.  Of course, I see  
19 a lot of plats and compulsory pooling cases -- mostly  
20 compulsory pooling cases.  Well, thank you.  We'll  
21 discuss that with the engineer.

22                               EXAMINER McMILLAN:  Okay.

23

24                               RE CROSS EXAMINATION

25                               BY EXAMINER McMILLAN:

1           **Q.    Have you looked in any other -- have you looked**  
2 **in either Section 1 of Township 17 South, Range 30 East**  
3 **and Section 6 of Township 17 South, Range 31 East to**  
4 **develop Section 31 in Township 16 South, Range 31 East?**

5           A.    In the early 2016 meeting with the BLM, again,  
6 we kind of covered a swath of north of it, south of it,  
7 east of it, west of it to try to find some way to fully  
8 develop 31. The only location that was granted, the  
9 only place they would be willing to was in that  
10 southeast quarter-southeast quarter of 36, which was a  
11 small pad, which would only be one well, and that would  
12 be it.

13           **Q.    Okay.**

14                       EXAMINER BROOKS: I don't have anything  
15 further for this witness.

16                       EXAMINER McMILLAN: If there are no more  
17 questions, the witness may be excused.

18                       THE WITNESS: Thank you.

19                       MR. FELDEWERT: We'll call our next  
20 witness.

21                       EXAMINER McMILLAN: Please proceed.

22                                       CANDICE PETTIJOHN,  
23 after having been previously sworn under oath, was  
24 questioned and testified as follows:

25

1 DIRECT EXAMINATION

2 BY MR. FELDEWERT:

3 Q. Would you please state your name, identify by  
4 whom you're employed and in what capacity?

5 A. My name is Candice Pettijohn. I'm a geologist  
6 at COG Operating.

7 Q. And how long have you been a geologist with  
8 COG?

9 A. Three-and-a-half years.

10 Q. And what have your -- have your  
11 responsibilities included the Permian Basin?

12 A. Yes, the Northwest Shelf of the Permian Basin.

13 Q. So in particular, is the Yeso in the Northwest  
14 Shelf area?

15 A. Correct.

16 Q. Okay. Have you previously testified before  
17 this Division as an expert in petroleum geology?

18 A. Yes.

19 Q. Are you familiar with the application filed by  
20 Apache for its proposed Thunderbird Unit?

21 A. Yes.

22 Q. And have you conducted a geologic study of the  
23 proposed unitized interval in this general area of  
24 issue?

25 A. Yes.

1 MR. FELDEWERT: I would tender  
2 Ms. Pettijohn as an expert witness in petroleum geology.

3 MR. DeBRINE: No objection.

4 EXAMINER McMILLAN: So qualified.

5 Q. (BY MR. FELDEWERT) Ms. Pettijohn, if you would  
6 turn to what's been marked as COG Exhibit Number 3, is  
7 this a map that the company has put together of the  
8 existing production in the Yeso in this area?

9 A. Yes.

10 Q. And did you assist in the preparation of this  
11 map?

12 A. Yes.

13 Q. And does this area accurately depict the Yeso  
14 production as shown?

15 A. Yes.

16 Q. You also then provided the Examiners, for  
17 orientation purposes, an outline of Apache's proposed  
18 unit in red?

19 A. Yes.

20 Q. Okay. What does this demonstrate about the  
21 development of the Yeso Formation in this area to date?

22 A. Yeso production and development first began  
23 with vertical wells. They started towards the shelf  
24 edge, which is the southern end of the Yeso Fairway,  
25 gradually moving northward until about 2011 when lateral

1 development began. From then on, we've moved almost  
2 exclusively to lateral development. You can see here  
3 that the fairway is an east-west orientation on this  
4 part of the shelf, and we're almost exclusively  
5 developing with horizontal wells now. This part of the  
6 shelf, it's primarily lay-down or east-west wells.

7 **Q. Why is everybody out there developing with**  
8 **lay-down, east-west horizontal wells?**

9 A. Okay. Because of the orientation of the  
10 fairway, the more prudent method of development, when  
11 you're taking a step-out to the north, is to do it with  
12 an east-west well because you're testing a smaller  
13 section of the fairway than you would with a north-south  
14 well, so it's less risk averse.

15 **Q. Does your company or do geologists have a good**  
16 **idea where this fairway ends as you move to the north?**

17 A. Not yet.

18 **Q. Okay. And that's why everybody is stepping out**  
19 **to the north?**

20 A. Yes.

21 **Q. And if we look at -- in fact, is it -- in your**  
22 **opinion, have all prudent operators utilized lay-down**  
23 **horizontal wells to gradually step out to the north?**

24 A. Yes.

25 **Q. And in your opinion, is it prudent to continue**

1 to develop with lay-down horizontal wells as you  
2 continue to step out to the north?

3 A. Yes.

4 Q. If I look at the Thunderbird Exploratory Unit  
5 outline and the adjacent -- to the east, Sections 31,  
6 32, 33, those are all currently undeveloped, right?

7 A. At this time.

8 Q. In the Yeso?

9 A. Yup.

10 Q. And so development in there would be a step-out  
11 to the north?

12 A. Yes.

13 Q. Are you aware of the surface-use restrictions  
14 that the BLM has imposed in Sections 31, 32 and 33?

15 A. Yes.

16 Q. Okay. If I turn to what's been marked as COG  
17 Exhibit Number 1, is this a development plan that you  
18 assisted in putting together given the BLM surface-use  
19 restrictions in this area?

20 A. Yes.

21 Q. And is it premised upon the exclusion of the  
22 south half of 36 from the proposed unitized area?

23 A. Yes.

24 Q. In the course of putting this plan together,  
25 have you become aware of the company's ownership in the

1 southwest quarter of Section 31?

2 A. Yes.

3 Q. Okay. And currently, what does the company own  
4 in the southwest quarter of 31?

5 A. You'd have to get with the mineral landman on  
6 that.

7 Q. Let me ask you this: What acreage do they own  
8 in the southwest quarter of 31?

9 A. We own minerals in the south half of the  
10 southwest quarter.

11 Q. Okay. And is that why we see, currently, two  
12 BLM-approved locations in that location?

13 A. For the time being, yes.

14 Q. Okay. Because that's based on your ownership?

15 A. Yes.

16 Q. Were you also aware that the company was  
17 seeking to acquire additional ownership in the north  
18 half of the southwest quarter?

19 A. Yes.

20 Q. Okay. And is it true that once you became  
21 aware of this unit boundary, that that ceased?

22 A. Yes.

23 Q. And why did that stop?

24 A. We didn't want to further strand additional  
25 acreage in addition to the south half of the southwest

1 quarter.

2 Q. Okay. So as a prudent operator, you didn't go  
3 out and acquire additional acreage until you were sure  
4 you would be able to prudently develop it, right?

5 A. Correct.

6 Q. Okay. And so we're here today to try to  
7 exclude the south half of 36 so that your company first  
8 and prudently can develop the acreage that it owns in  
9 the southwest quarter?

10 A. Yes.

11 Q. And then prudently develop the acreage it wants  
12 to acquire in the north half of the southwest quarter?

13 A. That is the plan.

14 Q. Okay. Now, as part -- in the course of your  
15 employment, do you, in putting these plans together,  
16 have to visit with the engineering group that you work  
17 with?

18 A. Extensively.

19 Q. And as a result of those extensive discussions,  
20 do you have a general understanding about what they can  
21 and cannot do from certain locations?

22 A. Yes. I participate in the staking of the wells  
23 and the plan of development and designing the well  
24 plans.

25 Q. Okay. And in knowing -- and you're fully aware

1 of what the BLM has approved in the midsection of  
2 Section 31?

3 A. Yes.

4 Q. And the location of those pads?

5 A. Yup.

6 Q. The size of those pads?

7 A. (Indicating.)

8 Q. And as a geologist, you're fully apprised of  
9 the interval that you're seeking to develop in those  
10 pads?

11 A. Yes.

12 Q. In your opinion, is it -- is it, first off,  
13 prudent to try to utilize those pads to do a curve and  
14 drill north-south?

15 A. It's not only not prudent, it's mechanically  
16 impossible.

17 Q. And why is that?

18 A. You would have to have a dogleg severity such  
19 that it would be impossible to drill at these depths, of  
20 around 5,000 feet, and be able to capture the entire  
21 southwest quarter of 31.

22 Q. So depth is a big component here, right?

23 A. Yeah. You're limited on your dogleg severity  
24 here because we're really shallow here.

25 Q. Okay. So it's unlike some other areas that

1 Mr. Brooks was referring to where perhaps people could  
2 do that kind of dogleg. You're limited here because of  
3 depth of the Yeso?

4 A. Yeah. You have to make the turn in a shorter  
5 period of time.

6 Q. They actually have two intervals within the  
7 Yeso, the Paddock and the Blinebry?

8 A. Yes.

9 Q. One being even more shallow than the other?

10 A. Yes.

11 Q. All right. In your opinion, the plan reflected  
12 here on Exhibit Number 1, given the limitations imposed  
13 by the BLM, is this the most prudent development plan  
14 for this particular acreage?

15 MR. DeBRINE: I'll object as being beyond  
16 the scope of expertise of a geologist. I don't think  
17 she can offer those kind of opinions. There's been no  
18 foundation for the opinion with regard to what the  
19 particular well plans look like, what the economics look  
20 like, what plan, what pad the well's going to take, and  
21 so this witness can't express a speculative opinion of  
22 that nature.

23 EXAMINER BROOKS: Well, it's normally  
24 considered to be within the realm of expertise of  
25 engineers. I know that about the profession. Of

1 course, I don't know -- I don't know personally what's  
2 in the realm of geologists and what's in the realm of  
3 engineers since I'm neither one, but that's what I  
4 understand. So I would --

5 Q. (BY MR. FELDEWERT) Let me ask you this -- let  
6 me do this, Ms. Pettijohn. Didn't you testify that you  
7 participated in putting this development plan together?

8 A. Correct.

9 Q. Okay. And in the course of that participation,  
10 did you work with your engineering team to ascertain  
11 what is feasible here?

12 A. Yes.

13 Q. And they ascertained what is the prudent --  
14 most prudent method of developing this acreage given the  
15 surface limitations that the BLM has imposed?

16 A. Yes.

17 Q. And in your opinion, based on that experience,  
18 is this the most prudent plan that the company can come  
19 up with given the restrictions that the BLM has imposed  
20 in this area?

21 A. Yes.

22 MR. DeBRINE: Again, the same objection.  
23 We're unable to cross-examine this witness. There is no  
24 foundation for that opinion with regard to what  
25 engineering plan was in place or what it consists of.

1 It's just a hypothetical that's meaningless, that she  
2 talked to some engineers and is familiar with what they  
3 did, but we don't have that in front of us. And I think  
4 we need to have a foundation for the witness' opinion,  
5 to look at it to be able to test that opinion.

6 EXAMINER BROOKS: Well, if I were on the  
7 bench and this was in court, I would say I would sustain  
8 the objection, but in the context of an Examiner  
9 Hearing, I will allow the witness -- if she has an  
10 opinion, based on the premise Mr. Feldewert is  
11 suggesting, she may testify to it. I understand it's  
12 somewhat -- it's not really in the normal field of a  
13 geologist.

14 So go ahead. If you want to express an  
15 opinion, please do so.

16 Q. (BY MR. FELDEWERT) Is this the most prudent  
17 plan for development of this acreage --

18 A. Yes.

19 Q. -- given the surface-use restrictions that the  
20 BLM has imposed?

21 A. Yes.

22 Q. Okay. And in your opinion, if the south half  
23 of Section 36 remains within the proposed unit, will the  
24 southwest quarter of Section 31 be stranded?

25 A. Yes.

1           Q.    Okay.  And will the company develop the  
2 southwest quarter from the approved BLM surface  
3 locations if they cannot continue to drill into the  
4 south half of Section 36?

5           A.    No.

6           Q.    And why is that?

7           A.    It's not economic for us to drill a half  
8 lateral, and as I mentioned before, it's not prudent to  
9 develop a step-out well in the north-south fashion.

10          Q.    Now, when you say it's not economic to drill a  
11 half-mile well, what's the basis for that?

12          A.    We haven't drilled a half-mile well as far as I  
13 know.

14          Q.    So in this particular area, in this Yeso shelf  
15 area, the company has certain parameters that it imposes  
16 upon you and the engineering team of putting these plans  
17 together?

18          A.    Correct.

19          Q.    Okay.  And is it your testimony that the  
20 economic threshold of the company for this area does not  
21 authorize the drilling of half-section, lay-down  
22 horizontal wells?

23          A.    Yes.

24          Q.    Have you created a structure map of this area?

25          A.    Yes.

1 Q. If I turn to what's been marked as COG Exhibit  
2 Number 4, is this a structure map that you put together  
3 for your proposed mile-and-a-half wells from the BLM  
4 locations in 31 into Section 36?

5 A. Yes.

6 Q. And, again --

7 You have to speak out loud.

8 A. Yes.

9 Q. And, again, this plan assumes that the south  
10 half of 36 is excluded from the unit, correct?

11 A. Yes.

12 Q. And if that relief is granted to the company,  
13 do you observe any structural impediments to developing  
14 the southwest quarter of Section 31 with the south half  
15 of 36?

16 A. No geologic impediments, no faulting, no  
17 pinch-outs between the two sections.

18 Q. Okay. And do you likewise agree with Apache's  
19 geologist that there are no appreciable differences in  
20 the productivity of the Yeso Formation between the  
21 southwest quarter of Section 31 and the south half of  
22 36?

23 A. I agree.

24 Q. And your opinion, is the southwest quarter of  
25 Section 31 and the south half of 36 an area that can be

1     **efficiently and effectively developed together with**  
2     **lay-down horizontal wells?**

3           A.     Yes.

4           **Q.     And in your opinion, is the inclusion of the**  
5     **south half of 36 in the unit, is that in the best**  
6     **interest of the prevention of waste and the protection**  
7     **of correlative rights, Ms. Pettijohn?**

8           A.     No, it is not.

9           **Q.     And in your opinion, if that -- if this remains**  
10    **within the unit, will that result in the stranding of**  
11    **recoverable reserves in the southwest quarter of Section**  
12    **31?**

13          A.     Yes.

14                   MR. FELDEWERT:   Mr. Examiner, I would move  
15    the admission into evidence of COG Exhibits 3 and 4.

16                   MR. DeBRINE:    No objection.

17                   EXAMINER McMILLAN:   Exhibits 3 and 4 may  
18    now be accepted as part of the record.

19                                   (COG Operating, LLC Exhibit Numbers 3 and 4  
20    are offered and admitted into evidence.)

21                   MR. FELDEWERT:   And that concludes my  
22    examination of this witness.

23                                   CROSS-EXAMINATION

24    BY MR. DeBRINE:

25           **Q.     Ms. Pettijohn, what is the estimated cost of**

1 Concho to drill the two wells that are shown on Exhibit  
2 1 from Section 31 to the south half of Section 36?

3 A. I could speculate, but I can't give you an  
4 exact number on that.

5 Q. I don't need you to speculate.

6 Do you know what assumption was used to  
7 price in order to determine the economics of drilling  
8 those wells?

9 A. No. I'm not a reservoir engineer.

10 Q. Do you know if there was any assumption built  
11 into the cost to acquire an acreage in order to drill  
12 those wells, since Concho doesn't own any interest in  
13 the south half of Section 36?

14 A. There probably was, but I was not involved in  
15 that because I'm not a landman or a reservoir engineer.

16 Q. And so you really can't offer any kind of  
17 opinion as to the economics of those wells?

18 A. I do know that they were; otherwise, we  
19 wouldn't have started the leasing project.

20 Q. When did Concho first acquire its acreage in  
21 Section 31?

22 A. You'll have to ask my mineral landman that  
23 question.

24 Q. Do you have any estimate?

25 A. It's been since I've been on the team, so

1 within the past three-and-a-half years.

2 Q. And do you know what other interests Concho  
3 owns in Sections 31, 32 and 33?

4 A. I can't give you the exact interest on that  
5 location.

6 Q. Do you know if Concho owns an interest in each  
7 tract that would be penetrated or developed by the  
8 laterals that are shown on Exhibit 1 for the drilling of  
9 the wells in Sections 31, 32 and 33?

10 A. We will need to force pool those wells. The  
11 two in the west, we would need to work with, obviously,  
12 you guys and all of the other operators in the area or  
13 force pool.

14 Q. What about the other wells in 32 and 33? Will  
15 you need to force pool acreage in order to drill those  
16 wells as well?

17 A. It is a possibility.

18 Q. When were you first brought in to lend your  
19 expertise into developing a plan for drilling these  
20 wells?

21 A. When we first started staking these wells and  
22 began a plan of development, which was the beginning of  
23 2016.

24 Q. Did you participate in any of the meetings with  
25 the BLM with regard to requesting locations for staking?

1           A.    That's not common practice for geologists at  
2 Concho.

3           Q.    So is that a no?

4           A.    That's a no.

5           Q.    Is it a common practice for Concho, when it's  
6 meeting with regulatory agencies, to invite offset  
7 operators to participate in those meetings to determine  
8 if that's going to adversely impact their plans of  
9 development?

10                   MR. FELDEWERT:  Objection.  You're talking  
11 about the meeting with the BLM to ascertain surface  
12 locations?

13                   MR. DeBRINE:  No.

14           Q.    (BY MR. DeBRINE) I'm talking about when Concho  
15 is putting together its plan of development and meeting  
16 with regulatory agencies, is it its practice to invite  
17 offset operators to participate in those meetings to  
18 determine whether Concho's plans for development that  
19 it's proposing will adversely impact development of  
20 offset operators?

21           A.    Concho hasn't met with a regulatory agency to  
22 work on our plan of development.  We're not forming a  
23 unit here.

24           Q.    How about when you formed units?  Have you  
25 invited offset operators to participate?

1           A.    We have not formed a unit since I've been at  
2 Concho on my team.

3                           MR. DeBRINE:  I'll pass the witness.

4   CROSS-EXAMINATION

5 BY EXAMINER McMILLAN:

6           Q.    Have you had a chance to look at Apache's  
7 geologist's presentation?

8           A.    I have not.

9           Q.    And based on the testimony presented by Apache,  
10 do you think their target interval is prospective?

11          A.    Yes.

12          Q.    Would those be -- would their target interval  
13 be the same as yours?

14          A.    Most likely, yes.  We have existing production  
15 surrounding their unit in the same intervals.

16                           EXAMINER McMILLAN:  Go ahead, David.

17   CROSS-EXAMINATION

18 BY EXAMINER BROOKS:

19          Q.    Well, as you stated, you're not an engineer,  
20 correct?

21          A.    No, I'm not.

22          Q.    Neither am I.

23                           But you are also -- you also testified that  
24 you're not familiar with the assumptions that the  
25 engineers used to make the conclusion that this was a

1 **prudent plan of development, correct?**

2 A. I do know they incorporate those numbers when  
3 we decide if we're going to lease or not, but I don't  
4 know the exact numbers because I don't do those  
5 calculations myself.

6 Q. Well, both you and the previous witness have  
7 talked a lot about not knowing things exactly, but that  
8 means -- that's really another way of saying, is it not,  
9 you don't know them? Because you may know from general  
10 knowledge of things the approximate contours within some  
11 range, but you really don't know what they are with  
12 regard to this particular situation, right?

13 A. I'm familiar. I can't give you details on  
14 those exact numbers that he asked for.

15 Q. Okay. Very good.

16 EXAMINER BROOKS: Well, I don't have any  
17 further questions for this witness.

18 EXAMINER McMILLAN: Thank you.

19 MR. DeBRINE: I just have one follow-up  
20 question with regard to Exhibit 3.

21 EXAMINER BROOKS: Okay.

22 MR. FELDEWERT: Which one is that?

23 MR. DeBRINE: That's the map of existing  
24 Yeso production.

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REXCROSS EXAMINATION

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BY MR. DeBRINE:

**Q. As I understood your earlier testimony, you said that most of the -- that the Yeso had been developed initially by vertical wells and then horizontal wells, and the general orientation is from east to west with horizontal wells?**

A. Yes.

**Q. How many wells do you count on this exhibit that are wells oriented north to south?**

A. I'd say maybe ten of them in the east half of Sections 12 and 13. Those are Concho wells which were drilled according to lease limitations. And there are half laterals drilled by Barnett in Sections 13, 14, 12, 11, 24 and 23 of 17-30.

**Q. And also in Section 11 and Section 10, you see some half-mile laterals going from north to south as well?**

A. Yes, a couple of them. But all of those wells all well within the Yeso Fairway, so they're not step-out wells. There's not a lot of risk with them if there is existing vertical production around them.

MR. DeBRINE: No further questions.

MR. FELDEWERT: I have one follow-up.

REDIRECT EXAMINATION

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BY MR. FELDEWERT:

Q. Ms. Pettijohn, looking at this, we do see kind of a step-out well up to the northeast of this exhibit, right up there in Sections 32 and 29?

A. Yup.

Q. A stand-up well?

A. Yes.

Q. Who drilled that well?

A. Apache.

Q. Have you looked at the success of that well?

A. I'm aware of the results from that well.

Q. What were the results of this bold vertical stand-up -- what were the results of this bold stand-up-oriented step-out well up in that area?

A. It was unsuccessful.

Q. Unsuccessful?

A. Yes.

Q. That's why, in your opinion, it would be prudent to step out using lay-down wells?

A. Yes.

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

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RECROSS EXAMINATION

BY EXAMINER McMILLAN:

Q. Okay. Actually, if you look in Section 3, Township 17 South, Range 30 East, you've got a well in the north half of the north half, right? And that's an east-west well. So is that -- do you know about the status of any of those wells?

A. Section 3, you said?

Q. Yeah. It looks like a 330.

A. Yes. We recently actually just drilled one well, and it was successful, just this year.

Q. Okay. So if you're one spacing unit away, these wouldn't be that big of a step-out then?

A. Correct, if it's an east-west well.

EXAMINER BROOKS: No questions.

EXAMINER McMILLAN: Thank you very much.

THE WITNESS: Uh-huh.

MR. FELDEWERT: Mr. Examiner, that concludes the witnesses I anticipated calling then.

EXAMINER BROOKS: Are you going to present a rebuttal case?

MR. DeBRINE: We would like to see the email that's going to be introduced.

EXAMINER BROOKS: I was going to bring that up.

1 MR. DeBRINE: Depending on that, we may  
2 have a rebuttal witness.

3 EXAMINER McMILLAN: What about the acreage  
4 position in the southwest quarter of Section 31? How  
5 are we going to resolve that?

6 MR. FELDEWERT: I believe Ms. Pettijohn  
7 testified that currently COG owns the south half of the  
8 southwest quarter.

9 EXAMINER BROOKS: Yeah, but she said she  
10 did not know what they owned in the north half of the  
11 northwest quarter, if anything, as I understood it.

12 MR. FELDEWERT: I think she testified that  
13 currently they do not own acreage, that that's what they  
14 were trying to acquire.

15 EXAMINER BROOKS: Well, it's my  
16 understanding of her testimony was - and maybe we should  
17 have her supplement it. My understanding was that they  
18 had started efforts to get acreage, and she didn't know  
19 where they were with it when they quit the process.

20 MS. PETTIJOHN: Do you want me back on the  
21 stand?

22 CANDICE PETTIJOHN,  
23 after having been previously sworn under oath, was  
24 recalled, questioned and testified as follows:

25 THE WITNESS: The north half of the

1 southwest quarter of Section 31, we do not have any  
2 ownership at this time.

3 RE CROSS EXAMINATION

4 BY EXAMINER BROOKS:

5 Q. Do not have any leasehold ownership?

6 A. At this time. But we were in works to acquire  
7 that lease when we got notice of the Thunderbird Unit.

8 Q. That was kind of the way I understood it,  
9 although I wasn't sure if you had knowledge or acquired  
10 any or not.

11 EXAMINER BROOKS: Anything further?

12 MR. FELDEWERT: Not unless you have any  
13 other questions.

14 EXAMINER BROOKS: I don't have any more  
15 questions.

16 MR. DeBRINE: Thank you, Mr. Examiner.

17 EXAMINER BROOKS: Okay. Do you want to  
18 take five minutes?

19 EXAMINER McMILLAN: Yeah. We'll take a  
20 five-minute break.

21 (Recess, 2:30 p.m. to 2:36 p.m.)

22 EXAMINER BROOKS: Well, I'm not sure this  
23 is even relevant, now that I look at it, because -- I  
24 refreshed my recollection. I didn't know as much about  
25 the case, but from the testimony this morning, I would

1    assume -- or today, I would assume that Mr. Glover is  
2    misinformed to the extent that he suggests that there is  
3    a depth-severance issue in this case.

4                   EXAMINER McMILLAN:  Both emails say that  
5    they were only unitizing a portion of the vertical unit  
6    and leaving a portion -- and leave the lower portion  
7    out.  That was what that was in reference to the --  
8    because everything from the Tubb down.

9                   EXAMINER BROOKS:  Okay.  It's not a depth  
10   severance of ownership.  It's a matter of depth  
11   severance of a pool, is that right, that our pool  
12   includes --

13                   EXAMINER McMILLAN:  Includes the entire  
14   Yeso, and they just want the upper three-quarters.

15                   EXAMINER BROOKS:  Yeah.

16                   And there's not been a request to form a  
17   new pool.  And that was an issue that's not explored in  
18   this.

19                   EXAMINER McMILLAN:  No, it was not.

20                   EXAMINER BROOKS:  Mr. Glover does not  
21   comment on the issues -- on any of the issues that were  
22   considered in this hearing.  So I still think it should  
23   be made -- it should be put in the case file.  It should  
24   either be put in the case file or admitted into  
25   evidence.  I don't have a preference as to which because

1 it's not really evidentiary. It doesn't touch on the  
2 issues we've discussed in the case.

3 MR. DeBRINE: Yeah. I would concur with  
4 your opinion that it's really not relevant to the issues  
5 that have been discussed here today. The  
6 depth-severance issue -- the testimony has been that the  
7 ownership is the same through the bottom of the  
8 formation, just Apache is targeting the top portion of  
9 the interval through -- in the unit.

10 EXAMINER BROOKS: Right.

11 Okay. Well, I think that in this case,  
12 this exhibit -- this letter should be put into the case  
13 file as correspondence so it can be considered by  
14 the -- by the director in making a decision, but I don't  
15 really believe it's relevant. I don't think it has  
16 evidentiary relevance. Okay?

17 MR. DeBRINE: That's fine.

18 EXAMINER BROOKS: Mr. Feldewert, is that  
19 acceptable to you?

20 MR. FELDEWERT: That's acceptable to me.  
21 I'm not going to object.

22 EXAMINER BROOKS: Make it part of the file  
23 but not part of the record.

24 MR. FELDEWERT: That's correct.

25 MR. DeBRINE: Mr. Examiner, at this time

1 we'd like to call Laci Stretcher for brief rebuttal.

2 EXAMINER McMILLAN: Please proceed.

3 LACI L. STRETCHER,

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

6 DIRECT EXAMINATION

7 BY MR. DeBRINE:

8 Q. Ms. Stretcher, did you have any conversations  
9 with a Concho landman with regard to the interests that  
10 were owned by Concho in the southwest quarter of Section  
11 31?

12 A. Yes. If you will turn to Exhibit 7, page 4,  
13 this is the email correspondence in its entirety from  
14 Concho -- between Concho and Apache when they contacted  
15 us in November about their potential protest. On page  
16 4, I had asked about Concho's ownership in the section,  
17 and he responded back on Friday, November 17th. He  
18 said, "We have an interest in the northeast quarter of  
19 Section 36 and have 80 acres of the southwest quarter of  
20 Section 1 [sic]." And in parentheses, he wrote, "(And  
21 are term-assigning the other 80.)"

22 Q. Did you mean 31? I think you said 1.

23 A. 31, yes.

24 So there is a little confusion as to  
25 Concho's ownership here. This is what Concho told me in

1 November, that they -- it seemed at that point that they  
2 had interest in the full 160 acres. They're talking  
3 about term-assigning half of it and that they own  
4 another 80 acres here. And the testimony that we just  
5 heard from the geologist said that they don't own any in  
6 80 acres of that quarter section. So --

7 EXAMINER BROOKS: Okay. Did you -- which  
8 page are you reading from in Exhibit 7?

9 THE WITNESS: I'm on page 4, and it's the  
10 blue --

11 MR. DeBRINE: It's the very top email,  
12 Mr. Examiner.

13 EXAMINER BROOKS: Okay. Okay. Thank you.

14 MR. DeBRINE: No further questions.

15 CROSS-EXAMINATION

16 BY MR. FELDEWERT:

17 Q. Ms. Stretcher, I'm confused by your testimony.  
18 Okay. Let's walk through this.

19 A. Sure.

20 Q. "We have an interest in the" -- and I'm looking  
21 at the email that you just pointed out. It says, "We  
22 have interest in the northeast quarter of Section 36."  
23 That would be the north half of 36. It's not an issue,  
24 correct?

25 A. Right. That's not an issue.

1 Q. So you're not focused on that?

2 A. No. It's the second part.

3 Q. Then it says, "And 80 acres in the southwest  
4 quarter of 31." Do you see that?

5 A. Uh-huh.

6 Q. And you were here for the witness who testified  
7 that they own the south half of the southwest quarter?

8 A. The south half of the south -- yes.

9 Q. That would be 80 acres?

10 A. That's correct.

11 Q. Okay. Were you also here for the testimony of  
12 the witness that they were in the process of acquiring  
13 the north half of the southwest quarter?

14 A. It says, "And are term-assigning the other 80."

15 Q. And you think that's inconsistent with their  
16 testimony that they were in the process of acquiring the  
17 north half of the southwest quarter and that they halted  
18 that effort when they ascertained and determined what  
19 impact the southwest of 36 would have on that acreage?

20 A. No. I'm saying that this sounds like they are  
21 term-assigning, which is a divestiture, not an  
22 acquisition. Acquisition is not listed here.

23 And just another side note is that they  
24 talk about that they've been staking these wells since  
25 2016. They had our unit boundaries back in July of

1 2017, and nothing was said at that time that there was  
2 any sort of conflict with a potential plan of  
3 development in that area with staked wells of any kind.

4 **Q. Okay. So you and I just have a different**  
5 **interpretation of what they meant in the parenthetical?**

6 A. Term assigning to me means that they are  
7 getting rid of, not acquiring.

8 **Q. Oh, I see. Okay.**

9 A. That's -- that's where the confusion is.

10 **Q. That's what you're thinking it means as opposed**  
11 **to --**

12 A. That's my interpretation.

13 **Q. -- what they testified to, that they were in**  
14 **the process of acquiring and then halted it?**

15 A. I'm back up here because it's confusing, that  
16 their ownership is not clear and that they had a  
17 geologist testifying as to their working interest when  
18 you're talking about proposing wells that would  
19 completely change our unit boundaries. I think it's a  
20 valid point to bring it up that Concho is saying that we  
21 have, you know, two opposing plans of development here,  
22 the Thunderbird Unit, and you have Concho. And Concho  
23 doesn't even own in the north half of that southwest  
24 quarter that's at issue here. So that's why I'm  
25 bringing it up, that there is at least some confusion on

1 our part on Concho's ownership here, especially in the  
2 fact that you had a geologist testifying as to working  
3 interest.

4 Q. Well, Ms. Stretcher, you can pooh-pooh the  
5 geologist's testimony because she's a geologist, but she  
6 did testify that she was aware of the ownership. And I  
7 know you don't like it, but she did testify, number one.

8 Number two, in your opinion, does it matter  
9 who owns the acreage if the Division is examining  
10 whether the acreage will be stranded?

11 A. The Division should definitely look at both  
12 sides of the cases, and that's the point of coming here  
13 today.

14 Q. Okay. And you should likewise --

15 A. I'm pointing out that there was some confusion  
16 in their email correspondence from November.

17 Q. And you should likewise examine not only  
18 whether the proposed unit boundary will strand acreage  
19 in the south half of the southwest quarter, but also  
20 whether it's going to strand acreage in the north half  
21 of the --

22 A. I agree they should look at both sides of the  
23 case.

24 Q. Thank you.

25 EXAMINER BROOKS: Okay. I just have one

1 question.

2 CROSS-EXAMINATION

3 BY EXAMINER BROOKS:

4 Q. Does Apache own any interest in Section 31?

5 A. No. We don't own any interest in Section 31.

6 Q. Thank you.

7 I agree with you that it's confusing.

8 MR. DeBRINE: That concludes our case.

9 MR. FELDEWERT: Mr. Examiner, we will call  
10 one more witness.

11 EXAMINER McMILLAN: Okay.

12 ADAM REKER,

13 after having been first duly sworn under oath, was  
14 questioned and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. FELDEWERT:

17 Q. Please state your name.

18 A. I'm Adam Reker.

19 Q. Would you identify by whom you're employed and  
20 in what capacity?

21 A. I'm a landman for COG Operating, LLC.

22 Q. How long have you been a landman for COG  
23 Operating?

24 A. Three-and-a-half years.

25 Q. Okay. If I turn to what's been marked as

1 Apache Exhibit Number 7, Mr. Reker, would you put that  
2 in front of you, please?

3 A. Yes.

4 Q. I want you to go to the last page.

5 EXAMINER McMILLAN: Which is?

6 MR. FELDEWERT: I'm sorry. Not the last  
7 page. Page number 4 of Apache Exhibit Number 7, when  
8 Ms. Stretcher was on the stand.

9 Q. (BY MR. FELDEWERT) Are you there?

10 A. Yes.

11 Q. Are you the Adam Reker that sent the email that  
12 Ms. Stretcher was confused about?

13 A. Yes.

14 Q. Would you please first clarify currently today  
15 what is COG's ownership in the southwest quarter of  
16 Section 31?

17 A. Yes. COG owns 100 percent of the south half of  
18 the southwest quarter.

19 Q. Secondly, Mr. Reker, were you involved in the  
20 company's efforts to obtain ownership in the north half  
21 of the southwest quarter of Section 31?

22 A. Yes, I was.

23 Q. And that was for the purpose of putting  
24 together and completing its development plan for not  
25 only the south half of 33 and 32, but also 31 into

1     **Section 36?**

2           A.     Yes.

3           **Q.     Okay.  And is it true that you were in the**  
4 **process at one point of trying to acquire that acreage**  
5 **by a term assignment?**

6           A.     Yes.  I guess that would have cleared up the  
7 discrepancy, if I would have said "acquiring term  
8 assignments" instead of "term assigning."

9           **Q.     Is that what you meant?**

10          A.     That is what I meant.  We were in the middle of  
11 negotiating term assignments, and I wasn't going to pay  
12 for this acreage not knowing what the result of this  
13 hearing would be.

14          **Q.     I understand your position.**

15                   MR. FELDEWERT:  That's all the questions I  
16 have.

17                   EXAMINER BROOKS:  No questions.

18                                   CROSS-EXAMINATION

19     BY EXAMINER McMILLAN:

20           **Q.     Okay.  So for clarity purposes, in the north**  
21 **half of the southwest quarter, does COG have operating**  
22 **rights?**

23           A.     Not at this time, no.  But as our attorney  
24 pointed out, I guess we're under the position that it  
25 doesn't really matter if COG owns those rights or

1 another party owns those rights. Those rights are still  
2 stranded regardless of who owns them. And we would like  
3 to own them, but we'll see what happens today.

4 **Q. And it's established that in the south half of**  
5 **Section 36, COG has no -- has no leases?**

6 A. Correct. We have no operating rights in the  
7 south half of 36. Ms. Stretcher's testimony was correct  
8 on that. I agree.

9 EXAMINER McMILLAN: Go ahead.

10 EXAMINER BROOKS: No questions.

11 MR. FELDEWERT: That concludes our  
12 presentation.

13 EXAMINER BROOKS: Okay. You had some  
14 additional questions -- some questions for this witness?

15 MR. DeBRINE: Yes.

16 CROSS-EXAMINATION

17 BY MR. DeBRINE:

18 **Q. Mr. Reker, does Concho own an interest in all**  
19 **of the tracts that will be developed by the horizontal**  
20 **wells that are shown on Concho Exhibit 1 in Sections 32**  
21 **and 33?**

22 A. No, they do not.

23 **Q. And what is its proportionate ownership?**

24 A. I mean, roughly, I would say -- I mean, I don't  
25 have it in front of me. If I had to give you an

1 estimated number, I'd say 50 percent, enough to go to  
2 forced pooling and make sure our acreage gets developed.

3 **Q. But you currently have no right to drill those**  
4 **wells?**

5 A. Yes, we do. Why would we not have the right to  
6 drill?

7 **Q. You couldn't obtain an APD for those wells if**  
8 **you don't own an interest in every tract that's going to**  
9 **be penetrated by the horizontal?**

10 A. We can obtain an APD. It's my understanding  
11 that we can obtain an APD if we have a force pooling  
12 order.

13 **Q. If you have a force pooling order. You don't**  
14 **have one currently, do you?**

15 A. No. But we can obtain an APD once we do have  
16 one.

17 **Q. Do you own interest in the tracts where the**  
18 **well pads are located?**

19 A. I believe so, yes.

20 **Q. Do you have an interest in the tracts where the**  
21 **well pads are located in Section 31?**

22 A. Yes.

23 **Q. And have you had any contact with the working**  
24 **interest owners whose consent or who you would have to**  
25 **force pool in order to propose the wells that are shown**

1 on Concho Exhibit 1 to see if they --

2 MR. FELDEWERT: I'm going to object.

3 Q. (BY MR. DeBRINE) -- would participate in the  
4 drilling of those wells?

5 MR. FELDEWERT: I'm going to object to the  
6 form of the question. I think it's compound. It  
7 assumes that they would have to force pool. As counsel  
8 knows, the first step is seek to propose the well, seek  
9 the voluntary agreement, and then if they can't get a  
10 voluntary agreement, then seek to pool.

11 EXAMINER BROOKS: Well, I think his  
12 question could be interpreted as him saying: Do they  
13 want to do it -- did they have the ownership necessary  
14 to either propose or force pool?

15 MR. FELDEWERT: Okay.

16 EXAMINER BROOKS: Is that correct?

17 MR. DeBRINE: Yes. It was any contact with  
18 those working interest owners.

19 EXAMINER BROOKS: That's the way I  
20 understood it.

21 THE WITNESS: Can you please repeat the  
22 question?

23 Q. (BY MR. DeBRINE) Have you had any contact with  
24 the working interest owners who would own an interest in  
25 the wells that are shown on Concho's Exhibit 1, who you

1     **would have to reach an agreement in order to jointly**  
2     **develop their property or force pool them?**

3           A.     So there are two answers to that question. For  
4     the wells on the eastern portion that run from Section  
5     33 to 31, the answer is yes. Through that same  
6     term-assigning effort that I was discussing earlier for  
7     the north half of the southwest of 31, we were able to  
8     obtain term assignments on several acres that we did not  
9     previously own. A portion of those people have not  
10    responded or were -- wanted to participate in the well,  
11    et cetera, on some of those term assignments, so we have  
12    contacted them, but they haven't given us a term  
13    assignment. We haven't proposed them a well, so we're  
14    kind of in that limbo period.

15           As for the wells in Section 31, we own all  
16    of the interest in Section 31, and as has been testified  
17    today, Apache owns the majority of the interest in 36.  
18    We have not contacted Apache about those wells because  
19    they have not been proposed yet.

20           **Q.     When did Concho first acquire its acreage in**  
21    **Section 31?**

22           A.     It was before I was at the company. I believe  
23    it was done through acquisition. I can't testify as to  
24    exactly when it was.

25           **Q.     And remind me how long you've been with the**

1     **company.**

2           A.     Three-and-a-half years.

3           **Q.     And when did Concho first consider a**  
4 **development plan for the acreage?**

5           A.     I'm not sure. I think that was testified to by  
6 some of my colleagues earlier. It's been several years  
7 now. But they tell me where they want to drill the  
8 wells, and then I try to make it happen. So I'm more  
9 involved after the development plan.

10          **Q.     Have you seen any written evidence of an actual**  
11 **development plan for the wells that analyzes the**  
12 **economics and actual well pad and the depths that are**  
13 **going to be perforated?**

14          A.     As we've kind of discussed today, I'm not going  
15 to speak to economics on this stuff. I don't -- it's  
16 not the side that I am an expert in.

17          **Q.     No. But my question is: Have you seen any**  
18 **documents that analyze those economics?**

19          A.     No. No. I have no reason to do that.

20                   MR. DeBRINE: No further questions.

21                   MR. FELDEWERT: I have no further  
22 questions.

23                   EXAMINER McMILLAN: Okay.

24                   EXAMINER BROOKS: No further questions.

25                   EXAMINER McMILLAN: Closing?

1 MR. DeBRINE: Yes. Briefly.

2 CLOSING ARGUMENT

3 MR. DeBRINE: This is a curious case,  
4 Mr. Examiners. The testimony today has been pretty  
5 clear that the acreage that Concho wants you to exclude  
6 from the unit is already owned 100 percent by the  
7 working interest owners in the proposed Thunderbird  
8 Unit. There have been wells permitted for that acreage.  
9 And Apache could begin tomorrow and drill the wells that  
10 have already been permitted, and there is nothing that  
11 Concho could do to prevent that under the Division's  
12 rules with regard to those wells.

13 The wells are orthodox. They are going to  
14 be drilled. They're owned 100 percent. There is no  
15 consent that's needed -- further consent that's needed  
16 by the Division to drill the wells that are part of the  
17 development plan for the Thunderbird Unit.

18 So we have a very unusual situation where a  
19 party who has very speculative plans for developing  
20 acreage that requires that it obtain additional acreage  
21 through the exercise of the force pooling power of the  
22 Division to try and block a unit that's been in the  
23 works for three years where there are millions of  
24 dollars that have been invested in putting it together,  
25 that's been approved by the State Land Office and the

1 BLM, and the testimony by engineers is the best way to  
2 develop the acreage that's going to be composing the  
3 unit.

4           We have no engineering testimony from  
5 Concho to support their plan of development. We have no  
6 written document that even shows an actual plan of  
7 development exists. And so in a normal case, even if  
8 you were dealing with a competing proposal for drilling  
9 a well, you normally come in and you have engineers and  
10 you have actual evidence to evaluate the two plans. We  
11 don't even have that here. We've just got speculative  
12 plans by Concho about what it would like to do. And if  
13 that were the case, anybody owning a quarter-acre tract  
14 could have big plans to acquire more acreage and is  
15 somehow going to impact their development plan that is  
16 going to take a lot of work and thwart the unit. That  
17 would be a gross misuse of the Commission -- or the  
18 Division's authority with regard to these units, which  
19 is somewhat uncertain. There is no specific statutory  
20 grant with regard to the approval of units.

21           The testimony has been that Apache is  
22 prepared to begin developing this unit tomorrow.

23           Concho's essentially asking the Division to  
24 abrogate a development contract that's already in place  
25 to allow it to develop adjacent acreage it doesn't even

1 own, which until a few months ago, it had no concrete  
2 plans to develop and even today has no concrete plans to  
3 develop.

4           So we believe -- given the fact that Apache  
5 has already devoted substantial resources to the unit,  
6 it's made every attempt to accommodate Concho, offering  
7 pass-through easements so it could drill lateral wells  
8 from Section 36 within the unit -- and that's state  
9 land. And we have all this speculation about what the  
10 BLM says and did, but the BLM's not here today to  
11 actually give create evidence as to what it would or  
12 wouldn't approve with regard to well locations in  
13 Section 36.

14           You do have concrete testimony from Apache  
15 that they went out and they had no problem permitting  
16 their wells in Section 36. In talking to the State Land  
17 Office, it's the same agency that evaluates the  
18 endangered species and other environmental limitations  
19 on drilling, and Apache had no problem in obtaining its  
20 permits to drill the wells in Section 36.

21           Concho has known about this proposed unit  
22 since July when Apache first sent the proposed unit  
23 boundaries to Concho and heard nothing for months until  
24 it filed its application, when suddenly there is plans  
25 in the works where Concho's theoretical development

1 plans might be impacted by the unit. And so they appear  
2 and they oppose -- to oppose its approval by the  
3 Division.

4 Apache is an experienced operator which has  
5 proven results at developing the Yeso in this area. You  
6 have evidence before you that the results they've  
7 obtained are superior to Concho's of developing the Yeso  
8 in this area. And it's sheer speculation whether the  
9 State Land Office or the BLM might grant a change in the  
10 approved unit boundaries. The email, it's not part of  
11 the record, but the BLM has said it's not going to  
12 approve any more resource development plans. We are  
13 very concerned that if the Division were to change the  
14 unit boundaries and we had to go back to the agencies,  
15 that the BLM might never approve the establishment of  
16 the unit.

17 The correlative rights of the interest  
18 owners in the south half of Section 36 will be adversely  
19 affected if the Division were to exclude that from the  
20 unit. They were part of a plan for cooperative  
21 development, which is based on specific economics that  
22 have been analyzed and supported by engineering  
23 testimony as to the facilities and the savings of costs  
24 that'll be achieved by cooperative development for a  
25 unit. And those interest owners would be adversely

1 affected if they were somehow left on their own and  
2 someday be in front of the Division in a forced pooling  
3 where Concho gets to try and capture their acreage to  
4 its own personal benefit.

5           The map of the active units in this area  
6 shows that the ownership is the driving factor with  
7 regard to the location of unit boundaries. The  
8 testimony has been that this has to be -- New Mexico  
9 doesn't allow for pooling of units, except with regards  
10 to secondary recovery. The statute does allow for  
11 establishment of units under those circumstances. The  
12 only way you can form a unit is through a voluntary  
13 agreement, and it takes a lot of work and effort in  
14 order to do that, to identify all the potential  
15 overriding royalty interest owners who were given notice  
16 of these proceedings and to acquire the acreage needed  
17 to put together a common plan of development that works  
18 for everybody.

19           And we submit that there's been no basis  
20 whatsoever under the Oil and Gas Act or the Division's  
21 rules for excising the south half of Section 36 from the  
22 unit. It's pure speculation as to whether that acreage  
23 can be stranded. The engineering testimony is it could  
24 be developed from utilizing well pads that Apache has  
25 offered in Section 36, drilling laterals from east to

1 west, and that Apache has had good success in drilling  
2 laterals from north to south, and Concho hasn't explored  
3 drilling laterals from north to south where it could --  
4 where it could try those as well.

5 There's no concrete evidence that any  
6 acreage would be stranded if the Division approves the  
7 location, and we would ask that you do that.

8 EXAMINER McMILLAN: Thank you.

9 CLOSING ARGUMENT

10 MR. FELDEWERT: So Apache comes before you  
11 here today. They file an application. And they say in  
12 their application, the Division, we want you to approve  
13 the combining of the contiguous spacing units into a  
14 unitized area. And they say that you should do that  
15 because that would be in the best interest of  
16 conservation, the prevention of waste and the protection  
17 of correlative rights.

18 After that, they pretty much ignore it,  
19 because all I hear today is about the dollar that they  
20 spent, the time invested into this, the impact on their  
21 farm-out with Chisos, what a great operator they are  
22 here in New Mexico, and that ownership is a driving  
23 factor and we own 85 percent, so we get to determine the  
24 unit boundary, and you, the Division, should just  
25 rubber-stamp this. That's what they're saying to you.

1                   But the issue here before you is: Will  
2 this boundary and, in particular, the inclusion of the  
3 south half of Section 36, is that going to cause waste?  
4 Is it going to impact the correlative rights of the  
5 interest owners in the southwest quarter of 31? Is it  
6 going to cost [sic] waste? That's the issue. And you  
7 are free to look at that, and it is your duty to look at  
8 that, and you do so in this hearing.

9                   When they finally gave notice to offset  
10 operators, they said, Come in if you see a problem with  
11 our boundaries. So here we come in, and we show the  
12 problem with their boundary. We show that it's caused  
13 by the BLM surface locations. Fact: The BLM has only  
14 approved these locations for the development of this  
15 acreage. Fact: They will not approve surface locations  
16 on the eastern side of the south half of 36 to go this  
17 way (indicating) and develop the acreage. Cannot  
18 happen. So fact is the only option that is prudent and  
19 reasonable -- and everybody here agrees -- prudent and  
20 reasonable to develop this acreage with lay-down  
21 horizontal wells. And that can only be accomplished  
22 with these limited surface locations by the exclusion of  
23 the south half of 36.

24                   So have we shown that these will cause  
25 waste? Yes. Waste because the southwest quarter is not

1 going to be developed. They're not going to do it.  
2 It's not economic. And you've got the waste associated  
3 with the setbacks that are going to apply. So have we  
4 shown that they're going to cause waste and impact  
5 correlative rights? Yes, we have.

6 Their geologist got on the stand and  
7 answered the question: Is there going to be any impact  
8 on correlative rights if you exclude the south half of  
9 36? He said no. I saw your reaction. He said no.  
10 Okay?

11 I look at their development plan, Exhibit  
12 20. They're developing the south half of 36 on its own.  
13 It's not connected with any of their other unit plans.  
14 It's got its own stand-alone wells. Okay? No impact on  
15 their ownership, no impact on their ability to go  
16 forward with this unit if the south half is excluded.  
17 They have shown no harm from that if the south half is  
18 excluded. Zero. But we have shown the vast potential  
19 for harm or waste and the impact of correlative rights  
20 if it's included.

21 So I sit here and I say: Why would you  
22 keep it in the unit? If you're going to exercise your  
23 discretion, why would you strand the southwest quarter  
24 of 31 by including it in the unit? Why would you let  
25 that impact occur on the correlative rights of the

1 owners in the southwest quarter no matter who owns it,  
2 given this limited surface location? And why would you  
3 allow the waste of those reserves not only in the  
4 southwest quarter but in the 330 offsets on each side,  
5 which can be developed under COG's plan using the  
6 BLM-approved surface locations.

7           So yes. We've asked you to come here and  
8 exercise your discretion. We've asked you to do exactly  
9 what Apache has done. Look at this unit boundary on  
10 your own and determine, based on your expertise, whether  
11 it is going to have a negative impact on correlative  
12 rights, whether it's going to cause waste and whether  
13 it's going to strand acreage.

14           And, quite frankly, I don't see any reason  
15 why that south half of 36 has to remain within the unit.  
16 They can proceed without it, and we could alleviate the  
17 concern about waste and correlative rights. So we ask  
18 that you exclude it.

19           EXAMINER BROOKS: Anything further?

20           REBUTTAL CLOSING ARGUMENT

21           MR. DeBRINE: If I could just respond  
22 briefly.

23           The exclusion of Section 36 is still going  
24 to have the same impact on Concho. It's already been  
25 targeted for development, for lay-down laterals that

1 have been approved. There are approved APDs for the  
2 drilling of those wells. And so the result is going to  
3 be the same regardless of the decision of the Division.  
4 It's going to have the same impact on Concho. They're  
5 trying to abuse the Division's authority to affect the  
6 divestiture of property that's already been committed to  
7 a development plan. And the clear evidence is  
8 protective of correlative rights and to prevent waste.

9                   And under the pooling statute, if we're  
10 dealing with pooling, the Division has to defer to an  
11 existing development plan, and particularly one that has  
12 already gone through the wringer for three years with  
13 the regulatory agencies that administer the actual lands  
14 that compose of the unit, the State Land Office and the  
15 BLM, who had the opportunity to discuss what lands  
16 should or should not be included. Testimony,  
17 additionally, acres were brought into the unit at their  
18 request. And we submit that the relief Concho is  
19 requesting would have the same result if that land were  
20 excluded from the unit. They still would have the same  
21 limitations with regard to their adjacent acreage, and  
22 they wouldn't be able to force pool Apache because  
23 Apache would start drilling these wells tomorrow.

24                   EXAMINER BROOKS: If they were not  
25 enjoined.

1 MR. FELDEWERT: What's that?

2 EXAMINER BROOKS: I said if they were not  
3 enjoined.

4 MR. FELDEWERT: Correct.

5 EXAMINER BROOKS: Okay.

6 EXAMINER McMILLAN: Case Number 15874 shall  
7 be taken under advisement at this time.

8 Thank you very much.

9 (Case Number 15874 concludes, 3:07 p.m.)

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1 STATE OF NEW MEXICO  
2 COUNTY OF BERNALILLO

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4 CERTIFICATE OF COURT REPORTER

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

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

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

20 DATED THIS 31st day of January 2018.

21

22 MARY C. HANKINS, CCR, RPR  
23 Certified Court Reporter  
24 New Mexico CCR No. 20  
Date of CCR Expiration: 12/31/2018  
Paul Baca Professional Court Reporters

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