

STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION COMMISSION

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

APPLICATION OF THE MARBOB ENERGY CORPORATION FOR  
VERTICAL EXPANSION OF THE BURCH-KEELY UNIT, EDDY  
COUNTY, NEW MEXICO

Case No. 14558 (de novo)

APPLICATION OF COB OPERATING LLC FOR VERTICAL  
EXPANSION OF THE GRAYBURG-JACKSON (SEVEN  
RIVERS-QUEEN-GRAYBURG-SAN ANDRES) POOL TO CORRESPOND  
WITH THE UNITIZED FORMATION OF THE BURCH-KEELY UNIT,  
EDDY COUNTY, NEW MEXICO.

Case No. 14577 (de novo)

JULY 28, 2011  
9:00 a.m.  
1220 St. Francis Drive  
Santa Fe, New Mexico

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1 (Note: In session at 9:05.)

2 CHAIRWOMAN BAILEY: So now we have Case  
3 14558, Application of Marbob Energy Corporation for  
4 Vertical Expansion of the Burch Keely Unit, Eddy  
5 County, New Mexico; and Case No. 14577, Application  
6 of the COG Operating LLC for Vertical Expansion of  
7 the Grayburg-Jackson (Seven  
8 Rivers-Queen-Grayburg-San Andres) Pool to Correspond  
9 with the Unitized Formation of the Burch Keely Unit,  
10 Eddy County, New Mexico.

11 There have been a series of motions  
12 concerning these two cases. Although not in  
13 sequence of time, in sequence of logically dealing  
14 with the motions we will go in the following order:  
15 Today is a motion to consolidate cases for hearing,  
16 COG brought this motion and I see no response. Are  
17 there any arguments concerning this motion to  
18 consolidate the cases? Seeing none.

19 MR. CAMPBELL: Ma'am Chairman, no, I  
20 thought we had informed counsel that we did not  
21 oppose it.

22 CHAIRWOMAN BAILEY: Okay. Seeing none, do  
23 the commissioners have any objection to  
24 consolidating the cases?

25 MR. DAWSON: I have no objection.

1 MR. BALCH: None.

2 CHAIRWOMAN BAILEY: Okay. Next we have a  
3 motion for a continuance where Cimarex and Magnum  
4 Hunter -- Cimarex Energy Company of Colorado and  
5 Magnum Hunter Production, Inc. move for a  
6 continuance of these cases. Could we ask for  
7 appearances first before we get involved in  
8 discussion of these other motions?

9 MS. LEACH: Carol Leach from the law firm  
10 Beatty & Wozniak, PC located here in Santa Fe, and  
11 with me at the table is the client representative,  
12 Greg Daggett. We represent Concho Resources or COG  
13 Operating, LLC.

14 CHAIRWOMAN BAILEY: Okay.

15 MR. CAMPBELL: Madam Chairman, I'm Michael  
16 Campbell, a lawyer here in Santa Fe. With me is Jim  
17 Vaiana, a managing counsel of ConocoPhillips in  
18 Houston appearing here for ConocoPhillips.

19 MR. BRUCE: Madam Chair, Jim Bruce of  
20 Santa Fe representing Cimarex Energy Company of  
21 Colorado and Magnum Hunter Production, Inc.

22 CHAIRWOMAN BAILEY: Mr. Bruce, it was  
23 Cimarex and Magnum Hunter who have filed this motion  
24 for continuance. I would like to hear arguments on  
25 whether or not this Commission should grant the

1 motion.

2 MR. BRUCE: Ma'am chair, I presume the  
3 commissioners have read the motion and the response,  
4 so I don't want to take up too much time. There are  
5 some issues regarding notice. I recognize the  
6 filing was late and I apologize to the Commission  
7 for that, but that's partly because my client was  
8 kind of confused as to what was going on.

9 All I will say is that I don't think  
10 adequate notice was given in at least one of the  
11 cases to Cimarex Energy Company of Colorado. The  
12 other thing is there's an affidavit attached to  
13 COG's response regarding conversations between a  
14 couple of the vice presidents of Cimarex. I don't  
15 think a casual conversation satisfies the notice  
16 requirements. I recognize the parties are here and  
17 they want to go forward. I know my friends at COG  
18 have one or two other things going on in the state  
19 and they want to get this over and done with and I'm  
20 sure ConocoPhillips does, too.

21 So at best, I would ask that after this  
22 hearing it be continued to allow my clients to put  
23 on some evidence. My clients do fully support  
24 ConocoPhillips' position in this case, and as you  
25 know, operators always like to present their own

1 evidence, but because of the time deadlines there  
2 was no -- I couldn't satisfy the Division's or I  
3 should say the regulations regarding designating  
4 witnesses and submitting exhibits to opposing  
5 counsel, et cetera, so I have not brought any  
6 witnesses with me today.

7 CHAIRWOMAN BAILEY: We have COG's response  
8 to the motion of continuance.

9 MS. LEACH: We responded to the motion by  
10 opposing it, and we additionally have some other  
11 requests for you regarding the participation of  
12 Cimarex and Magnum Hunter. Our basic response is  
13 they missed the deadline. Cimarex has appeared in  
14 numerous cases in front of the Commission, so they  
15 are definitely a sophisticated participant in the  
16 hearings.

17 In this case they had actual knowledge and  
18 it's interesting to me to hear Mr. Bruce talk about  
19 notice but he does not cite a single rule that  
20 requires that notice be given to the clients that  
21 he's talking about today. So while he is claiming  
22 they didn't get notice, that may well be true in  
23 some of the cases but it does not mean that they are  
24 necessarily entitled to notice pursuant to the  
25 rules. So I think that's a gaping hole in

1 Mr. Bruce's argument.

2 In addition, I strongly object to allowing  
3 part of the case being put on today and another part  
4 of it later. That is not playing in to these people  
5 who waited until the last minute to do anything and  
6 then they hear everybody else's case and get the  
7 tenure of their arguments.

8 I think the rules of identifying witnesses  
9 and exchanging documents before the hearing are  
10 designed not to have an ambush effect and that's  
11 what they are trying to set up. I don't think they  
12 followed the rules and I think it's inappropriate  
13 and the case needs to go forward. We have a room  
14 full of witnesses who traveled for the case and we  
15 would like to go forward and have it completed  
16 today.

17 MR. CAMPBELL: Ma'am Chairman, we don't  
18 have any argument on the motion.

19 CHAIRWOMAN BAILEY: Okay. Mr. Bruce has  
20 submitted a letter saying that ConocoPhillips has  
21 informed him that it would like to proceed with the  
22 cases today.

23 MR. CAMPBELL: Yes, ma'am.

24 CHAIRWOMAN BAILEY: Is that  
25 representative?

1 MR. CAMPBELL: Yes, ma'am.

2 CHAIRWOMAN BAILEY: Commissioners, would  
3 you like to rule on continuing the case?

4 (Note: A discussion was held off the  
5 record).

6 CHAIRWOMAN BAILEY: We will go into  
7 executive session to consider this proposal for  
8 continuance, the motion for continuance. In  
9 accordance with New Mexico Statute 10-15-1 and the  
10 OCC resolution on open meetings, we will go into  
11 executive session.

12 MS. LEACH: Ma'am chairman, we also asked  
13 you as part our response to the motion that you  
14 basically either limit or not allow Cimarex and  
15 Magnum Hunter to participate in this hearing and  
16 that's because they basically did not follow the  
17 rules. Having presented no witnesses, no exhibits,  
18 they should not be allowed to put on witnesses or  
19 exhibits. And frankly, the way your rules are  
20 drafted, the de novo hearings can only be triggered  
21 by people who participated in the case below. Those  
22 are the parties to the case.

23 If they wanted to come into this case,  
24 they should have filed a motion to intervene in a  
25 timely manner. They did not do that. They are

1 basically following the procedure that is followed  
2 at the division level where anybody can walk in the  
3 room and participate in the case that day. That's  
4 different than a de novo hearing that is -- the  
5 division case basically has a do-over at the  
6 commission level, so it can be a little more  
7 informal. But at this level, your rules basically  
8 require everybody to be up front about the  
9 participation and not come in at the last minute.

10 So we strenuously urge you basically not  
11 to let Cimarex and Magnum Hunter participate in the  
12 case. In the alternative, if you do, that they are  
13 not allowed to call witnesses or put on evidence.

14 MR. BRUCE: Madam Chair, if I can address  
15 that, I already said we have no exhibits or  
16 witnesses. We are not attempting to present any  
17 evidence.

18 MS. LEACH: Except that he is asking for  
19 it to be continued to another day so they can put on  
20 witnesses and evidence at that time.

21 MR. BRUCE: Again, you get back to the  
22 notice issues, and I would state that if they  
23 notified ConocoPhillips, an operator in the Grayburg  
24 Deep unit of the original applications, they did not  
25 notify Cimarex Energy Corporation of Colorado, also

1 an operator in the Grayburg Deep unit of the two  
2 cases. So there is that issue, but I will abide --  
3 at this point at the very least, I would like my two  
4 clients of record before the Division -- or before  
5 the Commission to note that they have entered an  
6 appearance and that they do support ConocoPhillips.

7 CHAIRWOMAN BAILEY: We will take that into  
8 account. Do I hear a motion from the Commission to  
9 go into executive session?

10 MR. BALCH: I will so move.

11 MR. DAWSON: I will second, yes.

12 CHAIRWOMAN BAILEY: All in favor? All  
13 those opposed? This should not take very long.

14 (Note: The hearing stood in recess at  
15 9:15 to 9:25.)

16 CHAIRWOMAN BAILEY: The only thing  
17 discussed when we were in executive session was the  
18 argument concerning continuance. The Commission has  
19 decided that the motion was filed untimely and that  
20 there has been no evidence presented to support the  
21 claims. So the motion is denied.

22 The next motion has to do with  
23 postponement by ConocoPhillips. Do you wish to  
24 withdraw this motion for postponement?

25 MR. CAMPBELL: Yes, we do, Ma'am Chair.



1 CHAIRWOMAN BAILEY: Then the next motion  
2 has to do with the partial stay that was filed by  
3 ConocoPhillips. This motion can be dealt with when  
4 we rule on the merits of the case. Are there  
5 arguments concerning this?

6 MR. CAMPBELL: This is a motion that  
7 Conoco filed?

8 CHAIRWOMAN BAILEY: ConocoPhillips'  
9 Application of COG for Vertical Expansion, Motion  
10 for Partial Stay.

11 MR. CAMPBELL: I think we filed that,  
12 Ma'am Chairman, before the parties agreed to  
13 continue the case.

14 MS. LEACH: Ma'am Chairman, on this  
15 motion, Conoco asks basically for a stay before the  
16 hearing, so it may be somewhat moot now, but what  
17 they are asking for, it says, "In order to protect  
18 the correlative rights of the interest owners in the  
19 Grayburg Deep, including the rights of  
20 ConocoPhillips, the director at a minimum should  
21 stay applicant from drilling, perforating and  
22 fracking to a depth limit equivalent to the aerial  
23 spacing restraint of 330 feet above, 5,000 feet  
24 below the surface."

25 In a later pleading Mr. Campbell first

1 objected to my calling that a buffer zone and said  
2 that I was chasing ghosts, but in a later pleading  
3 he said they were no longer asking for that. So I  
4 think we are actually through with this motion for  
5 partial stay.

6 CHAIRWOMAN BAILEY: Thank you.

7 MR. SMITH: Do you want to withdraw that?

8 MR. CAMPBELL: Yes, sir, that would be  
9 fine.

10 CHAIRWOMAN BAILEY: Then the next motion  
11 is COG's motion to limit testimony and argument.  
12 Could we have arguments or discussion concerning  
13 this motion?

14 MS. LEACH: Thank you, Ma'am Chair. This  
15 motion was originally related to the motion for  
16 partial stay and the so-called buffer zone. And  
17 that's my term; that is not ConocoPhillips' term.  
18 But when I see something that says don't drill  
19 within 330 feet of the bottom of the area that you  
20 own, that looks like a buffer zone to me.

21 But in addition to that, what is clear now  
22 is that while they have backed away from the concept  
23 of a buffer zone, what they are looking for is  
24 protection from fracking, hydraulic fracking. They  
25 are asking basically that you deny the unit and the

1 pool in this case to give them protection from  
2 fracking.

3 Our point of this is that if they are  
4 concerned about protection from fracking, it needs  
5 to be brought, one, in a specific case. They can  
6 protest an application for a permit to drill because  
7 then you know what area you are dealing with. You  
8 would know basically how deep the well is going to  
9 be and have all those kinds of facts in front of  
10 you. It would be a specific adjudication about the  
11 proposed well.

12 That's not what they have chosen to do.  
13 They chose to bring it in this unit and pool case  
14 and they want you to bar any drilling in the area.  
15 To me that's not the rule. It could be a special  
16 pool rule, but the notices in this case have not  
17 gone out pertaining to the special pool rules for  
18 the Grayburg-Jackson pool.

19 So then it looks more like a general rule,  
20 and you have a very specific process for  
21 rule-making, and the rule-making would bring in lots  
22 of other parties. Basically, now you have two  
23 parties, and we have a little unfinished business  
24 with Cimarex, but you have two parties talking about  
25 an issue that's incredibly important to this

1 industry.

2 Almost every well in this state is  
3 fracked. Fracking has been going on since like  
4 1947. Every single well is, and OCD has very few  
5 rules about fracking and you have no rules that go  
6 to the length of a fracture. That's what they are  
7 really looking for here. When they say they don't  
8 want you to drill close to the ownership line, they  
9 are looking for a rule to that effect. As you have  
10 setbacks from like ownership on the surface, I will  
11 call it, horizontal ownership instead of vertical  
12 ownership.

13 So they are looking for that to be a rule  
14 in this case or at least I thought they were when  
15 they were going for a buffer. Now they just say  
16 they want protection, and their protection is deny  
17 the unit, deny the pool, and that will give Conoco  
18 protection. Well, it really doesn't, because we can  
19 drill the wells whether or not they are dependent on  
20 the pool. It just makes it more economical for us  
21 to do it if they are in the unit or the pool.

22 I think the real problem is we shouldn't  
23 be talking about fracturing in this case. That  
24 really should be part of a separate rule-making  
25 hearing and to do so violates your rules.

1           In addition, I think they are asking you  
2   to take a huge turn in direction from the  
3   traditional OCD practice. That basically, if you  
4   look at -- there's a case very long ago where one of  
5   Mr. Campbell's clients said that basically their  
6   fractures were designed to go 500 feet but they are  
7   in fact going out 900 feet. The world didn't end.  
8   The hearing officer didn't say, "Oh, that's  
9   horrible. 330 foot setback and you're going 900  
10   feet? You may well be draining for the next-door  
11   neighbor." That's not what's going on. Basically  
12   OCD has a rule practice of not regulating fracking.

13           If I can share with you basically a  
14   decision that COG had in a case in front of the  
15   Division fairly recently, I think it illustrates, if  
16   I may, that fracking is not something that OCD is  
17   currently looking to. COG asks for compulsory  
18   pooling down to 5,000 feet in this case. They were  
19   basically denied that. They were allowed to pool  
20   down to the depth of the well that they proposed and  
21   the pooling below that level was not granted.

22           So if you look at the first two findings  
23   under the order, the second one clearly says, "The  
24   proposal of COG Operating, LLC to pool all oil and  
25   gas interest within Lot 2 of Section 30 between 4800

1 feet and 5,000 feet is hereby denied."

2           OCD would only allow COG to pool to 4800  
3 feet with the bottom depth of the well they  
4 proposed. So if there's an argument that fracking  
5 can go below the bottom of the well, which is the  
6 argument that Conoco is making here, basically OCD  
7 is saying, "We don't care. We are not pooling those  
8 interests in. If you happen to pull hydrocarbons  
9 from below the bottom of the well, that's not in  
10 your pool."

11           So I don't think OCD would really try to  
12 set COG or any other operator up for a trespass case  
13 or anything, so I think everyone has an  
14 understanding that we are not really at this point  
15 making decisions about where fracks go or how long  
16 they may be. You are entitled to do that and if you  
17 want to do that, I think you need to do that through  
18 a rule-making procedure, not under the guise of the  
19 unit or pool case.

20           That's our argument. Therefore, we would  
21 really like to not have testimony today about  
22 fracking. I think you may want to take a look at  
23 the decision in Texas in the Texas Supreme Court,  
24 and I have copies of that for you or your counsel if  
25 you would like them, but basically the Texas Supreme

1 Court was faced with a trespass case about drainage  
2 because of fracking and said, you know, it's  
3 governed by the rule of capture. We are not going  
4 to say basically fracks going on to the next-door  
5 neighbor. Even if there is drainage, it's  
6 recognized in that case. That's not going to be a  
7 trespass case, not going to be damages awarded for  
8 that.

9           They also observed that the Texas Railroad  
10 Commission and the Texas legislature, just as in New  
11 Mexico, does not have a statutory scheme for  
12 regulating the length of fracking and does not have  
13 a rule-making scheme for regulating the length of  
14 fractures. Because we don't have the rules, we  
15 think basically you shouldn't make a decision  
16 whether a unit should be extended or a pool should  
17 be extended by mixing it up with basically  
18 protection from fractures. So we think that should  
19 be a rule-making case instead of in this case or in  
20 a protest of an individual well case. Thank you.

21           MR. CAMPBELL: Ma'am Chair, it was in  
22 response to this motion that I suggested Ms. Leach  
23 was chasing ghosts. We are not here seeking  
24 protection from fracking. Conoco, like all  
25 operators in that area, fracks its wells. We are

1 not complaining about their fracking techniques,  
2 methods or design. We are here to oppose their  
3 application which seeks a vertical extension to both  
4 the Burch Keely unit and the Grayburg-Jackson pool  
5 to a 5,000 foot depth directly on top of Conoco's  
6 interests and others' interests in the Grayburg Deep  
7 unit.

8 We will demonstrate with our presentation  
9 that grant of this application by Concho, these two  
10 applications, will result in the impairment of  
11 correlative rights and the encouragement of economic  
12 waste. We are entitled to present our case as we  
13 present it. We are not going to be here arguing  
14 about fracks. We strongly suggest that you  
15 shouldn't limit us with respect to what we say or  
16 don't say regarding our opposition to these  
17 applications.

18 CHAIRWOMAN BAILEY: Thank you. Executive  
19 session? Is that what you care to do?

20 MR. DAWSON: Yes, ma'am.

21 CHAIRWOMAN BAILEY: Do I hear a motion to  
22 go into executive session to consider the motion to  
23 limit testimony?

24 MR. BALCH: I will make the motion.

25 MR. DAWSON: I will second.



1 CHAIRWOMAN BAILEY: All in favor? All  
2 those opposed?

3 MS. LEACH: Ma'am Chair, while you are  
4 away, I don't think we got a ruling on the motion we  
5 made regarding participation by Cimarex and Magnum  
6 Hunter in this case or their ability to put on  
7 witnesses and exhibits.

8 CHAIRWOMAN BAILEY: That was denied.

9 MS. LEACH: Okay. I just heard the part  
10 about the continuances. Excuse me. Thank you.

11 (Note: The hearing stood in recess at  
12 9:37 to 9:44.)

13 CHAIRWOMAN BAILEY: The Commission has  
14 decided to deny COG's motion to limit testimony and  
15 argument. If there are individual objections to  
16 testimony, those can be ruled on on an individual  
17 case basis but at this time we are denying this  
18 motion to limit testimony and argument. Opening  
19 statements?

20 OPENING STATEMENTS

21 MS. LEACH: Thank you, Ma'am Chair. This  
22 started as a relatively simple case. There is an  
23 existing Burch Keely unit. It's a statutory unit  
24 under the Statutory Unitization Act. It is mostly  
25 federal lands, so the BLM is also involved in the

1    approvals of it. Since it was originally created it  
2    has been extended vertically before this  
3    application, and in this application we are asking  
4    to extend it down to the ownership line that COG  
5    has. The case originally started under the name of  
6    Marbob and then COG purchased Marbob assets and COG  
7    continued the case.

8                   When we talk about extending downward to  
9    the vertical limits, within the Burch Keely unit,  
10   from the previous unit descriptions we are talking  
11   on one side of the unit that the extension is less  
12   than 600 feet and on the other side of the unit the  
13   extension is 250 or less than 300 feet, so we are  
14   not talking about a huge amount of space, but we're  
15   talking about enough space for us to be able to  
16   reach the Blinebry formation. The Blinebry  
17   formation at one time was considered perhaps even a  
18   worthless rock, as people described it. Times have  
19   changed.

20                   In this case the original demarcation of  
21   the 5,000-foot ownership began with the demarcation  
22   of two units and pools. There's a Grayburg Deep  
23   unit and it starts at 5,000 feet and goes downward  
24   and then there's the pool and unit that we're  
25   talking about up above it. Just for name's sake

1 it's the Burch Keely unit and the Grayburg-Jackson  
2 pool. We will try to talk in terms of the unit and  
3 the pool so it's not quite such a mouthful to say.

4 So there are two applications, one for the  
5 unit extension one for a pool extension. Both are  
6 extending into the same area.

7 When the unit case first came to the  
8 Division, the hearing examiner said, "Looks like you  
9 have everything you need to extend the unit. You  
10 have a unit agreement that allows for that  
11 extension. You have support of the Bureau of Land  
12 Management. We are a little concerned about if you  
13 do that, because the area is not in the  
14 Grayburg-Jackson pool as is the rest of the unit,  
15 that you will have a commingling problem and that  
16 means you will have to file papers asking for  
17 commingling and you will be coming back in front of  
18 the Division and it will be more paperwork or you  
19 will have to maintain separate equipment and you  
20 won't get the benefit you really wanted, which is  
21 being able to see a vertical well that picks up from  
22 a number of formations." Specifically, in the area  
23 we are talking about, the Paddock and the Blinebry.

24 So basically the hearing examiners raised  
25 a question about extending the pool to match the

1 unit and COG went out and did that. They brought a  
2 second application to expand in the regular Jackson  
3 pool so it matched the Burch Keely unit. So we are  
4 talking about a very small part of land at the  
5 bottom of a unit and pool that goes to the vertical  
6 5,000 mark that is the end of COG's lease interest  
7 in this. And that's all we're asking for.

8 I think the case has gotten much more  
9 complicated with the protest and bringing into the  
10 context the argument, and I think you will also see  
11 in the exhibits today that perhaps there's another  
12 motive from Conoco. They want COG to participate in  
13 a much larger unit that combines at least the  
14 Blinebry if not more that they have control of below  
15 5,000 feet through the area that COG has control of  
16 above 5,000 feet and it should be produced that way.  
17 We think it's inappropriate that they are opposing  
18 this to put more pressure on COG. We don't want to  
19 see you used that way. Thank you.

20 CHAIRWOMAN BAILEY: Mr. Campbell?

21 MR. CAMPBELL: Ma'am chairman,  
22 Commissioners and Counsel, it is a fact that without  
23 any criticism whatsoever, that Concho Resources and  
24 its operating arm, COG, are the most active,  
25 aggressive drillers in all of New Mexico. Concho's

1 objective seems to be to drill as many wells as it  
2 can, as fast as it can, as deep as it can and apply  
3 as hard a fracture as they can in order to produce  
4 their interest as quickly as possible.

5 We understand that objective. It is a  
6 good objective for Concho. Wall Street apparently  
7 loves it. Some politicians love it because it  
8 results in more money for them to spend.

9 We would concede that if the statutory  
10 charge of this commission were to maximize oil  
11 revenues, you should grant these applications. But  
12 we all know that that is not the statutory charge of  
13 this commission. The statutory charge here is to  
14 prevent waste and protect correlative rights, and  
15 that statutory charge, we respectfully submit, based  
16 on the evidence you will hear today, compels, in our  
17 view, a denial of these applications.

18 The evidence today will demonstrate four  
19 facts: Number one, this is an unusual geologic  
20 setting. And by that, I mean we have a 5,000-foot  
21 demarcation in what is otherwise a homogeneous  
22 source of supply. The reservoir rock that Concho  
23 owns above 5,000 feet and the reservoir rock that  
24 ConocoPhillips and others below 5,000 feet is  
25 exactly the same reservoir rock.

1           The 5,000 foot dividing line is an  
2 ownership line. It is not a geologic demarcation in  
3 this Yesso/Blaine section. That's fact No. 1.

4           Fact No. 2, the only plausible, prudent  
5 way to maximize production in this area while  
6 protecting correlative rights and preventing waste  
7 is through joint cooperative development.

8           Fact No. 3. ConocoPhillips has proposed  
9 such joint cooperative development to Concho and has  
10 received no response.

11           Finally, fact No. 4. Concho has already  
12 drilled a well in the Burch Keely unit to within 25  
13 feet of this 5,000-foot ownership demarcation, and  
14 then fracked it. It is highly probable,  
15 accordingly, that Concho has already impaired the  
16 correlative rights of ConocoPhillips and others.

17           Concho did this before the OCD had entered  
18 an order in Case 14558 authorizing the extension of  
19 the Burch Keely unit down to 5,000 feet, and Concho  
20 did this before the OCD entered an order in case  
21 14577 authorizing the vertical extension of the  
22 Grayburg-Jackson pool. Rules and orders and  
23 commission procedure apparently don't make much  
24 difference to Concho.

25           Testimony in this case will demonstrate

1     that if the Commission grants Concho's applications  
2     here to extend the Burch Keely unit to 5,000 feet  
3     and to extend the Grayburg-Jackson pool to 5,000  
4     feet, and if Concho continues to rebuff  
5     ConocoPhillips' efforts at joint development, then  
6     the only result will be a wasteful and inefficient  
7     drilling war between Concho and ConocoPhillips.

8             Given what Concho has done and proposes to  
9     continue to do, ConocoPhillips' only choice to  
10    protect its own correlative rights and those of its  
11    partners is to drill and frack a twin wells to every  
12    Concho well to a depth of 5001 foot and frack those  
13    wells. We would have no other choice to protect our  
14    correlative rights, and that indisputably  
15    constitutes waste.

16            We urge the Commission and we respectfully  
17    submit that the facts compel these applications  
18    should be denied. We further urge the Commission to  
19    use its power to push Concho to the only reasonable,  
20    rational, prudent course of conduct here, which is  
21    to jointly develop this acreage above and below the  
22    5,000 foot demarcation, a cooperative effort that  
23    they apparently have no interest in pursuing. Thank  
24    you.

25            CHAIRWOMAN BAILEY: All right. Do you

1 want to call your first witness?

2 MS. LEACH: May I just ask for  
3 clarification on the record because this is one of  
4 those things that I don't want to leave on the  
5 record. Mr. Campbell said something about  
6 politicians and getting more money to spend from the  
7 drilling of COG. I'm going to assume that is only a  
8 reference to bringing in revenue into the state and  
9 not any other.

10 MR. CAMPBELL: Oh, absolutely, Carol.

11 MS. LEACH: I just wanted to clarify it.  
12 It didn't sound so good when it came out. With  
13 that, I will be happy to call my first witness.  
14 That would be David Evans, please.

15 DAVID R. EVANS  
16 after having been first duly sworn under oath,  
17 was questioned and testified as follows:

18 DIRECT EXAMINATION

19 BY MS. LEACH

20 Q. Good morning. Would you state your name  
21 for the record?

22 A. David Ray Evans.

23 Q. And by whom are you employed?

24 A. COG Operating, LLC also known as Concho.

25 Q. For how long have you worked with them?



1 A. Nine months.

2 Q. What do you do for them?

3 A. I'm the lead for the New Mexico Shelf  
4 Team, which is kind of the manager over the landmen  
5 that work the shelf.

6 Q. What do landmen do for COG?

7 A. Landmen clear title, take leases,  
8 negotiate all kinds of items.

9 Q. Would you please give the Commission a  
10 brief summary of your education and training to be a  
11 landman?

12 A. I'm a University of Tulsa graduate of  
13 1980, degree in science. I've taken extensive oil  
14 and gas courses throughout the 32 years, 28 years of  
15 Oxy out of Midland, two-and-a-half years with  
16 ConocoPhillips and the rest with Concho.

17 Q. We have two applications in this case  
18 before the Commission. One is for the unit  
19 expansion which is for the Burch Keely unit and the  
20 other is for the pool expansion, the  
21 Grayburg-Jackson pool. Are you familiar with those?

22 A. I am.

23 Q. Have you testified at division level  
24 hearings concerning these?

25 A. I did.

1 Q. Were you accepted as an expert petroleum  
2 landman in that case?

3 A. Yes, I was.

4 Q. Have you been accepted by the Oil  
5 Conservation Division and Commission before this  
6 matter as a expert petroleum landman?

7 A. I have been.

8 MS. LEACH: With that, I offer Mr. Evans  
9 an expert petroleum landman specializing in  
10 specifically.

11 MR. CAMPBELL: No objection.

12 CHAIRWOMAN BAILEY: His qualifications are  
13 accepted.

14 Q. What is the New Mexico shelf?

15 A. It's an area just north of the Delaware  
16 Basin in New Mexico that we drill extensively.

17 Q. Where is that?

18 A. This is between Artesia and Local Hills in  
19 Eddy County, New Mexico, 17, 29 and 30.

20 Q. Talking about sections?

21 A. Yes.

22 Q. Could I get you to look at what has been  
23 marked as Exhibit 1 for COG, please.

24 A. Yes, Exhibit 1 is Case 14558. It's the  
25 application to vertically expand the unit.

1 Q. Is there another part to Exhibit 1?

2 A. Unit and the pool.

3 Q. These are both --

4 A. The Grayburg-Jackson expansion.

5 Application for approval down to 5,000 feet.

6 Q. Why does COG want the application to be  
7 approved?

8 A. There's a sliver of formation between 250  
9 feet to 500 feet to the west that was not brought in  
10 under our ownership, was not originally brought into  
11 the unit, nor was the pool vertically expanded. We  
12 are simply expanding the remaining depth that we own  
13 100 percent into the unit so we can enjoy and  
14 produce the oil and gas that's there.

15 Q. How does having it as part of the same  
16 unit and pool facilitate production?

17 A. This increases the economic viability of  
18 the unit and the life of the unit, allows us to use  
19 the additional equipment, wellbores, facilities,  
20 disposal without having to go to a bunch of  
21 agreements between ourselves and it reduces the cost  
22 upon the Commission for all the commingling  
23 applications.

24 Q. I would ask you to look at Exhibit 2,  
25 please, and tell the Commission what that is.

1           A.     These are the orders for the OCD basically  
2     granting the two applications we applied that we  
3     just talked about.

4           Q.     Let's go to Exhibit 3, please. Will you  
5     tell us what it is.

6           A.     This is a map of the unit, the Burch Keely  
7     unit. This is a surface of the Burch Keely unit  
8     showing the various leases and the lands and former  
9     well names of the previous units.

10          Q.     Who controls -- who owns the minerals?

11          A.     The minerals are Bureau of Land  
12     Management, 100 percent.

13          Q.     And then who controls the surface of the  
14     land?

15          A.     The Bureau of Land Management, 100  
16     percent.

17          Q.     How many acres is there?

18          A.     4189.44. Sometimes you see it referred to  
19     as 5129.44. I think that's an error. I'm sorry,  
20     5149.44.

21          Q.     Thank you. And do you know approximately  
22     how many wells are in the Burch Keely unit at  
23     present?

24          A.     Currently there are 366 wells with 29  
25     injections.

1 Q. And the expansion will be the same area  
2 but just below what you showed us in Exhibit 3; is  
3 that correct?

4 A. That's correct, so horizontal expansion of  
5 about 250 or 500 feet.

6 Q. To the 5,000 feet?

7 A. Yes.

8 Q. Who holds the leases in the expansion  
9 area?

10 A. The leases are held by ConocoPhillips and  
11 shelves held by Concho and Concho Oil & Gas. COG  
12 and Concho Oil & Gas.

13 Q. So COG and Concho control the working  
14 interest in it?

15 A. Control 100 percent of the working  
16 interest.

17 Q. Is that the same for the Burch Keely unit?

18 A. That's correct.

19 Q. How did COG obtain this interest in the  
20 Burch Keely unit and Grayburg-Jackson pool?

21 A. In August, August 2010 we acquired the  
22 assets of Marbob. Marbob acquired this property  
23 from Phillips Petroleum Company back in '92, I  
24 believe.

25 Q. And could I get you to identify Exhibit 4

1 for the record, please.

2 A. Exhibit 4 is the assignment and Bill of  
3 Sale from Marbob to COG Operating Company.

4 Q. And is that the document that basically  
5 conveys the working interest from Marbob to COG?

6 A. Yes, it is.

7 Q. And do you know who Marbob obtained its  
8 interest from?

9 A. Phillips Petroleum Company now known as  
10 ConocoPhillips.

11 Q. And would you look at what we have marked  
12 as COG Exhibit 5, please.

13 A. This is the copy of the Assignment and  
14 Bill of Sale from Phillips Petroleum Company to  
15 Marbob Energy Company. It covers all the rights of  
16 surface down to 5,000 feet.

17 Q. So you could not have purchased anything  
18 else from Marbob below 5,000 feet?

19 A. Correct.

20 Q. Because Marbob only had down to 5,000  
21 feet?

22 A. Phillips had only to 5,000 and Marbob had  
23 only down to 5,000. ConocoPhillips, prior to the  
24 sale to Marbob, had 100 percent from surface down to  
25 all depths.

1 Q. So is there an agreement of purchase -- is  
2 there a purchase and sale agreement as far as that  
3 exhibit?

4 A. There is. Purchase and sale agreement  
5 between Phillips Petroleum Company and Marbob dated  
6 23rd of October, 1992, effective November of 1992.

7 Q. Now, I draw your attention to Section 5B  
8 in that section.

9 A. It's rather important paragraph, we  
10 believe. Basically it says that notwithstanding  
11 anything herein, it's understood and agreed that  
12 seller retains the rights below 5,000 feet  
13 subsurface with respect to the surface for all  
14 purposes permitted for the pertinent leases of which  
15 a portion are to conveyed to purchaser and the right  
16 to drill through the formations being conveyed for  
17 the purposes of discovery and producing oil and gas  
18 and other minerals.

19 Basically, this is a guarantee they can  
20 enjoy the rights of the develop their property below  
21 the rights of 5,000. More importantly, further on  
22 it says that the purchaser, at any present or future  
23 operations conducted by purchaser, in or upon the  
24 lands and leases of which an interest is being  
25 conveyed, neither party will interfere with each

1 other. So that means the parties will not interfere  
2 with the operations above 5,000 -- that would be  
3 ConocoPhillips would not interfere with Marbob or  
4 Concho -- and below 5,000 Concho would not interfere  
5 with what's now known as ConocoPhillips Petroleum.  
6 Both have the free rights to develop their horizons.

7 Q. Is this an unusual term and agreement from  
8 your experience?

9 A. This is rather unusual. It's clear this  
10 is written specifically to give both parties the  
11 right to develop individually. I deal with many  
12 acquisitions and divestitures and this language is  
13 not generally in those type of agreements. This is  
14 very specific. It appears to be a protection for  
15 both parties.

16 Q. Does it protect the rights of  
17 ConocoPhillips now as the seller in its interest  
18 below 5,000 feet?

19 MR. CAMPBELL: Object to the form of the  
20 question. Calls for a legal conclusion.

21 MS. LEACH: We qualified him as an expert  
22 in land issues and that's part of his job. They  
23 interpret documents such as this. While I recognize  
24 he is not an attorney, I think this is in the nature  
25 of the work that landmen do in New Mexico.



1 CHAIRWOMAN BAILEY: Sustained.

2 Q (By Ms. Leach) What is required of  
3 Phillips, now ConocoPhillips, regarding the  
4 5,000-foot mark?

5 A. That it not interfere with Concho's  
6 operations of its rights that it acquired from  
7 surface down to 5,000 feet, and it requires of us  
8 not to interfere with ConocoPhillips below 5,000  
9 feet.

10 Q. Let's talk a little bit about the history  
11 of the Burch Keely units. If you could look at  
12 Exhibit 6, please. Tell the commission what that  
13 is.

14 A. These are three orders. It gives the  
15 history of the properties. The first one is an  
16 application by Phillips Oil Company to do a  
17 cooperative water flood. This is ordering of a  
18 8418 -- I'm sorry, R-7900 dated April 25 of 1985 and  
19 it allows Phillips to create a water flood from 2300  
20 feet to 3500 feet involving the San Andres in  
21 Grayburg. It was approved.

22 The second one approves the statutory unit  
23 for Marbob. It is Order No. R7900-A. It's the  
24 application for Marbob for a statutory unit dated  
25 October of 1993. It combines the leases to a

1 cooperative -- to statutory water flood for the  
2 Burch Keely unit.

3 Q. Does the order approve the unit agreement  
4 for the Burch Keely unit?

5 A. Yes.

6 Q. Does the order approve the unit offering  
7 agreement for the Burch Keely unit?

8 A. It does.

9 Q. Are anything about the unit operating  
10 agreement or the unit agreement changed by the  
11 vertical extension in the unit that you're seeking  
12 now?

13 A. Nothing is changed. The ownership remains  
14 the same. The minerals remain the same; the  
15 royalties remain the same; the mineral rights remain  
16 the same.

17 Q. And in terms of the unit agreement?

18 A. That's right.

19 Q. We are still describing the three orders  
20 in Exhibit 6.

21 A. Yes.

22 Q. What's a statutory unit under New Mexico  
23 law?

24 A. A statutory unit is where you acquire 85  
25 percent of the interest to approve the unit sign-up,

1 you might say, and you go before the Commission and  
2 you request a formal unitization or statutory order  
3 to create the unit itself. They grant the approval  
4 after you obtain 85 percent.

5 Q. And that the unit for secondary recovery?

6 A. Yes.

7 Q. In this case that will be the water flood  
8 talked about in these documents?

9 A. That is correct.

10 Q. Is the area proposed for the vertical  
11 extension proposed to be included in the water flood  
12 project within the Burch Keely unit?

13 A. Eventually. Not at this time. They are  
14 studying to see if the water flood can be expanded  
15 but currently it was primary development.

16 Q. It would be primary production, not  
17 secondary production at this time?

18 A. That's correct.

19 Q. And that's --

20 A. That's common. That's normal. You have  
21 to drill the primary wells first and produce and do  
22 your studies and evaluations and then you go to  
23 water floods or CO2.

24 Q. Looking back at R-7900A, it indicates  
25 there are other working interest holders in the unit

1 at that point. Is that still the case?

2 A. That's not still the case. It's actually  
3 COG and Concho Oil & Gas, 95 and 5. But  
4 collectively, we own 100 percent of it.

5 Q. We could just call it COG?

6 A. COG.

7 Q. On Page 6 of Order R-79008, does it  
8 describe in Paragraph 4 the vertical limits of the  
9 unit?

10 A. Yes, it does. The vertical limits of the  
11 unitized formation of said area is to comprise that  
12 interval from the top of the Seven Rivers formation  
13 to the base of the San Andres formation, which also  
14 corresponds with the vertical limits of the  
15 Grayburg-Jackson pool or to a true vertical depth of  
16 5,000 feet below the surface, whichever is the  
17 lesser.

18 Q. So which was the lesser?

19 A. 5,000 feet.

20 Q. I thought we were looking for an extension  
21 now down to 5,000 feet?

22 A. Yes, 250 to 500 -- it was below, yes.

23 Q. So we need the extension down to get to  
24 5,000 feet?

25 A. Right.

1 Q. But at the time you started the unit and  
2 the pool were at the same depth?

3 A. That's correct.

4 Q. So when the unit was first recognized as a  
5 statutory unit, it was tied to the pool?

6 A. Yes, that's right.

7 Q. Does the unit agreement allow for that  
8 extension?

9 A. It does. The AO has the authority to  
10 grant that extension.

11 Q. Let's go with Exhibit 7 for a second. You  
12 might want to let the Commission know what an AO is?

13 A. Authorizing officer, the guy with the  
14 Bureau of Land Management that approves these  
15 expansions.

16 Q. So Section 4, does that address the  
17 ability to expand a unit?

18 A. Yes. Section 4 allows the horizontal and  
19 vertical expansion of any unit as approved by the AO  
20 or as requested by the working interest owner.

21 Q. So you are acting in compliance with  
22 Section 4 of the unit agreement?

23 A. We are.

24 Q. And has BLM supported this request to  
25 extend any of it?

1           A.     They have.  If you look at Exhibit 8, this  
2     is a support letter for the expansion of the Burch  
3     Keely unit from Tony Ferguson to Mr. Miller.

4           Q.     When was that?

5           A.     That is in March 11, 1994.

6           Q.     What expansion is that?

7           A.     That's the expansion of the Burch Keely.  
8     Application for the Burch Keely unit has been  
9     approved on this date, approval of the expansion  
10    effective February 22nd of '94.  It expands the  
11    unitized formation to include the top 500 feet of  
12    the Paddock formation.

13          Q.     Counting down the first to the San Andres  
14    and then --

15          A.     500 feet.

16          Q.     -- 500 feet into the Paddock?

17          A.     Into the Paddock.

18          Q.     Have there been additional discussions  
19    with the BLM about the current vertical levels of  
20    the Burch Keely unit?

21          A.     There was.

22          Q.     So if you would look at Exhibit 9 and tell  
23    us what that is?

24          A.     This is a letter of support from the  
25    Bureau of Land Management from Don Peterson from

1 Mr. Fesmire that basically is dated October 25th of  
2 2010. It's a letter supporting our application to  
3 expand the unit, the Burch Keely unit to the depth  
4 of 5,000 feet.

5 Q. Was that written prior to the division  
6 level hearing in this case?

7 A. It was.

8 Q. Was there another -- wait. Let's finish  
9 with this one. What does it say about the expansion  
10 of the unit?

11 A. The incremental Blinbry and Paddock  
12 reserves are developed that are owned by Concho,  
13 they see a plus in that.

14 Q. But it's still represented by Marbob at  
15 this time; is that correct?

16 A. That's correct.

17 Q. And it doesn't say that Marbob captured  
18 the incremental production?

19 A. I'm sorry?

20 Q. Doesn't it say that it will enable Marbob  
21 Energy Corporation to capture reserves?

22 A. Yes, it does.

23 Q. Okay. Is there another document with that  
24 exhibit?

25 A. There's another letter, again, from the

1 BLM that approves the application of February 8,  
2 2011 and amending the unitized formation of the  
3 Burch Keely unit down to the 5,000 feet.

4 Q. So, in fact, this unit has been extended  
5 and this de novo hearing, if Marbob and Concho do  
6 not prevail, it will take some undoing of things for  
7 the BLM?

8 A. That's correct. The unit has been  
9 expanded and approved by the BLM and to undo it  
10 would create some more.

11 Q. Let's talk about the royalty ownership in  
12 the unit. You may have done this, but I didn't get  
13 it down in my notes. The royalty owner is the  
14 federal government; is that correct?

15 A. That's correct.

16 Q. Overriding royalty interests?

17 A. There are numerous overriding royalty  
18 owners.

19 Q. And the working interest is held by  
20 Concho?

21 A. Working interest held by Concho Oil & Gas,  
22 which is Concho.

23 Q. So none of that would change by approving  
24 the application for the vertical extension?

25 A. No change would occur to any of the



1 mineral royalty or overriding royalty owners. No  
2 changes.

3 Q. Now I'm going to take you back, if you  
4 would, please, to Exhibit 2. I specifically want  
5 you to look at the order regarding the unit R 7900C.  
6 Basically I want you to look at the order that's  
7 Exhibit 2 and specifically the order about the unit.

8 A. Okay.

9 Q. Then I want you to look at the findings  
10 that are in the order and specifically we are going  
11 to go through Findings 1 through 7. If you could  
12 tell us what they say and whether or not you agree  
13 with them.

14 A. This is Order No. R-7900C, findings that  
15 due notice was given and the Division has  
16 jurisdiction of the subject matter. Marbob Energy,  
17 on behalf of its successor in title, COG Operating,  
18 LLC, seeks expansion of the vertical limits of the  
19 Burch Keely unit established by the division order  
20 R-7900-A issued in Case No. 10810 on October 28,  
21 1993. No. 3.

22 MR. CAMPBELL: Excuse me, Mr. Evans. I'm  
23 sorry to interrupt you. I would pose an objection  
24 that we -- it is inappropriate to have a witness  
25 simply read the division order word for word. The

1 document speaks for itself. I'm not sure what we  
2 are gaining. Through Paragraph 6 here it goes two  
3 more pages. Is there some reason we have to repeat  
4 what the order says?

5 MS. LEACH: I was asking Mr. Evans if he  
6 would confirm if it was his understanding that those  
7 were, indeed, true statements, and if the record was  
8 complete on the findings.

9 MR. CAMPBELL: Well, I mean, the order  
10 speaks for itself, it seems to me. I just object  
11 because it doesn't advance the inquiry here.

12 A. I have read 1 through 7 and I agree that  
13 it does approve.

14 Q. That will be fine. Let's talk about the  
15 Grayburg-Jackson pool expansion. I draw your  
16 attention to Exhibit 10. We're going to talk a  
17 little bit about the history of the Grayburg-Jackson  
18 pool. Looking at the first order R-1007, could you  
19 identify the document, please?

20 A. Yes. This is the application of Marbob to  
21 abolish the Grayburg Paddock pool and extend the  
22 vertical limits of the Grayburg-Jackson pool.

23 Q. What depth does that go to?

24 A. They are wanting to go -- extending the  
25 vertical limits of the Grayburg-Jackson pool

1 including the Paddock formation in the unit area, 17  
2 south 29 east.

3 Q. Does the vertical area goes from the top  
4 of the Seven Rivers to 500 feet below the Paddock  
5 formation?

6 A. Correct.

7 Q. Below that is once again the same area  
8 that you are looking for in the expansion of the  
9 pool?

10 A. We are trying to expand it to the sliver.

11 Q. So the sliver, as we use the term, is  
12 basically you go 500 feet down in the Paddock and  
13 there may be part of the Paddock there. Then you  
14 would go to 5,000 feet which would be captured in  
15 the Blinebry; is that correct?

16 A. That's correct.

17 Q. And there's a second order in the package,  
18 R-10067A.

19 A. Correct. This is the nomenclature,  
20 application for Marbob for the abolishment of the  
21 Grayburg Paddock pool and expand the vertical limits  
22 of the Grayburg-Jackson pool. This is the order  
23 that ordered it.

24 Q. It's basically just a name change, isn't  
25 it?

1 A. That's correct.

2 Q. Let's just talk about pools and pool names  
3 in New Mexico. Have you had occasion to look at the  
4 Oil Conservation Division website regarding pools?

5 A. For over 20 years. There are 99 pages  
6 that contain thousands and thousands and thousands  
7 of pools.

8 Q. In your experience, is it uncommon to find  
9 a pool that has a dividing mark at an elevation  
10 rather than naming a formation?

11 A. You know, the pooling orders are all over.  
12 They can be at the top of a formation, the middle of  
13 the formation. It just depends where the operators  
14 requested a pool because they discovered some oil  
15 and gas and made application to produce it. That  
16 defines the pool throughout the 99 pages. It can be  
17 to the top of a formation, the middle of a  
18 formation, the bottom of the formation. It's all  
19 over the place.

20 Q. So it's not unique to have a 5,000 foot  
21 demarcation in a pool?

22 A. It's more common than it is not.

23 Q. Let me draw your attention to Exhibit 11,  
24 please. Would you identify those briefly.

25 A. These are the 1950 orders granting pools

1 randomly for the order designating and naming and  
2 defining extending the gas pools of Lee, Eddy and  
3 Chaves County back in 1953. You can see how it  
4 names various pools at various depths at various  
5 formations, tops, bottoms, middles.

6 Q. Those are just two examples of orders  
7 going back to the '50s where pools were cut off at  
8 certain elevations?

9 A. Correct.

10 Q. Thank you. Let me draw your attention to  
11 Exhibit 12 and ask you to identify what that is?

12 A. Well, the first one is a copy of our unit  
13 map and the ownership around it. This is the  
14 parties that we gave notice to.

15 Q. How was that prepared?

16 A. This is prepared upon the Marbob's behalf  
17 by one of its linemen, Dean Chumley.

18 Q. Do you know Dean Chumley?

19 A. I do.

20 Q. Does he still work for COG?

21 A. He does.

22 Q. Did you ever talk to him about this notice  
23 package?

24 A. I have.

25 Q. Do you believe this notice package meets

1 the requirements for notice under the OCD rules?

2 A. I do.

3 Q. If you could look at Exhibit 13, please.

4 What's Exhibit 13?

5 A. It's Case No. 14558, the application of  
6 Marbob for the vertical expansion of the Burch Keely  
7 unit and it's Ocean Munds-Dry's affidavit of notice  
8 that we followed the rules.

9 Q. Basically that's a required part of every  
10 application that there be an affidavit in  
11 compliance?

12 A. Yes.

13 Q. So let me get you to look at Exhibit 14,  
14 please.

15 A. 14577 is 14. Again, it's an affidavit of  
16 notice for the expansion of the vertical extension  
17 of the Grayburg by Scott Hall, another attorney that  
18 worked on this matter, certifying that the parties  
19 have been noticed.

20 Q. And is there another affidavit in the  
21 package?

22 A. There is one other from Ernest Padilla  
23 giving notice to -- correcting notice.

24 Q. Now, you named about three different  
25 attorneys representing you in these cases.

1 A. Four total.

2 Q. Why? What happened?

3 A. ConocoPhillips continued to deny us the  
4 use of various attorneys because of their  
5 affiliation with ConocoPhillips so we would start  
6 and have them removed from the case.

7 MS. LEACH: At this time I would like to  
8 ask the Commission to take administrative notice of  
9 Exhibits 1, 2, 6 and 10 because they are copies from  
10 the records of OCD and then the remaining exhibits  
11 of 1 through 14 I will ask Mr. Evans if they were  
12 prepared by him or for him by the landman group for  
13 COG or its predecessor, Marbob, or if they are  
14 records kept by the landman group by COG in the  
15 normal course of business.

16 A. Yes, they were.

17 MS. LEACH: With that, I move the  
18 admission of Exhibits 1 through 14.

19 CHAIRWOMAN BAILEY: Any objection?

20 MR. CAMPBELL: No, ma'am chairman.

21 CHAIRWOMAN BAILEY: They are so admitted.

22 (Note: Exhibits 1 through 14 admitted.)

23 Q. Mr. Evans, does it make sense to you to  
24 expand the unit and pool to include all of the  
25 interest that COG owns?

1           A.     Yes, it does. One, we have a right to  
2     develop what we own, what we acquired from  
3     ConocoPhillips Petroleum Company. Number two, it  
4     increases the economic life of the unit and the  
5     value of the unit. Number 3, using the existing  
6     surface facilities and wellbores allows us to bring  
7     more production to the field and extend the economic  
8     life. If we are denied, it could cause waste and  
9     the interference of our rights. It could cause --  
10    if we are required to file application after  
11    application after application, we are going to be  
12    here on every well that we propose to drill in the  
13    non-unitized area. So we believe it's in the best  
14    economic interest of this property on behalf of  
15    Concho that the unit be expanded along with the  
16    vertical pool.

17           Q.     If this unit is extended to include the  
18    proposed expansion area, do you think it makes it  
19    more likely that there will be development in the  
20    expansion area?

21           A.     We have plans to drill over 200 wells in  
22    the expanded area.

23           Q.     That's a significant undertaking?

24           A.     It is a significant undertaking.

25           Q.     That would prevent the waste of that



1 resource; is that correct?

2 A. That would prevent the waste and allow us  
3 our correlative rights.

4 Q. And the correlative rights are that you  
5 have the opportunity to drill in the area?

6 A. It gives us the opportunity to produce  
7 what we own.

8 MS. LEACH: Pass the witness.

9 CHAIRWOMAN BAILEY: Before we start with  
10 cross-examination, let's take a ten-minute break.

11 (Note: The hearing stood in recess at  
12 10:29 to 10:39.)

13 CROSS-EXAMINATION

14 BY MR. CAMPBELL

15 Q. Good morning, Mr. Evans.

16 A. Good morning.

17 Q. I think you used the word sliver, that  
18 Concho is simply attempting to extend the pool and  
19 the unit just a sliver. Did I hear you correctly?

20 A. That's correct.

21 Q. Would you consider 1,000 feet to be a  
22 sliver?

23 A. To the oil and gas industry, probably so.

24 Q. I mean, it's your objective here to extend  
25 both the pool and the unit from 4,000 to 5,000 feet,

1 is it not?

2 A. It's our desire to expand it down to 5,000  
3 feet. That's right.

4 Q. Is your current understanding that the  
5 existing vertical limit of the Grayburg-Jackson pool  
6 is 4,000 feet?

7 A. It's more like 4500.

8 Q. You were the landman that testified for  
9 Concho at the division below, were you not?

10 A. I was one of two.

11 Q. And did you tell the OCD, Mr. Evans, that  
12 you were trying to expand the limits from 4,000 down  
13 to 5,000 feet of the Grayburg-Jackson pool so that  
14 it coincides with the Burch Keely unit?

15 A. That's correct.

16 Q. So is it your understanding then that the  
17 current vertical limit of the Grayburg-Jackson pool  
18 is 4,000 feet?

19 A. I think it's more like 4500 feet. I would  
20 correct myself town to five. That's what we're  
21 expanding, about 500 feet.

22 Q. So your testimony to the division was off  
23 by 500 feet?

24 A. If that's what it says.

25 Q. Well, I mean, you can look at it if you

1 want.

2 A. No, I believe what you're saying.

3 Q. And there are millions of barrels of oil  
4 reserves in that thousand feet, isn't there?

5 A. You would have to talk to the reservoir  
6 engineer.

7 Q. You testified that an artificial ownership  
8 demarcation through the middle of a common source of  
9 supply, through a pool, is common, more common than  
10 not, I think you said.

11 A. Would you repeat the question again?

12 Q. Yes, sir. Your testimony on direct, as I  
13 understood it, was that the demarcation of an  
14 ownership line through the middle of a pool was more  
15 common than not, given your long history here at the  
16 OCD and looking at OCD rules?

17 A. That's correct.

18 Q. Could you tell from your examination  
19 whether that circumstance was protested by any  
20 party?

21 A. I have not been to every hearing on 99  
22 pages of regulatory orders.

23 Q. You do you know how often an ownership  
24 line goes through the middle of a pool in  
25 circumstances where one party or the other protested

1 the pool definition?

2 A. The ones I have been involved in have not  
3 been protested.

4 Q. All right. So your testimony that it is  
5 more common than not to see an ownership line  
6 through the middle of a pool is a circumstance where  
7 no one protested the pool definition?

8 A. Not in the ones I have been involved in.

9 Q. Have you discovered any pool definition  
10 that has been -- or extension that has been  
11 protested when there was an ownership demarcation  
12 through the middle of the pool?

13 A. Not that I've been involved with, except  
14 for this one.

15 Q. Okay. Now, I thought I heard you say -- I  
16 have only been to the commission for two hearings.  
17 This is not the general forum that I practice in.  
18 So I don't know all of the buzz words, and please  
19 correct me if I make a misnomer. But I thought I  
20 heard you say that as a concept, Concho can recover  
21 all its reserves down to 5,000 feet through an  
22 administrative process of commingling applications,  
23 but that that's an administrative hassle. A lot of  
24 paperwork, correct?

25 A. We can drill below a unitized interval

1 down to 5,000 feet. It does create additional  
2 paperwork for both us and the Commission and a lot  
3 more hearings, incoming and applications. Also it  
4 causes problems with not being able to use existing  
5 wellbores, facilities. It complicates everything.

6 Q. Why can't you use existing wellbores if  
7 you are seeking to commingle down to the 5,000  
8 depth?

9 A. We could but we have to make commingling  
10 applications to produce those wells.

11 Q. Understood. But it's only the  
12 applications and your view that it will create  
13 additional paperwork for you and the Commission --

14 A. Time. Time and money.

15 Q. I will try to let you --

16 A. Sorry.

17 Q. -- finish your answers if you let me  
18 finish my questions.

19 A. I agree with that.

20 Q. Okay. So you could use existing  
21 facilities through the commingling application  
22 process, correct?

23 A. Absolutely.

24 Q. So your real complaint here is that to  
25 capture your reserves using a commingling process is

1 time-consuming, administratively burdensome and  
2 creates a lot of paperwork, correct?

3 A. That's one of the reasons, yes.

4 Q. Now, in your view as a landman, do you  
5 think those complaints outweigh an impairment of  
6 correlative rights?

7 A. Repeat the question.

8 Q. In your view as a landman, do you think  
9 those complaints, administrative difficulty -- the  
10 time value of money, additional paperwork -- do  
11 those complaints, in your view, outweigh the  
12 impairment of correlative rights?

13 A. Well, the whole point of filing the  
14 commingling orders would be to develop our  
15 correlative rights.

16 Q. You just want the easiest way to do that?

17 A. Certainly. The least expensive.

18 Q. Even though it might impair someone else's  
19 correlative rights?

20 A. I don't know how that happens.

21 Q. Are you going to be here for the rest of  
22 the hearing?

23 A. I plan to be.

24 Q. We hope to convince you. Now, in your  
25 review of the purchase agreement from Phillips,

1     which I believe is Concho Exhibit 4 --

2           A.     No, I believe it's 5.

3           Q.     Thank you. You referred to a section that  
4     you found important. I think it was Article 4?

5           A.     Five.

6           Q.     Five, in which you stated that the parties  
7     had promised not to interfere with one another,  
8     right?

9           A.     That's correct.

10          Q.     Would you consider the impairment of  
11     correlative rights to be an interference?

12          A.     The development by Concho -- the  
13     impairment by Phillips, by denying Concho the right  
14     to develop something it has acquired by Phillips, is  
15     certainly a concern. You are interfering with our  
16     correlative rights after you sold it.

17          Q.     Well, but I thought you just admitted that  
18     you could secure your rights through a commingling  
19     process, although it was administratively  
20     burdensome.

21          A.     We could have been drilling this some time  
22     ago if we hadn't gone through these processes  
23     slowing down the drilling schedule. But we can  
24     acquire our production without deepening the unit or  
25     deepening the pool.

1 Q. Do you think that the impairment of  
2 correlative rights trumps or outweighs slowing down  
3 Concho's drilling program?

4 A. I think your impairment on us is causing  
5 it to slow down, yes.

6 Q. So the pace of your drilling, someone  
7 interfering or questioning your drilling schedule in  
8 your view is an impairment of your correlative  
9 rights?

10 A. I believe so.

11 Q. That ConocoPhillips is here today  
12 protesting your application, in your view, is an  
13 impairment of your correlative rights?

14 A. Yes, you are denying us to drill something  
15 you sold to us.

16 Q. Where do you get the idea that we are  
17 preventing you from drilling the wells you want to  
18 drill?

19 A. That's what all the hearings are about.  
20 Slowing us down.

21 Q. Slowing you down. Okay.

22 A. You have no interest in the property.

23 Q. In which property?

24 A. The Burch Keely unit.

25 Q. I mean, you're well aware that Conoco has



1 an interest in the Grayburg Deep at the 5,000 foot  
2 ownership?

3 A. Sure. I'm well aware they sold us the  
4 unit from surface down to 5,000 feet for the right  
5 to develop it.

6 Q. How much -- did you ask to buy deeper than  
7 5,000 feet?

8 A. We did make some attempts to buy below  
9 5,000 feet. I was not a party to that.

10 Q. Were you working for ConocoPhillips then?

11 A. I do not know when that occurred.

12 Q. So you really don't know what you tried to  
13 buy at Concho?

14 A. I'm aware we made a second attempt to buy  
15 the deeper rights.

16 Q. That's all I have, ma'am.

17 CHAIRWOMAN BAILEY: Do we have any  
18 questions, Commissioners?

19 MR. BALCH: Do you plan to have a witness  
20 that's an engineer?

21 MS. LEACH: Yes.

22 MR. DAWSON: No questions.

23 CHAIRWOMAN BAILEY: Any rebuttal on the  
24 questions?

25 MS. LEACH: One redirect question to

1 clarify.

2 REDIRECT EXAMINATION

3 BY MS. LEACH

4 Q. The current boundary of the unit is 500  
5 feet below the top of the Paddock?

6 A. That's correct.

7 Q. Is that just a straight elevation line  
8 across the area?

9 A. That's the confusion in the depths. It  
10 varies. It's not a straight line so, you know. It  
11 varies. It goes up and down. It's not just a  
12 straight line. That's why -- it's between 1000, 500  
13 feet. I'm not a geologist.

14 MS. LEACH: Thank you. That's all. We  
15 will call our next witness, Harvin Broughton.

16 HARVIN BROUGHTON

17 after having been first duly sworn under oath,  
18 was questioned and testified as follows:

19 DIRECT EXAMINATION

20 BY MS. LEACH

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

23 A. Harvin Broughton.

24 Q. Who do you work for?

25 A. Concho Resources, COG, LLC.

1 Q. What do you do for them?

2 A. I'm a geologist.

3 Q. You work mostly in the New Mexico shelf  
4 area?

5 A. I do. I am on the New Mexico Shelf Team.

6 Q. Would you describe your education and work  
7 experience, please?

8 A. I graduated from Oklahoma State University  
9 in 1983 with a bachelor's degree in petroleum  
10 engineering. I went immediately to work for  
11 Schlumberger Oil Field Services as a field engineer.  
12 I worked for Schlumberger for 25 years in varying  
13 capacities of increasing responsibility. My last  
14 eight years I was in an advanced interpretation  
15 group focusing on advanced geological interpretation  
16 of one of the Schlumberger logs.

17 Concurrent with that last eight years I  
18 went back to school to the University of Texas at  
19 the Permian Basin and pursued and secured a master's  
20 degree in geology, which I received. Immediately --  
21 and I have been with Concho Resources for three  
22 years as a geologist.

23 Q. Have you testified before the New Mexico  
24 Oil Conservation Division or the Commission before?

25 A. The Commission, yes, ma'am.

1 Q. Were your credentials as an expert  
2 petroleum geologist accepted then?

3 A. They were.

4 MS. LEACH: At this time I would offer Mr.  
5 Broughton as an expert petroleum geologist.

6 CHAIRWOMAN BAILEY: Any objection?

7 MR. CAMPBELL: No, ma'am.

8 CHAIRWOMAN BAILEY: So admitted.

9 Q (By Ms. Leach) Are you familiar with the  
10 lands and pools subject to the applications at issue  
11 in this case?

12 A. I am.

13 Q. And just to make sure we are talking about  
14 the same thing, the Burch Keely unit?

15 A. Yes.

16 Q. And the Grayburg-Jackson pool?

17 A. Yes, ma'am.

18 Q. And the proposed extension, expansion  
19 vertically?

20 A. Yes, ma'am.

21 Q. It's been some time since the applications  
22 were originally filed. Does COG still want the  
23 expansion to the Burch Keely unit pool?

24 A. We do.

25 Q. Why do you want those?

1           A.     We would like the unit and the pool and  
2     our ownership to align. That would be certainly --  
3     that would be a benefit to us, I believe.

4           Q.     But if expansions are not granted, Concho  
5     can still drill in the area of the proposed  
6     expansions?

7           A.     I'm not a landman but my understanding is  
8     we can.

9           Q.     There's nothing geological that would  
10    prohibit that?

11          A.     No.

12          Q.     Have you had an opportunity to look at  
13    certain wells in and around the Burch Keely unit?  
14    And with that, I would ask you to basically let's  
15    look at Exhibit 15.

16          A.     The answer is yes, ma'am, I have.

17          Q.     If you would get Exhibit 15 out, would you  
18    explain what it shows?

19          A.     This is a geologic cross-section showing  
20    the subsurface formations. There's two logs  
21    depicted here. The one on the left is an older log.  
22    The one on the right is a more modern log. The one  
23    on the left is within the Grayburg-Jackson unit.  
24    The one on the right is just east. It's the Polaris  
25    well, which is just east of the Grayburg-Jackson

1 unit, and this well was selected because it shows  
2 the entire interval in question.

3 This further shows on the right in the  
4 green shading, it shows the current Grayburg-Jackson  
5 pool extending down to 500 feet below the top of the  
6 Paddock formation and it shows in the red band  
7 Concho's proposed pooling extension, the sliver, if  
8 you will. And then at the 5,000 foot mark it shows  
9 the current Grayburg Deep unit. So that's -- the  
10 5,000 foot line is apparently the line that's in  
11 question here.

12 It shows basically from the seven rivers  
13 down to the Tubb is what's completely depicted here,  
14 which is the current Grayburg-Jackson pool down to  
15 at least past the top of the current Grayburg Deep  
16 pool.

17 Q. What are the formations currently in the  
18 Grayburg-Jackson pool?

19 A. In the current Grayburg-Jackson pool is  
20 the Seven Rivers, the Queen, the Grayburg, the San  
21 Andres, the Glorietta, the Paddock and in places  
22 parts of the Blinberry.

23 Q. So that would be the little tiny bit over  
24 on the left side; is that correct? Where the  
25 5,000 -- maybe it's on the right side. No, it's

1 not. Pardon me for confusing you.

2 A. That's fine. The current unit extends  
3 down to the green line there, the green dashed line.  
4 It's not representing the top of the Blinebry, but  
5 you will see in the middle of the page it says  
6 Blinebry there just for reference. That green  
7 dashed line is the current --

8 Q. That's the 500 feet?

9 A. Yes, ma'am.

10 Q. So some places it does go ever so slightly  
11 into the --

12 A. Yes, it does.

13 Q. I didn't get the question out. Thank you  
14 for helping me.

15 A. I'm sorry.

16 Q. That's all right. Okay. In this red or  
17 pink area, that illustrates what?

18 A. That illustrates the interval that Concho  
19 owns, but it is not part of the pool of a unit.  
20 This is our proposed expansion area and it's noted  
21 there on the right, the proposed extension pooling.  
22 So that's the sliver, I guess is what the term is we  
23 are using for it now.

24 Q. Will extending the boundary of the unit  
25 and pool make it more likely that the area will be

1 developed?

2 A. Yes. Yes, it will.

3 Q. Why is that?

4 A. Well, to optimize the production from the  
5 lands that we own, we would certainly want to  
6 continue and drill down to the 5,000 feet. We  
7 complete the Blinebry formation all over the shelf,  
8 and we believe it's an economically viable unit so  
9 we would absolutely want to add that to our  
10 completion.

11 Q. So this shows that addition as being 285  
12 feet in this area; is that correct?

13 A. That's correct.

14 Q. Is it wider in some other areas?

15 A. Yes. The formations across this area dip  
16 structurally from the west to the east. They go  
17 down from west to east. It's a fairly gentle dip in  
18 the range of a half to one degree. So as you get  
19 over -- and we will see that in a further slide, a  
20 further cross-section. As you get over towards the  
21 east side you actually have a thicker unit of  
22 expansion.

23 Q. So in the area below 5,000 feet, is that  
24 still the Blinebry?

25 A. Yes, ma'am. That 5,000 foot line does



1 fall within what we call the Blinebry formation.

2 Q. Below 5,000 feet is the Grayburg Deep  
3 unit; is that correct?

4 A. That is my understanding, yes, ma'am.

5 Q. And when people talk about the Yeso, what  
6 formations are they referencing?

7 A. The Yeso technically includes the Paddock,  
8 the Blinebry, the Drinkard and the Tubb. Those were  
9 not in question here. You will see the Tubb at the  
10 very bottom. That is geologically part of the Yeso  
11 part but not a productive reservoir in the area, so  
12 it's really just a reference area for the bottom of  
13 the Blinebry.

14 Q. And the log on the left doesn't have a lot  
15 of detail. Why did you include that well?

16 A. Well, this is an older log. I believe  
17 it's a mid to late '50s vintage. So this was a  
18 state of the art log at that particular time. But  
19 this well, which is the General American Oil Company  
20 Burch Keely Unit 827 was mentioned in some of the  
21 documentation that conveyed the ownership from  
22 Phillips to Marbob, I believe. But that's why this  
23 well was included is because it was referenced as a  
24 type log in some of the sale documentation.

25 Q. Does it also reference in the case

1 creating the Burch Keely unit as a reference log?

2 A. I have not read that. It might very well  
3 be, but I don't know that.

4 Q. So let's talk a little bit about the  
5 difference between the Paddock and the Blinebry,  
6 please.

7 A. Okay. The Paddock and Blinebry are very  
8 similar. You will notice -- and I'm going to work  
9 from the log on the right. That's the more modern  
10 logging data. But from the Paddock, which is the  
11 green line there labeled Paddock, of course, all the  
12 way to the bottom of the log where it's marked Tubb,  
13 that's the Paddock Blinebry, what is kind of loosely  
14 thrown around now is the Yeso interval. It's the  
15 productive Yeso interval.

16 Both are dolomite formations with some  
17 intermittent sands. The Paddock typically has  
18 higher porosity than the Blinebry, but the Blinebry  
19 is much thicker. So geologically they are very  
20 similar except for those subtle differences of  
21 higher porosity versus lower porosity, thicker  
22 versus thinner.

23 Q. And are there significant differences  
24 between the Blinebry and the Paddock?

25 A. In my opinion, no, there are not.

1 Q. Are there common sources?

2 A. I believe they would be, yes, ma'am.

3 Q. And what number do you usually use to  
4 indicate the elevation of the top of the Paddock?

5 A. Well, we pick these tops in stratigraphic  
6 cross-sections. We use the base of the Glorietta,  
7 so there's a little Glorietta sandstone. If you  
8 notice the yellow coating on the log on the right is  
9 the Glorietta sandstone. So we are depicting the  
10 top and the base of the Glorietta, the base of the  
11 Glorietta being the top of the Paddock. The top of  
12 the Paddock, as I mentioned before, structurally it  
13 moves. It gets deeper as you move to the east. And  
14 you will see that in the coming cross-section.

15 Q. What about the top of the Blinebry?

16 A. Well, the top of the Blinebry would move  
17 down correspondingly.

18 Q. What number do you usually associate with  
19 the top of the Blinebry?

20 A. It's not a fixed number. It's a variable  
21 number.

22 Q. Okay.

23 A. In this case it's right at 4700 feet, but  
24 it's not that everywhere.

25 Q. And the 5,000 foot, we said that's an

1 ownership number; is that correct?

2 A. That's my understanding that it's an  
3 ownership.

4 Q. Have you seen other pools divided by  
5 elevation or ownership?

6 A. Actually, I have.

7 Q. And if there were not ownership concerns,  
8 what might be the geological end for the Blinebry?  
9 Or for the Grayburg-Jackson pool? Perhaps that's a  
10 better way to say it.

11 A. From a geological standpoint and the  
12 logical end of the pool would probably be the top of  
13 the Tubb. I mean, that's our typical completion  
14 scheme in the Paddock, Blinebry or Yeso formation,  
15 and that's depicted by these red bars on the right.  
16 That's our perforations, so that would be a typical  
17 completion of the entire interval.

18 Q. And you didn't ask for that to be included  
19 in the Grayburg-Jackson pool --

20 A. Because we don't own it, right.

21 Q. Let's look at Exhibit 16, please. What  
22 does Exhibit 16 show?

23 A. Exhibit 16 is an exhibit that was meant to  
24 give a graphic representation of the heterogeneity  
25 of the reservoir talking about here.

1 Q. You are a geologist and you understand  
2 heterogeneity, so could you explain that?

3 A. Heterogeneous, heterogeneity refers to the  
4 differences, horizontally, north, south, east, west,  
5 vertically, the fact that it's not the same  
6 everywhere. It's called heterogeneous. So the  
7 formation we are dealing with here is heterogeneous  
8 with respect to porosity and permeability. Those  
9 are the two primary factors that affect oil and gas  
10 production. So just as a quick example, you could  
11 drill one well, you could drill a well near it and  
12 the rock properties on the log would look  
13 dissimilar. The dissimilar of porosity, the  
14 magnitude of porosity, the permeability could be  
15 different. That's what we are trying to show with  
16 these patches. It's a lenticular reservoir, it's  
17 horizontally and vertically segregated. There are  
18 sweet spots, better porosity, poorer porosity  
19 varying across the unit.

20 Q. So explain for my benefit what you mean  
21 when you use the term lenticular?

22 A. Lenticular suggests that it's  
23 compartmentalized both laterally and vertically. If  
24 you look at the black splotches, that's trying to  
25 give a graphic representation of how this could look

1 if you were looking at the entire interval.

2 Q. So would the little drawing, the lines  
3 coming down, I assume those depict wells and you  
4 have to be lucky to hit the sweet spots?

5 A. Well, I don't know if lucky is the word,  
6 but you drill --

7 Q. That's a lawyer talking. It's not a  
8 technical term.

9 A. Well, what they are showing, what we are  
10 trying to depict with Well A and B is you are not  
11 necessarily going to hit the good stuff all the  
12 time. Sometimes you might be on the edge of the  
13 good stuff, and that further leads to the  
14 heterogeneity of it that sometimes wells that look  
15 poor on logs are actually better producers and vice  
16 versa.

17 You know, a well that might look poor on  
18 the logs, you know, that wellbore, you know, six  
19 inches or a foot or five feet from the wellbore  
20 might be entirely different. That's what we are  
21 trying to depict, particularly with Well A that goes  
22 through the edge of the little good spot here. You  
23 know, when you frack the well, you might be fracking  
24 into something better.

25 Q. So then the rock and the Blinbry changes

1 from well to well?

2 A. The rock and the Blinebry and the Paddock  
3 change from well to well.

4 Q. So it could be very different --

5 A. Yes.

6 Q. Certainly would be different or could be  
7 different a mile away?

8 A. Could be different one well spacing away.  
9 I have seen one well spacing away that wells are  
10 different. The distribution of the porosity, the  
11 magnitude of the porosity can be different.

12 Q. And certainly the further away you get  
13 from a well -- ten miles away --

14 A. Ten miles away could be vastly different  
15 or could be the same. It's heterogeneous.

16 Q. Would at Exhibit 17, please. What does  
17 Exhibit 17 tell us?

18 A. Okay. Exhibit 17 shows the Burch Keely  
19 unit outline and then some reasonably near  
20 surrounding properties.

21 Q. Is that blue line is the Burch Keely line?

22 A. Yes, ma'am, the blue line is the Burch  
23 Keely unit outline and the yellow is Concho  
24 ownership. So these are predominantly areas where  
25 Concho operates wells on the east and west of the

1 Burch Keely unit.

2 Q. And the red represents wells; is that  
3 correct?

4 A. All the dots depict wells, yes, ma'am.

5 Q. What's the difference between the red and  
6 the blue dots?

7 A. The red dots are Paddock wells. That's  
8 the upper part of the Yeso section, so the interval  
9 right below the Glorietta. The blue dots represent  
10 Blinebry only wells. Those are wells we have  
11 completed only in the Blinebry, and the half and  
12 half dots depict wells completed in both. Concho  
13 refers to them as Yeso wells or combination wells  
14 because they are completed in both intervals.

15 Q. And at the time this was created, there  
16 are no blue dots within the Burch Keely unit?

17 A. There are not.

18 Q. Why is that?

19 A. Because we have not been exploiting down  
20 to the Blinebry because of the ownership issue. The  
21 previous owner, Marbob, was drilling Paddock only  
22 wells and we continue that pending the results of  
23 our extension. We have, since the rulings, drilled  
24 a few wells down into the sliver or the interval in  
25 question and completed them down in that interval.



1 Q. If I am reading this correctly, COG has  
2 wells with blue dots which are the Blinebry outside  
3 of the BK unit but not within?

4 A. Yes.

5 Q. What kind of success have you had in the  
6 wells?

7 A. Those have all been successful. We  
8 believe with our current completion techniques that  
9 the Blinebry is only -- the Blinebry is a viable  
10 unit to complete.

11 Q. Do you expect to drill more wells with  
12 blue dots within the BK unit?

13 A. We would drill wells with blue dots all  
14 over the BK unit. That will be our plan.

15 Q. I think that's it for Exhibit 17. You can  
16 fold that up and get out Exhibit 18. Can you tell  
17 us what 18 is?

18 A. This is a stratigraphic cross-section  
19 showing five well logs. The well on the left is a  
20 modern -- wells on the left and right are  
21 Concho-operated wells. The one on the left is from  
22 the GJ unit which is just to the west of the Burch  
23 Keely unit. The one on the right is from the well  
24 called the Jenkins Federal No. 18, which is just  
25 east of the Burch Keely unit, and then the three

1 wells depicted in the middle are from the lands in  
2 question. These are Grayburg Deep unit wells, and  
3 you will notice along the bottom of the tracts that  
4 those are all 11,000 plus wells, so we use these  
5 three wells just to show the entire interval, so we  
6 cut out the Yeso interval to show here.

7 Q. Just to make sure I understand, you have  
8 five wells but the two outside ones are not in the  
9 BK unit?

10 A. They are not in the BK unit, that's  
11 correct.

12 Q. The inside ones are but they are completed  
13 at much lower levels than the expansion area that  
14 we're talking about?

15 A. That's correct, yes, ma'am.

16 Q. But they give us information?

17 A. Yes.

18 Q. And so the pink area is the expansion  
19 area, correct?

20 A. That's correct. That's, again, because of  
21 the structural component. The top of the Paddock,  
22 the top of the Blinbry move down with respect to  
23 depth, but the 5,000 foot line, of course, stays the  
24 same. That's fixed for all areas. So over on the  
25 left log, the expansion would be in the 500-foot

1 range. Over on the far right it would be closer to  
2 the 200-foot range.

3 Q. So below the red 5,000 on Exhibit 18, even  
4 though that's a different color, that's part of the  
5 Blinebry, too; isn't that correct?

6 A. Yes. It encompasses down to what's marked  
7 as the Tubb on the logs. That's the interval right  
8 before the base of the logs.

9 Q. So it looks to me like there is more of  
10 the Blinebry below 5,000 feet than there is above;  
11 is that fair?

12 A. That's a fair assessment. Certainly over  
13 on the east side that's true.

14 Q. And has there been development in the area  
15 under the BK unit and the Blinebry area beneath the  
16 BK unit?

17 A. No, because we don't have the rights to  
18 drill past the 5,000 feet.

19 Q. But Conoco would have that right? Are you  
20 aware of wells in the Blinebry below 5,000 feet?

21 A. I'm aware there are wells that penetrate  
22 below that depth. Are I'm not aware of wells that  
23 are completed in that interval.

24 Q. This is the same Blinebry area we talked  
25 about a while ago that we said had low porosity?

1 A. Yes, typically a fairly low porosity rock.

2 Q. Is there a number assigned to that?

3 A. Low is a relative term, but typically in  
4 the maximum of maybe 5 percent. We would complete  
5 down to 3 percent, but I mean a lot of it is between  
6 zero and 3 percent.

7 Q. So we have had testimony earlier, and I  
8 think from you, that we can't drill in the Blinebry  
9 without having the expansion included in the unit of  
10 the pool; is that correct?

11 A. I'm not a landman but my understanding is  
12 we can, yes.

13 Q. Do you think it makes more sense to  
14 include the Blinebry in the unit and the pool? The  
15 top portion, the sliver portion of the Blinebry  
16 pool?

17 A. I think it does. I mean, we would like to  
18 be completing this interval. We certainly think  
19 that it's creating waste, to use that term, if we  
20 are not allowed to.

21 Q. Do you use a vertical well to basically  
22 pick up from the Paddock and from the Blinebry down  
23 to the 5,000 foot mark?

24 A. Yes, we would drill a well to just shy of  
25 5,000 feet and then we would complete upward from

1 that.

2 Q. But having it in a unit and pool makes it  
3 more likely that the reserves in the pink area you  
4 are talking about would be developed?

5 A. Yes.

6 Q. Would it be less likely they are stranded  
7 or wasted?

8 A. Far less likely, yes, ma'am.

9 Q. Let's go to Exhibit 19, please. Tell us  
10 what Exhibit 19 is, please.

11 A. Exhibit 19 is essentially the same as the  
12 last cross-section you looked at. It's the same  
13 five wells. One to the west of the Burch Keely  
14 unit, the one on the right just to the east, and the  
15 same three Grayburg Deep wells in the middle. The  
16 blue area shading is representing the 330-foot  
17 proposed setback that I think was being requested at  
18 one time. I'm not certain if that's still being  
19 requested, but that shows 330 feet above the 5,000  
20 mark, 330 feet below the 5,000 mark. So there's 660  
21 feet of formation that would be unexploited if we  
22 were to go down the road of vertical setbacks or  
23 buffer zones or whatever you want to call them.

24 Q. So even though Conoco didn't propose it be  
25 a mutual 330-foot setback, that's what you depicted

1 here?

2 A. Right.

3 MR. CAMPBELL: Counsel, you're aware that  
4 Conoco is not asserting a financial setback, aren't  
5 you?

6 MS. LEACH: We are aware of that now. At  
7 the time we had to have exhibits prepared you had  
8 not made that filing until basically the same date.  
9 So I want the Commission to understand that if you  
10 start talking about preventing development in the  
11 response, your request for protecting correlative  
12 rights, you were basically sealing off a great deal  
13 of area that would not be produced.

14 Q (By Ms. Leach) Mr. Broughton, do you  
15 believe approving expansion will reduce or is likely  
16 to prevent the waste of resource?

17 A. I do, yes.

18 Q. Do you believe that approving the  
19 expansion will promote correlative rights?

20 A. I believe it will promote an opportunity  
21 to exploit our ownership. Yes, I do.

22 Q. Did you prepare Exhibits 15 through 19 or  
23 members of your geologic group?

24 A. Yes, ma'am.

25 Q. Were they prepared from basically the

1 records that you keep normally and allow in your  
2 business?

3 A. Yes, ma'am.

4 MS. LEACH: At this time I would move  
5 Exhibits 15 through 19 into evidence.

6 CHAIRWOMAN BAILEY: Any objections?

7 MR. CAMPBELL: No, ma'am.

8 CHAIRWOMAN BAILEY: They are so admitted.

9 (Note: Exhibits 15 through 19 admitted.)

10 MS. LEACH: With that, I pass the witness.

11 CROSS-EXAMINATION

12 BY MR. CAMPBELL

13 Q. Good morning, Mr. Broughton.

14 A. Good morning, sir.

15 Q. You were not the geologist who testified  
16 on behalf of Concho in the division proceeding, were  
17 you?

18 A. I was not, sir, no.

19 Q. The geologist who testified for Concho in  
20 the division proceeding is Mr. Reyes?

21 A. I believe that's correct. I was not at  
22 that hearing, but I believe that's correct.

23 Q. And Mr. Reyes is sitting in the hearing  
24 room there in back, is he not?

25 A. He is.

1 Q. Is there some reason why Mr. Reyes is not  
2 testifying?

3 A. The reason is these are now my properties.  
4 At the time Mr. Reyes was the geologist assigned to  
5 the properties. We have changed our structure and  
6 Mr. Reyes is now the lead geologist over the entire  
7 shelf team. I work under him and this is now my  
8 area so that's why I'm handling this.

9 Q. Fine. Did you review Mr. Reyes' testimony  
10 as a geologist in the proceeding below?

11 A. I did not review all of it; no, sir.

12 Q. Did you review any of it?

13 A. I did not; no, sir. I did not.

14 Q. But just conceptually, if Mr. Reyes is now  
15 your boss -- is that proper to say he is your boss?

16 A. It is proper to say, yes, sir.

17 Q. You would assume that Mr. Reyes testified  
18 accurately at the hearing below?

19 A. I'm going to assume that he did, yes, sir.

20 Q. And that he provided expert geologic  
21 testimony in his testimony below?

22 A. I will agree with that, yes.

23 Q. And if Mr. Reyes said something below  
24 relative to the most effective way to develop the  
25 Blinbry, conceptually you wouldn't have any



1 difficulty with that testimony, would you?

2 A. I would hope not, no, sir.

3 Q. Could you retrieve Concho Exhibit 15,  
4 please.

5 A. Yes, sir, I have it.

6 Q. On the right-hand side, the color log?

7 A. Yes, sir.

8 Q. The Polaris well, which I believe you said  
9 was to the east of the Burch Keely?

10 A. Yes, sir, that is true, it is to the east.

11 Q. And we are seeing here, are we not, that  
12 phenomenon that on the east side of the Burch Keely  
13 unit there is much more of the Blinebry formation  
14 below 5,000 feet than on the west side?

15 A. That is true, yes, sir.

16 Q. So as a general proposition, it would be  
17 less economic for Concho, should its application be  
18 granted, to drill a Blinebry well on the east side  
19 of the Burch Keely than it would be for Concho to  
20 drill on the west side?

21 A. Less economic?

22 Q. Yes.

23 A. We would complete our portion of the  
24 Blinebry and the Paddock together, and that would  
25 be, in my opinion, an economic well.

1 Q. Okay. But it would be a more economic  
2 well, since there is more Blinebry on the west side  
3 of the unit above 5,000 feet, it would be more  
4 economic for Concho to drill on the west side in  
5 combination with the Paddock completion, correct?

6 A. It wouldn't be, because we don't own the  
7 depth below 5,000 feet. We couldn't complete that.

8 Q. No, I may have been misunderstood. I am  
9 trying to compare the economics for Concho of  
10 drilling a Paddock Blinebry well on the east side of  
11 the Burch Keely unit --

12 A. Right.

13 Q. -- which has less Blinebry above the 5,000  
14 foot line, than it would be for Concho to drill a  
15 Paddock Blinebry well on the west side of the unit  
16 because there is more Blinebry above 5,000 feet.

17 A. Just because of the thickness of the  
18 interval. Yes, sir, I would agree with that. Yes,  
19 I do.

20 Q. Okay. And as a corollary, it would be  
21 more economic for ConocoPhillips to drill a Blinebry  
22 well on the east side of the unit because there is  
23 more Blinebry on the east side below 5,000 feet?

24 A. I would say that that's probably accurate  
25 also, yes, sir.

1 Q. And similarly from ConocoPhillips'  
2 perspective, it would be less economic to drill a  
3 Blinebry well on the west side of the unit where  
4 there is more Blinebry above 5,000 feet?

5 A. Well, I'm not familiar with their  
6 economics, but just based on the amount of interval,  
7 I would say that that's probably true, too, yes,  
8 sir.

9 Q. So the economics for both companies then  
10 change, depending on whether you are drilling on the  
11 east or the west side of the Burch Keely unit or the  
12 Grayburg Deep?

13 A. That's probably true, yes, sir.

14 Q. Wouldn't the most economic and efficient  
15 way to produce all reserves in the Blinebry  
16 formation be to either force-pool the Blinebry  
17 across the ownership line or alternatively jointly  
18 develop it between Conoco and Concho?

19 A. I would agree that that's probably the  
20 case, and we have not made any kind of a deal or  
21 arrangement to allow that, though.

22 Q. You haven't even responded to Conoco's  
23 letter proposing it.

24 A. I have never seen a letter of proposal.  
25 That's not my department.

1 Q. All right. So you don't know whether  
2 Conoco may have proposed it and Concho simply not  
3 responded?

4 A. I have no idea about that, no, sir.

5 Q. Will the next witness, the engineer, know  
6 that?

7 A. I don't know. I have no idea.

8 Q. But you would concede for the Commission  
9 that as a petroleum engineer and a master geologist  
10 that the best way to develop this Blinebry  
11 productive formation is to either jointly develop it  
12 or force-pool Conoco, the other interest owners,  
13 below 5,000 feet and Concho?

14 A. Yes. We would develop it the entire  
15 interval -- if we owned it we would.

16 Q. And that would avoid impairment of  
17 anybody's correlative rights, wouldn't it?

18 A. Could you repeat that? I don't understand  
19 the question.

20 Q. If you jointly develop the entirety of the  
21 Blinebry and drop the pool definition to the top of  
22 the Tubb, then everybody's Blinebry reserves would  
23 be produced and nobody would be affected adversely  
24 in a correlative rights sense?

25 A. It depends on the arrangement of the terms

1 but it's possible that's true.

2 Q. I mean, assuming there are fair terms of  
3 allocation.

4 A. Then I will agree with you.

5 Q. Could I ask you to retrieve Concho Exhibit  
6 17? This is your color-coded map showing Blinebry  
7 producers and Paddock producers.

8 A. Yes, sir.

9 Q. And your testimony was the Burch Keely  
10 unit is outlined in blue?

11 A. Yes, sir, that is correct.

12 Q. And I took from your testimony that the  
13 absence of any blue dots here gives you the  
14 conclusion that Concho has not completed any wells  
15 in the Blinebry within the Burch Keely unit.

16 A. At the date of the preparation of this  
17 map, which was January 4th, 2011, that was the case.  
18 That is not currently the case. We have completed  
19 some wells in the upper part of the Blinebry above  
20 5,000 feet.

21 Q. How far above 5,000 feet?

22 A. I don't know the exact perf number, but  
23 it's at least 100 to 125 feet above the 5,000-foot  
24 mark. I can't give you the depths of the  
25 perforations. I don't know that number.

1 Q. Are you familiar with the Burch Keely Unit  
2 411?

3 A. The well number 411? Vaguely. It's in  
4 that area, yes, sir.

5 Q. Indeed, it is the well in Section 18  
6 within the Burch Keely outline here in the western  
7 half of that section --

8 A. Section 18?

9 Q. Yes, sir.

10 A. Yeah, this doesn't have well numbers on it  
11 so I'm not sure which one it is, but I will go with  
12 you here.

13 Q. Would you have anything to do with filing  
14 sundry notices?

15 A. No, sir, I would not.

16 Q. Would you know what a sundry notice is?

17 A. It's a notice to change some parameter of  
18 the well or wellbore or depth or completion, but  
19 that falls under our regulatory department. I  
20 wouldn't do the paperwork or be involved in the  
21 paperwork for that.

22 Q. Will your engineer witness know what a  
23 sundry notice and report on wells is, a BLM form?

24 A. Well, he will know what it is. He may not  
25 be any more intimate with the details of it than I

1 am, but you will have to ask him that. We have a  
2 regulatory group that files these particular forms.

3 Q. I appreciate that. But you can read one,  
4 can't you?

5 A. I will be glad to.

6 Q. I just don't want to have to do this  
7 twice. I will wait for the engineer.

8 A. That's fine.

9 Q. Would you retrieve Concho Exhibit 18.

10 A. I have it.

11 Q. Mr. Broughton, as I listened to your  
12 testimony here, the two wells on the outside of the  
13 log of the exhibit are not in the Burch Keely.

14 A. You're correct. Yes, sir, they are not.

15 Q. The well on the right, the Jenkins B well  
16 is located outside the Burch Keely on the east side?

17 A. That's correct. Yes, sir.

18 Q. And you operate that well?

19 A. Concho operates that well, yes, sir, as we  
20 do the well on the west.

21 Q. It appears to me that Concho, on that  
22 Jenkins B Federal well on the east side where the  
23 Paddock thickens below 5,000 feet, perforated and  
24 fracked several times below 5,000 feet. Do I read  
25 that correctly?

1           A.     Yes. The red marks in that tract towards  
2     the center are the perforations, yes, sir. So that  
3     would be true.

4           Q.     Is there a standard interval of  
5     perforations that your company uses?

6           A.     No, there's not. It's well-by-well basis.  
7     We log the well, either open hole or cased hole,  
8     look at the logs and then the completion engineer  
9     charged with that well would make an election on  
10    exactly how it's perforated and completed.

11          Q.     Indeed, on that east side well, the  
12    Jenkins B, it does not appear to me that you fracked  
13    in the Blinebry on that east side well, correct?

14          A.     That we didn't frack in the Blinebry?

15          Q.     That you didn't frack in the sliver that  
16    you are seeking to extend here.

17          A.     No, not in this particular well we didn't.

18          Q.     And you didn't frack in that -- am I  
19    reading that -- the sliver in the Blinebry there  
20    between -- there's a 200-foot sliver there of  
21    Blinebry?

22          A.     Yes, sir.

23          Q.     You didn't choose to frack in that sliver,  
24    did you?

25          A.     No, we did not. Not in this case.



1 Oftentimes we do, though. What you will notice is  
2 within that 200 feet, you will notice the porosity  
3 curve, which is that blue curve on the right, is far  
4 poorer in that interval. The porosity below the  
5 5,000-foot line increases significantly. So we are  
6 not just going to perforate it because it's within  
7 the 200-foot window. There's a very specific reason  
8 for not perforating in that window in this  
9 particular wellbore, other wellbores in the area,  
10 and that leads to the heterogeneity of it. Other  
11 wellbores in the area could very well and do have  
12 higher porosity in the upper part of the Blinebry  
13 and those would hence be completed.

14 Q. I understand that. But hypothetically, if  
15 this Jenkins B well was inside the Burch Keely unit,  
16 then you wouldn't have produced the Blinebry, right?

17 A. It's not in the unit. This well is to the  
18 east of the unit.

19 Q. I understand that. I'm asking you, as an  
20 expert, a hypothetical question. If this Jenkins B  
21 moved over a few feet and was in the Burch Keely  
22 unit, the data tells me that you wouldn't have  
23 produced the Blinebry.

24 A. Well, you are assuming that the porosity  
25 in the well just inside the Burch Keely unit would

1 be exactly the same as here, and that's not going to  
2 be the case. It's very likely that a well drilled  
3 just inside the east side of the Burch Keely unit  
4 might have higher porosity and we would thus  
5 complete it. It just depends on what the porosity  
6 tells us.

7 Q. And you would have to drill?

8 A. You would have to drill to know. You  
9 don't know until you know.

10 Q. Now, I believe your testimony on this  
11 Exhibit 18 was that -- I think you used the  
12 word "makes sense." I asked you a question. Does  
13 it make sense to extend the vertical limits down to  
14 pick up the pink area? And you said yes, it makes  
15 sense?

16 A. I believe it makes sense. Yes, sir.

17 Q. Does it make more sense as a geologist,  
18 given the facts we are seeing here and ignoring the  
19 ownership line, to extend the vertical limits of  
20 this common source of supply down to the top of the  
21 Tubb?

22 A. Well, if you choose to ignore the  
23 ownership line, then I would say yes.  
24 Unfortunately, we are stuck with the ownership line.

25 Q. Well, prudent companies like Concho and

1 ConocoPhillips can work around ownership differences  
2 through joint development, can they not?

3 A. That would be a question for our land  
4 department or for our executives. Decisions like  
5 that would be made well above my level.

6 Q. Okay. You have an Exhibit 19, which was  
7 your buffer zone map?

8 A. That's the same cross-section with the  
9 buffer zone, yes.

10 Q. Mr. Broughton, besides any other defects,  
11 I'm colorblind. So what I mean to illustrate here  
12 is -- what do you want to call that, the dotted  
13 section here?

14 A. Yes. We would call it stippling. On the  
15 graph that's call stippling.

16 Q. Stippling. It's a different color from  
17 above 5,000 and below 5,000, but you stipple a 300  
18 foot -- 330-foot setback in response to a suggestion  
19 that is now withdrawn, correct?

20 A. That is correct. This slide was  
21 prepared -- or this graphic was prepared when there  
22 was a 330-foot setback being suggested.

23 Q. Understood.

24 A. Okay.

25 Q. Your testimony was that this stippled

1 area --

2 A. Talking about the blue? The  
3 blue-shaded -- well, you will not be able to see  
4 blue.

5 Q. I am talking about the 330 on each side of  
6 the 5,000.

7 A. Yes, the blue area.

8 Q. Your testimony was that those reserves  
9 would not be exploited; that they would not be  
10 produced and that they would be wasted?

11 A. Given that the 330-foot setback above and  
12 below the 5,000-foot line would be implemented, then  
13 there's 660 feet of rock that would not be  
14 exploited, that is true. Yes, sir.

15 Q. Does that contemplate any effect of  
16 fracking?

17 A. Excuse me?

18 Q. Does it contemplate, for example, a  
19 horizontal well at the edge of the stipple in a  
20 frack?

21 A. No.

22 Q. I mean --

23 A. I don't know where a horizontal well came  
24 from.

25 Q. I mean, you drilled some horizontal wells,

1 haven't you? Your company?

2 A. Our company has. I haven't been involved  
3 in any.

4 Q. I am trying to test your testimony that  
5 the stippled area would be wasted and not produced.

6 A. It would not be drilled into and completed  
7 in.

8 Q. That's a much different thing, isn't it?

9 A. Not necessarily.

10 Q. Well, a horizontal well could be laid  
11 along the outside edges of the stipple and frack,  
12 couldn't they?

13 A. Absolutely.

14 Q. And in that case the reserves in the  
15 stippled area would not be wasted?

16 A. Not necessarily. The horizontal well  
17 would be above the stippled area so I don't know how  
18 you get -- I don't know how you -- I don't  
19 understand your line of questioning. I'm sorry.

20 Q. Well, not only do you drill horizontal  
21 wells, you frack those horizontal wells?

22 A. That would be the process, yes, sir.

23 Q. That's what I'm asking mere. In a  
24 horizontal well that's fracked there's an  
25 opportunity to capture -- is it stiffle or stipple?

1           A.     Stipple.

2           Q.     Stippled reserves here, would there not  
3     be?

4           A.     Not necessarily.

5           Q.     I would like to ask you just a few  
6     questions about testimony that Mr. Reyes gave at the  
7     hearing below.

8           A.     I will do my best with that.

9           Q.     Mr. Broughton, these are excerpts of  
10    Mr. Reyes' testimony.

11                 MS. LEACH:  Objection.  This was not  
12    included in your exhibits.

13                 MR. CAMPBELL:  This is already part of the  
14    record.

15                 MS. LEACH:  It's not part of the record  
16    until you make it part of the record, and if so, you  
17    need to provide copies in advance to the Commission  
18    and to the parties.

19                 MR. CAMPBELL:  There's no surprise here.  
20    This is testimony from your own witness.

21                 MS. LEACH:  It's not from this witness.  
22    This witness has already said that he's not read and  
23    studied this transcript.

24                 MR. CAMPBELL:  He also said that he would  
25    agree most probably with the statements --

1 MS. LEACH: I object to the use of an  
2 exhibit that wasn't identified.

3 MR. CAMPBELL: We made our response. It's  
4 part of the record. It's a statement by the prior  
5 witness, a geologic witness of Concho. It cannot be  
6 a surprise.

7 CHAIRWOMAN BAILEY: Do you intend to make  
8 the previous transcript part of the record?

9 MR. CAMPBELL: I will after lunch.

10 CHAIRWOMAN BAILEY: Well, until you do, I  
11 think that Concho has a point here.

12 MR. CAMPBELL: All right, ma'am. Is there  
13 a good time to break for lunch?

14 CHAIRWOMAN BAILEY: Why don't we. We will  
15 break for lunch until ten minutes after 1:00.

16 (Note: The hearing stood in recess at  
17 11:50 to 1:10.)

18 CHAIRWOMAN BAILEY: When we broke for  
19 lunch, there was discussion concerning the use of a  
20 portion of the transcript of the examiner hearing  
21 and then there was an objection to distribution and  
22 use of that transcript. But I understand now that  
23 that objection has been removed?

24 MS. LEACH: It appeared to me that you  
25 were going to let him use it if he produced the

1 entire transcript, and I thought that seemed like  
2 overkill so I did not make Mr. Campbell go produce  
3 the transcript. You are correct.

4 CHAIRWOMAN BAILEY: You may go ahead then  
5 and question the witness.

6 Q (By Mr. Campbell) Mr. Broughton, do you  
7 have the copy of the partial transcript?

8 A. The one that you handed out?

9 Q. Yes.

10 A. Yes, I do.

11 Q. Commissioners, this is a partial  
12 transcript of the testimony of Mr. Reyes, the  
13 geologist for Concho in the proceeding below. And I  
14 would ask you if you would turn to Page 18.

15 A. Okay.

16 Q. Beginning there at Line 9, Mr. Reyes says,  
17 "Let's cut it off at the top of the Tubb or at the  
18 base of the Glorietta, something that you can hang  
19 your hat on, rather than a 5,000 foot measured  
20 depth, cuts right into the middle of this Yeso  
21 formation." Do you see that?

22 A. I do.

23 Q. With respect to Mr. Reyes' testimony, do  
24 you agree with the proposition that this ownership  
25 line cuts right through the Yeso formation above and



1 below?

2 A. Yes, it does cut through the Yeso  
3 formation, yes, sir.

4 Q. And continuing on to Page 23, Mr. Reyes  
5 says, "At that 5,000 foot line is a unit boundary  
6 rather than a geologic boundary."

7 A. Yes, sir, I see that.

8 Q. Do you agree with that?

9 A. Yes, I do.

10 Q. Now, this is Examiner Brooks questioning,  
11 beginning at Line 17:

12 "QUESTION: As I look at your logs, it  
13 looks like this is more or less uniform through the  
14 area you want to expand but it continues more or  
15 less uniform on down below that."

16 Mr. Reyes says, "Yes."

17 Q. Do you agree that the formation of the  
18 Blinebry continues more or less uniform down below  
19 the 5,000-foot level?

20 A. Yes, I do. It's all heterogenous rock and  
21 the 5,000 foot is an ownership boundary. There's no  
22 discernable geologic formation that I can see.

23 Q. Thank you. That's all I have.

24 REDIRECT EXAMINATION

25 BY MS. LEACH

1 Q. I just need to clarify a few things. I  
2 believe you were shown -- I think if we look at  
3 Exhibit 18, that will work for us. Remember what 17  
4 looks like. Exhibit 17, you remember, is the one  
5 with the red and the blue dots?

6 A. Yes, the Paddock and the Blinebry wells.

7 Q. Would there be more dots in the BK unit if  
8 that map were created now instead of when it was  
9 created?

10 A. Yes, there would be, because we have been  
11 drilling wells there.

12 Q. How many that show completion?

13 A. Well, there currently aren't any blue dots  
14 in there, but there would be -- let's see. We  
15 drilled 23 wells -- we have drilled five that I  
16 believe are combination wells that have part Paddock  
17 and part Blinebry.

18 Q. So --

19 A. Half blue and half red dots. They would  
20 have both intervals.

21 Q. Thank you. Looking at Exhibit 17, there  
22 are a couple things I wanted to clarify.

23 Mr. Campbell seemed very concerned over the  
24 right-hand well log and the thinness of the Blinebry  
25 there. Do you remember that conversation with him?

1 A. Yes, I do.

2 Q. And as I recall your testimony, this is  
3 the well that's represented in the well log to the  
4 east of the BK unit?

5 A. It is just east, yes.

6 Q. That's a thinner part still of the  
7 Blinebry?

8 A. Yes.

9 Q. Or a thinner part of the expansion area?

10 A. Yes. This particular wedge or -- what's  
11 the term we are using? This particular sliver would  
12 thicken to the west from this particular well on the  
13 right.

14 Q. So this part is thinner than it would be  
15 if you were truly in the BK unit? The part shown on  
16 the right-hand log?

17 A. Yes, right.

18 Q. So it would be somewhat thicker within the  
19 BK unit?

20 A. Yes, ma'am, that's true.

21 Q. Okay. So in going over to the left-hand  
22 side and the well log there has red lines in four  
23 places. I believe you said those are the  
24 perforations?

25 A. That represents the actual perforations in

1     that wellbore; yes, ma'am.

2           Q.     So there were actual perforations in the  
3     wellbore in the Blinebry below 5,000 feet?

4           A.     In this wellbore, yes, ma'am.

5           Q.     So clearly at the time of perforations  
6     were done, you expected production below the 5,000  
7     line?

8           A.     Oh, absolutely.

9           Q.     I believe you testified, but let me  
10    confirm, that when you are making decisions about  
11    what to do with the well after you drilled it, you  
12    look at well logs?

13          A.     Yes, ma'am.

14          Q.     And you basically come up with a pattern  
15    that is suitable for the well and where you do the  
16    perforations?

17          A.     The completion engineer looks at the logs  
18    and decides how to space the perforations and how to  
19    complete or track the well, yes, ma'am.

20          Q.     You would be looking at the information  
21    you gather from the well logs that would show you  
22    things like porosity?

23          A.     That's one of the things you look at.

24          Q.     What else?

25          A.     The gamma ray curve to see how clean it

1 is. You look at the spacing between -- you look at  
2 the gross interval that you have to work with to  
3 determine how you want to space out the perforation.

4 Q. My next question is really trying to make  
5 sure that the record is correct. I thought I heard  
6 Mr. Campbell say that the Paddock thickens below  
7 5,000 feet as you go across this.

8 A. The Paddock doesn't make it to 5,000 feet.

9 Q. Okay. I think he meant the Blinebry. It  
10 would be correct if we were talking about the  
11 Blinebry; is that fair?

12 A. Yes, the Blinebry thickens moving east  
13 below the 5,000 foot line. It's very easy to see on  
14 Exhibit 18 how the Blinebry thickens moving from  
15 west to east.

16 Q. Mr. Campbell seemed concerned that  
17 Mr. Reyes was not here to testify. Do you recall  
18 that this case was originally set to be heard June  
19 28th?

20 A. I'm not familiar with the dates of when it  
21 might have happened. I'm sorry.

22 Q. Okay. Was Mr. Reyes in the country on  
23 June 28th?

24 A. Actually, he was not. He was on vacation.  
25 I believe he was in Europe.

1 Q. No further questions. Thank you.

2 CHAIRWOMAN BAILEY: The Commission does  
3 have some questions. Mr. Dawson, do you have any  
4 questions?

5 MR. DAWSON: I don't have any questions.

6 CHAIRWOMAN BAILEY: Mr. Balch?

7 MR. BALCH: I have one. Are these going  
8 to be existing wells or completely new wellbores?

9 THE WITNESS: I believe that we would plan  
10 to drill new wellbores. I believe the plan is to  
11 drill new wellbores but that would be a better  
12 question for the engineer.

13 MR. BALCH: Approximately how much oil per  
14 well?

15 THE WITNESS: I'm not going to know that  
16 answer, sir.

17 CHAIRWOMAN BAILEY: I do have a question  
18 also. Is the lithology here in the upper part of  
19 the Blinebry more conducive to horizontal drilling  
20 or vertical drilling.

21 A. It's economically drilled vertically. We  
22 are and have been looking at the possibility of  
23 drilling horizontal wells. We have not got those  
24 plans together and I'm not sure anyone in our group  
25 is convinced that we're ready to jump off into

1 horizontal drilling but it's certainly something  
2 that we are looking at and developing at least a  
3 scenario for.

4 CHAIRWOMAN BAILEY: Any redirect on those  
5 questions? Then you may be excused.

6 MS. LEACH: With that I would call Ken  
7 Craig.

8 KEN CRAIG  
9 after having been first duly sworn under oath,  
10 was questioned and testified as follows:

11 DIRECT EXAMINATION

12 BY MS. LEACH

13 Q. Good afternoon, Mr. Craig.

14 A. Good afternoon.

15 Q. How are you?

16 A. Doing well.

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

19 A. Ken Craig.

20 Q. Where do you work?

21 A. For Concho.

22 Q. What do you do for Concho?

23 A. I'm a lead reservoir engineer for the New  
24 Mexico Shelf Team.

25 Q. And in that capacity have you worked on

1 the Burch Keely unit in Grayburg-Jackson pool?

2 A. Yes.

3 Q. Would you give us a brief summary of your  
4 education and work experience?

5 A. I graduated from the University of Texas  
6 at Arlington in 1980 and went to work for Amoco  
7 Production in '81. From there I held several  
8 positions -- production engineer, reservoir  
9 engineer, operations engineer, facility engineer,  
10 unitization engineer. And as time went on, Amoco  
11 Properties got split. I worked for Altura and then  
12 I went to Oxy when they bought Altura and later went  
13 to Henry Petroleum in Midland and Oxy acquired Henry  
14 Petroleum.

15 Q. Have you testified before the Oil  
16 Conservation Division before this hearing?

17 A. I have.

18 Q. At that time were your credentials  
19 accepted as an expert witness?

20 A. Yes, they were.

21 MS. LEACH: I would like to offer Mr.  
22 Craig as an expert petroleum engineer.

23 CHAIRWOMAN BAILEY: Any objection?

24 MR. CAMPBELL: No, ma'am.

25 CHAIRWOMAN BAILEY: He is so accepted.



1           Q     (By Ms. Leach) Are you familiar with the  
2     applications in this case that Concho has filed to  
3     expand the vertical limits of the Burch Keely unit  
4     in the Grayburg-Jackson pool?

5           A.     Yes, I am.

6           Q.     Have you evaluated the possibility of  
7     development of this expansion area that we have been  
8     talking about today?

9           A.     We have.

10          Q.     And what did you determine?

11          A.     Well, when we first picked up the property  
12     in the fourth quarter of 2010, we were mostly  
13     looking at the possibility of drilling vertical  
14     wells, continue on a similar pace of what we do in  
15     other areas of the shelf and doing well work on  
16     existing wells to go down to pick up the additional  
17     Blaine pay.

18                 Since that time, as Mr. Broughton said, we  
19     started looking at horizontal wellbores to come  
20     through. We think that's an excellent way for us to  
21     pick up this pay, particularly under existing  
22     Paddock wells.

23          Q.     You used two exhibits in the hearing the  
24     last time you testified. Do you recall that?

25          A.     Yes.

1 Q. Would you look at Exhibits 20 and 21 that  
2 we have marked for this case, please. I don't know  
3 which order you prefer to talk about these, but if  
4 it's okay with you, I would like to start in the  
5 reverse order with Exhibit 21.

6 A. Okay.

7 Q. Would you tell us what that is?

8 A. These were some economics that we ran on  
9 some different scenarios of trying to develop the  
10 area. We looked at the Burch Keely performance,  
11 which was developed primarily in the Paddock, and  
12 tried to come up with an estimate of what a similar  
13 Paddock well would do covering approximately 115  
14 MBOE per well.

15 Then we started looking at what the  
16 contribution might be on the east side and the west  
17 side of Burch Keely and then we have some general  
18 rules of thumb that we use for the Blinebry. So we  
19 went through this and just tried to determine could  
20 we drill -- certainly we could drill a vertical  
21 Paddock with an additional Blinebry segment and then  
22 we looked at the possibility of just drilling for  
23 the Blinebry segment alone and felt that that was,  
24 of course, lower economics.

25 Since that time, we have also come up with

1 the idea of trying to drill horizontals, which would  
2 enhance the economics of just drilling the Blinebry  
3 stand-alone well.

4 Q. So what really was your conclusion, say,  
5 back in October or January of this year at the time  
6 that you preparing for the original hearings in this  
7 case, closer to the time when the applications were  
8 originally filed?

9 A. At that time we thought that the upper  
10 Blinebry would be a perfect add-on to the Paddock  
11 drilling.

12 Q. What did you expect in the way of  
13 production? Wait. Let's go to the other exhibit  
14 first, Exhibit 20. Because I assume with the  
15 economic work you did in developing Exhibit 21, then  
16 you were also working on the development plan; is  
17 that fair?

18 A. Yes.

19 Q. What is your development plan for this  
20 area?

21 A. Of course, we felt like the Burch Keely  
22 unit was an excellent place for us to go in and  
23 drill Yeso wells. You can see on the table here the  
24 activity level that we anticipated. The view from  
25 this end at this time when we put this exhibit

1     together was vertical wells only, and you see we  
2     have well over 200 wells that we anticipate that we  
3     could drill. The number may be higher, and at the  
4     time we were assigning 24 MBOE for each upper  
5     Blinebry completion, which gets you 4.8 to 5 million  
6     barrels that we thought we could develop.

7           Q.     Let me simplify it in layman's terms. If  
8     you drill to the Paddock and the top part of the  
9     Blinebry, you therefore had greater production than  
10    just by drilling either alone?

11          A.     Yes.

12          Q.     And from that and from your expected plans  
13    to drill, you are talking about producing five  
14    million barrels of oil?

15          A.     That was the target that we had.

16          Q.     And how are you doing on your first year  
17    of drilling?

18          A.     We were actually on pace to reach this 57  
19    producers that we have on the table. We spud 23  
20    wells to date and currently have two rigs running in  
21    that area.

22          Q.     Would you be as likely to drill those  
23    vertical wells if the Blinebry was not part of the  
24    BK unit or the GJ pool?

25          A.     No, we would not.

1 Q. Why is that?

2 A. If you were drilling from just the upper  
3 Blinebry alone, the economics would be very low.

4 Q. So if that were the case, then it would  
5 appear to be more likely that these reserves would  
6 be left on the ground; is that correct?

7 A. Yes.

8 Q. And if something has happened and you are  
9 not allowed to produce in the upper Blinebry, would  
10 that deny Concho's correlative rights?

11 A. Yes.

12 Q. So did you create Exhibits 20 and 21?

13 A. I did.

14 MS. LEACH: With that, I move the  
15 admission of Exhibits 20 and 21.

16 MR. CAMPBELL: No objection.

17 CHAIRWOMAN BAILEY: Admitted.

18 (Note: Exhibits 20 and 21 admitted.)

19 MS. LEACH: Pass the witness.

20 CROSS-EXAMINATION

21 BY MR. CAMPBELL

22 Q. I'm sorry, your name is Mr. Craig, right?

23 A. Yes, sir.

24 Q. Exhibit 20, do I sense from your testimony  
25 that this is not currently the plan of development

1 through 2015 that you are discussing revising away  
2 from vertical wells to horizontal wells?

3 A. This is the plan of development that we  
4 had in the fourth quarter of 2010. Since that time  
5 we have drilled several horizontal wells on the  
6 shelf and we have opened up the idea of drilling a  
7 horizontal through the sliver, and we felt like that  
8 would be an option that we would like to consider.

9 Q. So is Exhibit 20 your current plan of  
10 development or not your current plan of development?

11 A. That is the dated plan of development, the  
12 first plan. I don't have a table that shows you  
13 exactly what we are going to do now.

14 Q. But Exhibit 20 doesn't show us exactly  
15 what you are going to do now then, correct?

16 A. That's right.

17 Q. You don't know how many wells you are  
18 going to drill in the next five years and you don't  
19 know whether they will be horizontal wells or  
20 vertical wells, right?

21 A. If you put it that way, that's right.

22 Q. Now, assuming you were to drill a  
23 horizontal well, would you frack that horizontal  
24 well?

25 A. I expect that we would.

1 Q. And here on Exhibit 18, this is with the  
2 two outside wells not being in Burch Keely, and we  
3 have established that on the east side of the unit,  
4 the Blinebry is materially thinner than on the west  
5 side?

6 A. Yes.

7 Q. Are you with me?

8 A. Yes, sir.

9 Q. Would the contemplation be that your  
10 horizontal well would stretch -- how far? All the  
11 way across the unit?

12 A. No. Typically our horizontals are, I  
13 believe, at the most one mile or a section.

14 Q. One section?

15 A. Yeah, about a mile.

16 Q. I realize your plans are not solid, but  
17 would you expect that it would be economic then if  
18 you were drilling horizontally to run through the  
19 Blinebry on the east side where the Blinebry is  
20 thinner to 5,000 feet?

21 A. We would have to look at that particular  
22 lateral and look at the offsets and see the  
23 thickness of the pay we have there and make that  
24 determination, yeah.

25 Q. You say you evaluated the sliver in

1 Exhibit 21?

2 A. Where we made an estimate of what we think  
3 the sliver can contribute per well.

4 Q. Have you made an estimate of what the  
5 entire Blinebry, if jointly developed, would  
6 produce?

7 A. In the Burch Keely, no.

8 Q. Did you see a copy of Conoco's proposal  
9 for joint development come into your company?

10 A. No, sir, I did not.

11 Q. You are the chief engineer for your  
12 company in this area?

13 A. I'm the lead reservoir engineer for the  
14 specifically team. I hate to use the word chief.

15 Q. The lead reservoir engineer. Would you be  
16 a person that would be consulted by the company with  
17 respect to the development of a joint plan of  
18 development of the Blinebry?

19 A. I would most likely be down the chain  
20 where they would give me the specifics of a proposal  
21 and maybe run economics.

22 Q. Let me ask you to assume a slightly  
23 different set of facts here, Mr. Craig. Let's  
24 assume that it was Concho that owned the rights  
25 below 5,000 feet and Conoco owned the rights above



1 5,000 feet.

2 A. Okay.

3 Q. And Conoco came in to extend the vertical  
4 limits of the Grayburg-Jackson pool to a depth of  
5 5,000 feet, okay? What would be Concho's reaction?

6 MS. LEACH: Objection. He may not be able  
7 to speak for the entire company, because I don't  
8 think they really had a meeting to make a decision  
9 about this.

10 MR. CAMPBELL: I'm sure they haven't  
11 because this is a hypothetical question.

12 MS. LEACH: If you just want his opinion  
13 instead of Concho's opinion, that would be fine.

14 MR. CAMPBELL: Okay.

15 A. Well, that's a lot of ifs.

16 Q. That's what a hypothetical is, sir.

17 A. I understand that. Would I be upset if  
18 the unit boundary was being pushed down to 5,000  
19 feet if I had the rights below 5,000 feet?

20 Q. Yes. And the question was not phrased in  
21 terms of your emotional reaction.

22 A. Okay.

23 Q. It is posed in terms of what you would do,  
24 what you would recommend your company do if that  
25 were to occur?

1           A.     I would recommend to develop below 5,000  
2 feet if we hadn't already done it.

3           Q.     You wouldn't recommend a potential joint  
4 development?

5           A.     That's an idea, but we could still develop  
6 below 5,000.

7           Q.     With twin wells?

8           A.     Twin wells -- who would we twin?

9           Q.     Conoco, who is drilling these 215 wells  
10 into the Burch Keely?

11          A.     They would be twin wells.

12          Q.     So you're drilling two wells at different  
13 levels of the same formation simply based on  
14 different ownership, right?

15          A.     If you went the horizontal route, most  
16 likely you are going to have twin wells anyway if  
17 you only have a single lateral so there wouldn't be  
18 that much difference.

19          Q.     You now switched to horizontal wells?

20          A.     That's what makes this great for us to  
21 extend the unit down to 5,000 foot. It gives us  
22 lots of options.

23          Q.     And you're still in a role reversal and  
24 Concho -- I'm Concho and you're Conoco. We're still  
25 back on the hypothetical.

1           A.     Okay.

2           Q.     And Concho drills a horizontal well  
3     slightly above the 5,000-foot ownership demarcation  
4     and fracks it. Your recommendation, I sense, would  
5     be that you, as Conoco, should drill its own  
6     horizontal well close to the 5,000 foot demarcation  
7     and frack it, right?

8           A.     No.

9           Q.     What would you recommend?

10          A.     Well, I would try to develop all the pay  
11     that I had. I wouldn't intentionally try to come  
12     right in below 5,000 foot and frack a well.

13          Q.     Are you aware that your company, in  
14     September and October of 2010, drilled a vertical  
15     well bottom below 5,000 feet?

16          A.     I am not.

17          Q.     Are you aware that after they bottom-holed  
18     it there, they perforated and fracked it at 4975  
19     feet?

20          A.     No, I'm not.

21          Q.     That's all I have. Thank you.

22                   CHAIRWOMAN BAILEY: Does the Commission  
23     have any questions?

24                   MR. BALCH: I have one question. The  
25     current spacing in the Yeso now, is that 20? 40?

1 THE WITNESS: It's ten, sir.

2 MR. BALCH: About how many horizontals per  
3 section to equalize that production?

4 THE WITNESS: It would be one horizontal  
5 would cross eight ten-acre locations. That's why I  
6 couldn't come up with a well count because if you  
7 had eight verticals, they could be replaced with one  
8 horizontal.

9 CHAIRWOMAN BAILEY: Any other questions?  
10 Mr. Dawson?

11 MR. DAWSON: I have no questions.

12 CHAIRWOMAN BAILEY: I have no questions.  
13 Do you have any redirect?

14 MS. LEACH: No, no redirect and that is  
15 the end of our case.

16 CHAIRWOMAN BAILEY: The witness may be  
17 excused.

18 MR. CAMPBELL: Ma'am Chairman, can I turn  
19 on the projector?

20 CHAIRWOMAN BAILEY: Yes, you may. Call  
21 your first witness.

22 MR. CAMPBELL: ConocoPhillips calls Tom  
23 Scarborough.

24 TOM SCARBOROUGH  
25 after having been first duly sworn under oath,

1 was questioned and testified as follows:

2 DIRECT EXAMINATION

3 BY MR. CAMPBELL

4 Q. Please state your name for the  
5 commissioners.

6 A. My name is Tom Scarborough.

7 Q. What is your current position with  
8 ConocoPhillips?

9 A. I'm a staff landman in Houston, Texas.

10 Q. What is your educational background?

11 A. I graduated from the University of  
12 Oklahoma in 1982 with a degree in petroleum  
13 management.

14 Q. Have you worked as a landman your entire  
15 career?

16 A. Yes, I have. The first ten years I worked  
17 as an independent landman. In 1991 I joined Conoco  
18 and have been employed by Conoco ever since.

19 Q. Are you a certified landman?

20 A. I am a certified professional landman. My  
21 license is No. 24220 prescribed by the American  
22 Association of Professional Landmen.

23 Q. What are your current responsibilities for  
24 the company?

25 A. I am the landman responsible for all of

1 the assets in Southeast New Mexico, namely, Lea and  
2 Eddy County. In addition to many other job duties,  
3 I regularly appear before the BLM to present our  
4 annual plans of development for all of our federal  
5 units, one of which is the Grayburg Deep unit.

6 Q. Have your credentials as a landman been  
7 previously recognized by the Commission?

8 A. Yes.

9 MR. CAMPBELL: We would move recognition  
10 of Mr. Scarborough as an expert landman.

11 CHAIRWOMAN BAILEY: Any objection?

12 MS. LEACH: No.

13 CHAIRWOMAN BAILEY: So recognized.

14 Q. What is the object of your testimony  
15 today, Mr. Scarborough?

16 A. The object is to acquaint the Commission  
17 with the location and ownership interests of the  
18 Burch Keely unit and Grayburg Deep unit.

19 Q. Have you prepared exhibits to demonstrate  
20 your work here?

21 A. Yes, I have. Conoco Exhibits 1 through 5.

22 Q. Would you identify Exhibit 1?

23 A. A surface map showing the aerial extent of  
24 the Grayburg Deep unit as well as the Burch Keely.  
25 The Grayburg Deep unit is outlined in the red. The

1 shading of Burch Keely is in the green. Burch Keely  
2 is wholly encompassed geographically within the  
3 Grayburg Deep unit.

4 Q. Would you identify Exhibit 2?

5 A. Exhibit 2 is the unit agreement for the  
6 Grayburg Deep unit executed in 1954.

7 Q. And in Paragraph 3 of that Exhibit No. 2,  
8 does the -- 1954, I think you said?

9 A. 1954.

10 Q. Does the 1954 unit agreement describe the  
11 unitized area?

12 A. It does. It describes the unitized area  
13 as all formations below a depth of 5,000 feet.

14 Q. And who owned the interest at this time  
15 that Conoco now owns?

16 A. At that point in time the interest was  
17 owned by General American Oil Company.

18 Q. Could you briefly describe the ownership,  
19 Conoco's ownership interest in the Grayburg Deep  
20 unit?

21 A. ConocoPhillips owned a 50 percent  
22 undivided interest in the entire Grayburg Deep unit.  
23 We have three other partners who own the remaining  
24 50 percent: Great western, DOG, Dab Oil, Inc. In  
25 addition, ConocoPhillips' working interest in the

1 Grayburg Deep unit has contributed to an exploration  
2 agreement with Cimarex Energy of Colorado, and under  
3 that agreement they have the right to earn acreage,  
4 leasehold interests by performing certain  
5 requirements under the exploration agreement such as  
6 drilling wells. We have drilled several wells under  
7 this agreement to which they have earned an  
8 assignment and they are the operator.

9 Q. And that would explain Cimarex's interest  
10 in the dispute we have here?

11 A. Yes, it would.

12 Q. Are there any conclusions that you draw  
13 from this unit agreement?

14 A. Well, both units are covered by Federal  
15 Oil and Gas leases. They are the same gases --

16 Q. The Burch Keely and --

17 A. The Burch Keely and the Grayburg Deep unit  
18 are both covered by the same Federal Oil and Gas  
19 leases that were initiated in the time between the  
20 1930s and the late 1940s. These leases cover all  
21 depths. Currently COG has the ownership rights  
22 above 5,000 rights in the Burch Keely unit.  
23 ConocoPhillips and its partners have the ownership  
24 rights below 5,000 feet in the Grayburg Deep unit.  
25 The royalty interests are the same throughout all



1 formations. The overrides vary slightly in the  
2 Burch Keely unit as opposed to the Grayburg Deep  
3 unit.

4 Q. Would you identify Exhibit 3?

5 A. Exhibit 3 is my graph detailing various  
6 parties in the Burch Keely and the Grayburg Deep  
7 unit. I broke it out to show the different  
8 ownership above 5,000 feet and below 5,000 feet. It  
9 does reflect the federal leases and the royalty  
10 rights and they are all the same in both above and  
11 below the 5,000 feet.

12 Q. Would you identify and explain Exhibit 4.

13 A. Exhibit 4 is an unsolicited offer from  
14 Marbob in 1992 to acquire Phillips' interest from  
15 the surface down to 5,000 feet.

16 Q. Were you aware of any effort by Concho to  
17 purchase Conoco's interest below 5,000 feet?

18 A. I'm not aware of an effort, no.

19 Q. What is Exhibit 5, Mr. Scarborough?

20 A. Exhibit 5 is a letter by ConocoPhillips to  
21 COG June 3, 2011 which proposed certain discussion  
22 points around a joint development agreement. It was  
23 an introductory letter to begin discussions,  
24 conversations to hopefully arrive at a means to  
25 jointly develop the Yeso formation across the Burch

1 Keely and Grayburg units.

2 Q. To your knowledge, has Concho responded to  
3 the letter?

4 A. We have received no response to the  
5 letter.

6 Q. Why, in your opinion, is joint development  
7 necessary in the area encompassed by the  
8 applications?

9 A. Well, in our view, the Yeso formation is  
10 continuous. It's both above 5,000 feet and below  
11 5,000 feet, and the marker was set in the prior  
12 agreement. We believe that anything less than a  
13 joint development arrangement would create  
14 unnecessary wells being drilled, constitute waste  
15 and would impair our correlative rights if the  
16 application were approved.

17 Q. In your view, would a grant of Concho's  
18 application result in the prevention of waste and  
19 the protection of correlative rights?

20 A. No, not at all.

21 Q. Why not?

22 A. The ownership interests of Conoco and our  
23 partners directly below 5,000 feet is clearly a part  
24 of the Yeso formation. It's one formation. There's  
25 no distinction at 5,000 feet. Our only recourse

1 would be to drill a twin well to protect our  
2 correlative rights, which would result in waste.

3 MR. CAMPBELL: Ma'am chairman, we move the  
4 admission of Conoco Exhibits 1 through 5.

5 CHAIRWOMAN BAILEY: Any objection?

6 MS. LEACH: I have an objection to 2  
7 because I think it stops abruptly at Page 12 and  
8 it's not clear to me who the parties are. I think  
9 the points you wanted to make were probably made  
10 without the document.

11 MR. CAMPBELL: We were only referring to  
12 Paragraph 3, which is attached. I mean, if you find  
13 it necessary that you think there's  
14 cross-examination on the basis of the pages missing.

15 MS. LEACH: I don't know because I haven't  
16 seen them so we can't agree to its admission.

17 MR. CAMPBELL: We move its admission.

18 MS. LEACH: I object to its admission  
19 because it's not a complete document so it's a  
20 little difficult to say what exactly it is or who it  
21 applies to.

22 CHAIRWOMAN BAILEY: Talking about the unit  
23 agreement for the development and operation of  
24 Grayburg Deep unit?

25 MS. LEACH: Yes.

1 CHAIRWOMAN BAILEY: Which has 12 pages  
2 consecutively but not the remainder of the document.

3 MS. LEACH: Right. You can't tell if it  
4 was ever signed.

5 CHAIRWOMAN BAILEY: I have to agree with  
6 you that it is not a complete document and we should  
7 exclude this.

8 MS. LEACH: Thank you.

9 MR. CAMPBELL: Are the rest are admitted,  
10 Madam Chairwoman?

11 CHAIRWOMAN BAILEY: No objections to the  
12 rest. Yes, they are admitted.

13 (Note: Exhibits 1, 3, 4 and 5 admitted.)

14 MR. CAMPBELL: Pass the witness.

15 CROSS-EXAMINATION

16 BY MS. LEACH

17 Q. Well, Mr. Scarborough, I'm Carol Leach. I  
18 represent Concho or COG Operating. Nice to meet  
19 you.

20 A. Nice to meet you.

21 Q. I have a couple questions about the  
22 documents that have been admitted. We may as well  
23 start with the first one. I believe you testified  
24 that this is a portrayal of the Burch Keely unit and  
25 the Grayburg Deep unit; is that correct?

1 A. Yes, I did.

2 Q. And this, to the best of your knowledge,  
3 is an accurate and complete document?

4 A. According to the records, yes, it is.

5 Q. And it's current as of the date of June  
6 28, 2011?

7 A. Yes.

8 Q. And that's when we originally thought this  
9 hearing was going to take place? That's why it's  
10 dated that date?

11 A. Yes.

12 Q. Now, what's confusing to me is comparing  
13 that document with your Exhibit 5. If you could do  
14 that, please. In the Paragraph 1 with the No. 1  
15 with the closing parentheses, it says the Grayburg  
16 Deep unit is 2534.22 acres. In your Exhibit 1 it  
17 says the Grayburg Deep unit is 5484.17 acres. So  
18 that's a significant discrepancy, isn't it?

19 A. It is.

20 Q. Thank you. So there's a problem with one  
21 of these documents. They are in conflict to some  
22 extent, aren't they?

23 A. The Grayburg Deep unit was contracted by  
24 the BLM.

25 Q. But you didn't show the contraction in

1 Exhibit 1 that you just gave the Commission, did  
2 you?

3 A. I did not.

4 Q. You provided in Exhibit 3 a listing of the  
5 ownership in the Grayburg Deep unit as compared with  
6 the Burch Keely unit; is that correct?

7 A. That's correct.

8 Q. I'm going to show you a document. I think  
9 we will put stickers on it so it will take me a  
10 minute. Would you like to take a break?

11 CHAIRWOMAN BAILEY: We will take a  
12 ten-minute break and return at five after 2:00.

13 (Note: The hearing stood in recess at  
14 1:55 to 2:05.)

15 Q (By Ms. Leach) We were talking about  
16 Exhibit 3 that details the ownership of the parties  
17 involved in the Burch Keely unit and the Grayburg  
18 Deep unit; is that correct?

19 A. Yes, ma'am.

20 Q. That's not really all the people that are  
21 involved in the unit, is it?

22 A. We did not include the overriding royalty  
23 owners.

24 Q. Let me show you -- and I believe this is  
25 in the nature of a rebuttal exhibit so it was not

1 part of what was originally introduced. Have you  
2 had a chance to look at it, Mr. Scarborough?

3 A. Yes.

4 Q. I represent to you that the document was  
5 prepared by COG and it is listing of the Burch Keely  
6 overriding royalty ownership and the Grayburg Deep  
7 overriding ownership, and the highlighted areas show  
8 the common ownership. My question to you is would  
9 all these people have to be involved if you were  
10 going to combine the two units, as has been  
11 suggested?

12 A. What do you mean exactly by combine the  
13 two units?

14 Q. Your joint development agreement, approve  
15 the joint development agreement? I'm not exactly  
16 sure what Conoco's proposal is, if there was one.

17 A. Our letter was to initiate discussions  
18 about the best way.

19 Q. If you are going to jointly develop it  
20 would you have to have the approval of the interest  
21 royalty owners including the overriding royalty  
22 owners?

23 A. Yes, you would.

24 Q. And that would take basically the  
25 participation of the people listed on this and the

1 people listed on your Exhibit 3; is that correct?

2 A. If you were to form a new unit, you would  
3 have to have the appropriate percentage of owners  
4 execute and ratify a new unit agreement.

5 Q. And most of the ownership indicated in the  
6 white areas basically indicate those are ones that  
7 are not in common between the two units. So the  
8 majority of the owners are not owners in both units,  
9 are they?

10 A. Well, taking what you've prepared and  
11 presented, it does appear that there are ownership  
12 differences in the overriding royalty of the units.

13 MS. LEACH: I would probably have to call  
14 a witness to lay the foundation so we will not move  
15 admission at this time, but we will come back to it.

16 Q. Going back to your documents, let's look  
17 at Exhibit 5 again. I believe at least in the  
18 opening statements Mr. Campbell said that the Conoco  
19 had made an offer, a proposal to Concho and heard  
20 nothing back. Would your testimony agree with that  
21 statement?

22 A. ConocoPhillips made a proposal to initiate  
23 discussions.

24 Q. But what of the proposal exactly -- for  
25 the operating agreement that was a proposal to start



1 discussions; is that correct?

2 A. That's correct.

3 Q. As far as you know, there of his no  
4 response back to Conoco?

5 A. As far as I know.

6 Q. Would you be aware if there was a response  
7 back from Concho, say, to your legal counsel?

8 A. Our legal counsel is very aware of this  
9 action and had they received a proposal back from  
10 COG we would have heard that.

11 Q. What if COG contacted your legal counsel  
12 and had a telephone conversation with your legal  
13 counsel. Would you have been informed of that?

14 A. I'm aware of that, yes.

15 Q. You are aware of that? You are aware that  
16 happened?

17 A. I'm aware that there was a conversation.

18 Q. Was that about the possibilities of  
19 meeting about your joint development plan?

20 A. I was not privy to that conversation.

21 Q. But you were informed the conversation  
22 took place?

23 A. Yes, ma'am.

24 Q. And do you know what the nature of the  
25 conversation was at all?

1 A. I don't have any of the details.

2 Q. Do you know what the topic of the  
3 conversation was?

4 A. I don't know.

5 Q. Do you know even if it addressed the Burch  
6 Keely unit at all?

7 A. No. I was not informed of that  
8 conversation. I don't know.

9 Q. But yet you knew a conversation took place  
10 between counsel from Concho and counsel for Conoco?

11 A. Yes. I know of it but I don't know what  
12 the contents of the conversation was.

13 Q. If that conversation included some  
14 discussion of the Burch Keely unit or the Grayburg  
15 Deep unit, then that might be a response of some  
16 sort to the request for meeting --

17 MR. CAMPBELL: Object to the form of the  
18 question. It's vague, calls for speculation.

19 CHAIRWOMAN BAILEY: Would you care to  
20 reword that?

21 Q. Sure. I would be happy to do that.  
22 Basically, if counsel talked about the possibilities  
23 of considering a meeting or a possible proposal for  
24 joint development agreement, you wouldn't know  
25 anything about that, would you?

1           A.     I do not know if that was the topic of  
2     discussion.

3           Q.     Thank you. Are you aware of a discussion  
4     about the possibility of a confidentiality agreement  
5     needing to be in place before communications could  
6     take place about the suggestion in Exhibit 5 that  
7     there be a meeting?

8           A.     Yes, I am.

9           Q.     So there was at least a response that  
10    talked about the need for a confidentiality  
11    agreement?

12          A.     Yes, there was.

13          Q.     Was a confidentiality agreement ever  
14    entered into?

15          A.     No, ma'am.

16          Q.     So it's really not fair to say there was  
17    no response to Exhibit 5, is it? Is it fair to say  
18    there was no response to Exhibit 5?

19          A.     If by the discussion of the  
20    confidentiality agreement you mean a response, then  
21    no, there was no written response to our written  
22    letter.

23          Q.     But there are other kinds of responses  
24    that talked about a confidentiality agreement that  
25    you are aware of, aren't you?

1 A. Yes, ma'am.

2 Q. You are proposing joint development  
3 between the Grayburg Deep unit and the Burch Keely  
4 unit; is that correct?

5 A. Yes, ma'am.

6 Q. And do you think not having the area we  
7 are calling the sliver in the unit, is that going to  
8 help or hurt the possibility of working out some  
9 sort of joint arrangement?

10 A. It's our view that the entire Yeso column  
11 which would include the sliver should be a part of  
12 the Burch Keely unit.

13 Q. Would it be a part of the Burch Keely  
14 unit?

15 A. I'm going to have to say it would at this  
16 time as a part of the Yeso.

17 Q. So it would be helpful to have the  
18 expansion area considered a part of the Burch Keely  
19 unit if you were going to work out a joint  
20 development agreement?

21 A. Only if we were able to work out a joint  
22 development agreement. If not, the parties would  
23 have to drill their own wells, which would result in  
24 waste.

25 Q. You expect the Commission to order Concho

1 to work out a joint development agreement with  
2 Conoco?

3 A. I'm not sure that it's in the Commission's  
4 right to order the parties to do any kind of  
5 agreement.

6 MR. CAMPBELL: Could I ask you to keep  
7 your voice up a little bit?

8 Q. So what does Conoco gain by not having the  
9 expansion include in the Burch Keely unit? If it  
10 doesn't help you move towards joint development,  
11 what do you get from having the unit expansion  
12 denied?

13 A. Can you repeat the question?

14 Q. Sure. What do you get -- what does Conoco  
15 get by asking that the expansion of the unit be  
16 denied?

17 A. If the proposal is approved, then our  
18 correlative rights suffer unless a twin well is  
19 drilled which would result in waste.

20 Q. Why do you say that?

21 A. Because we feel that the Yeso is a  
22 continuous column up above and below 5,000 feet.

23 Q. If it is, why does that impact your  
24 correlative rights? What are you concerned about?

25 A. We would have to drill a twin well to

1 protect our correlative rights, which would result  
2 in waste.

3 Q. If there was a well in the unit and the  
4 well was proposed with an application for a permit  
5 to drill and you knew where the well was going to be  
6 and how deep it was going to be, why couldn't you  
7 just protest that application for a permit to drill?

8 A. Certainly that would be one way to do it.

9 Q. So then denying the expansion is not the  
10 only way you can protect your correlative rights, is  
11 it?

12 A. It would be a protest option.

13 Q. And that would let you look at each well  
14 specifically, wouldn't it?

15 A. It would.

16 Q. No further questions.

17 CHAIRWOMAN BAILEY: Does the Commission  
18 have any questions? Mr. Dawson, do you have any  
19 questions?

20 MR. DAWSON: I don't have any questions.

21 CHAIRWOMAN BAILEY: Dr. Balch?

22 MR. BALCH: No questions.

23 CHAIRWOMAN BAILEY: I do. The Grayburg  
24 Deep is an exploratory unit or a water flood?

25 THE WITNESS: It was an exploratory unit.

1 CHAIRWOMAN BAILEY: The sliver in question  
2 could not be statutorily unitized, could it? Since  
3 it would not be a water flood unit that would be  
4 formed which would include the sliver? That was  
5 poorly asked. The discussions concerning joint  
6 development, which would include the sliver, that  
7 joint agreement cannot be statutorily unitized by  
8 this Commission; isn't that correct?

9 THE WITNESS: I believe so, yes.

10 CHAIRWOMAN BAILEY: So the only  
11 discussions for a combined development of any area  
12 which would include the sliver would have to be  
13 through voluntary agreements between the two  
14 companies; isn't that correct?

15 THE WITNESS: Yes.

16 CHAIRWOMAN BAILEY: How many wells has the  
17 Grayburg Deep unit drilled that include the portion  
18 of the Blinebry below 5,000 feet?

19 THE WITNESS: We do not have any wells in  
20 Grayburg Deep currently in that formation. All of  
21 our wells are deeper, 8 to 11,000 foot wells.

22 CHAIRWOMAN BAILEY: So any claims that  
23 correlative rights for the Blinebry formation should  
24 take into account that the Grayburg Deep unit has  
25 not even attempted to produce from the formation?

1           A.       We have been looking at the Yeso formation  
2           and in turn we are gathering data. We do not have  
3           the Yeso well on the current drilling program.

4                   CHAIRWOMAN BAILEY: Those are all the  
5           questions I have. Do you have any redirect?

6                               REDIRECT EXAMINATION

7           BY MR. CAMPBELL

8           Q.       Ms. Leach's suggestion that we can protect  
9           correlative rights by protesting APDs  
10          Mr. Scarborough, do the APDs list frack information?

11          A.       No, they do not.

12          Q.       Do they show where the perfs are?

13          A.       They do not.

14          Q.       So just protesting an ADP would not have  
15          the ability to protest based upon the depth of the  
16          perfs or the frack model to be employed, would it?

17          A.       Yes.

18          Q.       This as yet untendered Exhibit 22 showing  
19          lack of commonality among overriding royalty owners,  
20          your testimony was that the overrides would have to  
21          be consulted only with respect to a joint  
22          development that combined the Burch Keely and the  
23          Grayburg Deep unit, correct?

24          A.       Yes. Anything that would form a new unit  
25          with approval by the BLM would require the approval



1 of the owners.

2 Q. But a joint development effort does not  
3 necessarily have to reform the unit that is already  
4 formed, is it?

5 A. It does not.

6 Q. So a joint development could occur without  
7 the threatened burden of consent by overrides?

8 A. Absolutely.

9 MR. CAMPBELL: Ma'am Examiner, I have  
10 obtained a full copy of Exhibit 2, the complete  
11 agreement. I showed it to Ms. Leach and she would  
12 have no objection to re-tendering it for the record.  
13 I only have one copy though. I'm not going to ask  
14 any more questions on it, so I would like to  
15 retender the complete copy of COP Exhibit 2.

16 CHAIRWOMAN BAILEY: We will accept it at  
17 this time with the copies to be brought and stand in  
18 for the normal distribution. So now you would like  
19 to tender Exhibit 2?

20 MR. CAMPBELL: Yes.

21 MS. LEACH: No objection.

22 CHAIRWOMAN BAILEY: Exhibit 2 is accepted.

23 MR. CAMPBELL: May I approach? Who gets  
24 the copy? We will give it to the court reporter.

25 (Note: COP Exhibit 2 admitted.)

1 MR. CAMPBELL: No further questions.

2 CHAIRWOMAN BAILEY: This witness may be  
3 excused.

4 MR. CAMPBELL: We call Charles E.  
5 Angerman.

6 CHARLES ANGERMAN  
7 after having been first duly sworn under oath,  
8 was questioned and testified as follows:

9 DIRECT EXAMINATION

10 BY MR. CAMPBELL

11 Q. Please state your name.

12 A. Charles Angerman.

13 Q. What's your current position with  
14 ConocoPhillips?

15 A. I'm a senior geologist in the Permian  
16 Southeast New Mexico Development Team.

17 Q. What's your educational background?

18 A. In 2002 I received a BA in geology from  
19 Miami University in Oxford, Ohio. In 2006 I  
20 received a master's degree in geoscience from Penn  
21 State University.

22 Q. Did you go to work for Conoco immediately?

23 A. Yes. I started in 2006. I initially  
24 worked on some of the company's assets in North  
25 Louisiana. I joined the permian team in September

1 of 2008 and I have been there ever since.

2 Q. What are your current responsibilities for  
3 the company?

4 A. I support onshore development drilling  
5 programs in the Yeso and Grayburg San Andres  
6 formations in the Permian Basin in Southeast New  
7 Mexico. I conduct geological studies, interpret  
8 logs, choose completion intervals and wells, I  
9 support planning and front end loading of  
10 development programs for the company. In that work  
11 I have studied the Yeso extensively.

12 Q. Have your credentials as a geologist been  
13 previously recognized by the Commission?

14 A. Yes.

15 MR. CAMPBELL: I move the recognition of  
16 Mr. Angerman as an expert in geology.

17 MS. LEACH: No objection.

18 CHAIRWOMAN BAILEY: So admitted.

19 Q. Mr. Angerman, what is the purpose of your  
20 testimony today?

21 A. My object is to, one, demonstrate the  
22 consistency of the Yeso group over the area  
23 encompassed in Concho's applications; two,  
24 demonstrate the 5,000 demarcation point referenced  
25 by those applications is artificial and not

1 geologic; and three, demonstrate that the grant of  
2 those applications would effect waste and result in  
3 the impairment of ConocoPhillips' correlative  
4 rights.

5 Q. Have you prepared certain exhibits to  
6 demonstrate your testimony?

7 A. Yes, I prepared Exhibits 6 through 10.

8 Q. Could you examine and explain Exhibit 6?

9 A. This shows a portion of an interpreted  
10 well log from a well that falls within the  
11 geographic area of the Burch Keely unit and Grayburg  
12 Deep unit. It's the Grayburg Deep unit. It  
13 illustrates the general geology of the Yeso  
14 formation and the Paddock and Blinebry.

15 Q. What conclusions do you draw from Conoco  
16 Exhibit 6?

17 A. The Paddock and Blinebry members are  
18 primarily dolomite with minor sandstones and minor  
19 anhydrite. They are productive across the northwest  
20 shelf. Operators typically drill through both the  
21 Paddock and the Blinebry, complete both formations  
22 and produce them together as Mr. Broughton  
23 referenced.

24 Q. What is Conoco Exhibit 7?

25 A. This is an exhibit that was originally

1 submitted by Concho. It's a map showing development  
2 of the Yeso and the Burch Keely unit in the  
3 immediately adjacent area.

4 Q. Did you hear the Concho witnesses testify  
5 that as of the date of this map, which I think was  
6 portrayed to be January 4 of 2011, that they had  
7 completed no wells in the Blinebry?

8 A. Yes, I did hear that.

9 Q. Have you investigated certain facts  
10 relative to that assertion?

11 A. Yes.

12 Q. Did you locate a sundry notice and report  
13 on wells submitted to the Bureau of Land Management  
14 by Concho, Debbie Wilborne, on October 8, 2010?

15 A. I located a sundry notice. My  
16 understanding was that it was submitted to the N.M.  
17 OCD.

18 Q. But it was submitted presumably on October  
19 the 8th, 2010?

20 A. If I can find the date here.

21 Q. Right under the heading Authorized  
22 Representative.

23 A. Yes, October 8, 2010.

24 Q. Does this sundry notice --

25 MS. LEACH: Objection. He is testifying

1 clearly from a document that we haven't seen. It  
2 was not in your exhibits and it doesn't seem to be  
3 available now for the rest of us to look at.

4 MR. CAMPBELL: You are welcome to see it.

5 MS. LEACH: I really think it's one that  
6 we are going to have to have the argument again  
7 about not including it in the prehearing statement.

8 MR. CAMPBELL: You didn't identify your  
9 exhibits in the prehearing statement. You are going  
10 to object to this filing that your company made on  
11 the grounds that it wasn't in the prehearing  
12 exhibits. I'm not going to introduce it as an  
13 exhibit. I'm going to use it to refresh his  
14 recollection as to what he found when he looked in  
15 the records. You are welcome to have a copy if you  
16 would like.

17 MS. LEACH: I would like a copy.

18 MR. CAMPBELL: I don't intend to introduce  
19 it. The Commissioners are certainly -- if you would  
20 like a copy, I will give you a copy.

21 CHAIRWOMAN BAILEY: If he is going to  
22 testify to it, I would like to see what he is  
23 testifying from.

24 Q. Does this sundry notice, Mr. Angerman,  
25 state that Concho, with respect to Burch Keely unit

1 411 well drilled to a total depth on September 26,  
2 2010 of 5100 feet?

3 A. Yes, it does, in Section 13 of this sundry  
4 notice.

5 Q. Do you know the status of the orders of  
6 the Division below as to the extension of the  
7 Grayburg-Jackson pool and the Burch Keely unit in  
8 September of 2010?

9 A. I do not recall the exact status at that  
10 date.

11 Q. Exhibit No. 2, Concho Exhibit 2 reflects  
12 the division order extending the Burch Keely unit  
13 was not issued until January 31, 2011. Can you  
14 confirm then that Concho drilled this well to 5100  
15 feet approximately three months before the division  
16 issued its order extending the unit?

17 A. Yes.

18 Q. Have you also discovered in your search of  
19 records recently that Concho fracked this well to a  
20 depth of 4975 feet in October of 2010?

21 A. Yes. An additional sundry notice dated  
22 December 16, 2010 documents this.

23 MS. LEACH: Same objection. I don't  
24 have it and the Commission doesn't have it.

25 MR. CAMPBELL: May I approach? I am

1 helping the witness reflect and refresh on what  
2 investigation he made on recent records. Ms. Leach  
3 demanded I produce the document.

4 MS. LEACH: If you are refreshing,  
5 shouldn't you ask first whether he needs help  
6 refreshing his memory.

7 CHAIRWOMAN BAILEY: There's no foundation  
8 at this time.

9 Q. You made an investigation with respect to  
10 recent drilling activities of Concho below 5,000  
11 feet?

12 A. The initial intent of the investigation  
13 was to learn the status of any pending permits that  
14 would involve perforating within what we have been  
15 referring to as the sliver. The intent was to know  
16 where Concho intended to perforate and frack within  
17 the sliver so we would know if we needed to drill  
18 twin wells to defend our assets below 5,000 feet,  
19 where we would first need to first drill those twin  
20 wells.

21 While looking for the permits, I found  
22 evidence that this well had been drilled to a depth  
23 of 5100 feet and subsequently perforated and fracked  
24 within the sliver.

25 Q. How far above the 5,000-foot line did



1 Concho perf and frack this well in October of 2010?

2 A. The sundry notice states that on October  
3 6, 2010 the lower boundary was perforated from 4789  
4 to --

5 MS. LEACH: Objection. He is testifying  
6 from a document that we don't have.

7 MR. CAMPBELL: May I approach?

8 A. Should I continue to answer the question?

9 MR. CAMPBELL: I don't know yet. Let me  
10 try this. We would move for the admission of Conoco  
11 Exhibits 18 and 19.

12 CHAIRWOMAN BAILEY: Any objection?

13 MS. LEACH: Yes, there is an objection.  
14 These were not included as part of exhibits to be  
15 submitted with the prehearing statement which is  
16 required by the rules of New Mexico OCD and,  
17 therefore, I would ask you to not allow him to use  
18 the exhibits because basically there's no reasons  
19 given for them being introduced. Apparently they  
20 were OCD records so I can't understand why they were  
21 not produced.

22 MR. CAMPBELL: May I respond?

23 CHAIRWOMAN BAILEY: Yes.

24 MR. CAMPBELL: This hearing has been  
25 postponed once.

1 Q. When did you find the documents?

2 A. Monday afternoon of this week. That would  
3 have been July 25th.

4 Q. And the purpose of your search?

5 A. To provide my supervisor with the location  
6 of pending permits for Concho wells that would  
7 involve perforating within the sliver so we could  
8 know if we needed to drill wells to twin the wells  
9 to defend our assets, where would we need to drill  
10 the wells.

11 Q. Would this 411 well that Concho drilled  
12 indicate this is an area you would now have to  
13 drill to defend your assets?

14 MS. LEACH: I thought we were talking  
15 about the document itself. I think what he is  
16 expecting us to say is, "Gee, they didn't get around  
17 to investigating this until after it was identified  
18 as an exhibit and for that reason they should be  
19 allowed to introduce it now." I don't think that  
20 meets the rules or the spirit of the rules.

21 CHAIRWOMAN BAILEY: We will have to  
22 exclude the documents.

23 Q. The documents have been excluded.  
24 Nevertheless, your investigation as testified to by  
25 you discovered that Concho drilled a well below

1 5,000 feet and fracked it 25 feet above the  
2 ownership demarcation; is that correct?

3 A. Yes, but it's actually 37 feet, because I  
4 believe that the perf depths will be reference to  
5 the Kelly Bushing whereas the 5,000-foot boundary is  
6 reference to surface elevation or ground level.  
7 When I looked at the logs for this particular well  
8 on the N.M. OCD website, they listed a Kelly Bushing  
9 elevation of 12 feet above ground level so it's an  
10 additional 12 feet.

11 Q. So it would appear that the Concho exhibit  
12 that you have reflected as Conoco Exhibit 7 should  
13 have had, if it was made January 2011, should have  
14 had a blue dot inside the Burch Keely unit, correct?

15 A. The updated version of this exhibit that  
16 Concho has provided today should have. I believe  
17 that the exhibit that we made for COP Exhibit 7 was  
18 an earlier version of their map.

19 Q. Well, none of their maps have a purple dot  
20 in the Burch Keely, do they?

21 A. Correct. Neither map has a blue dot  
22 there.

23 Q. And it would appear both should have,  
24 right?

25 A. Correct.

1 Q. I note in Exhibit 7 there's a  
2 cross-section line A to A prime. What is that meant  
3 to illustrate?

4 A. This is a cross-section that was initially  
5 submitted by Concho. The A to A prime on this  
6 exhibit shows the location of the wells in that  
7 cross-section.

8 Q. And you have shown that A to A prime  
9 cross-section on a Conoco Exhibit 8, correct?

10 A. Yes. Before we move on, there's one more  
11 conclusion I need to state regarding the previous  
12 exhibit. The lack of Blinebry development shown  
13 within the Burch Keely unit on this map also  
14 corresponds to a lack of Blinebry development in the  
15 underlying Grayburg Deep unit. One of the reasons  
16 contributing to that lack of Blinebry development is  
17 an issue of stranded reserves. I will illustrate  
18 this issue with a later exhibit.

19 Q. This is the same cross-section map that  
20 Concho utilized this morning, is it not?

21 A. Yes.

22 Q. What conclusions do you draw from this  
23 exhibit?

24 A. The Yeso group, both the Paddock and the  
25 Blinebry members, are generally consistent across

1 the Burch Keely unit. In this exhibit, the total  
2 thickness of the Paddock and Blinebry is relatively  
3 constant from west to east across the unit. You can  
4 see that there is some variation in the proportion  
5 of the Yeso above 5,000 versus below 5,000, but in  
6 this cross-section that variation is not dramatic.

7 Q. And this was the Concho exhibit?

8 A. Yes.

9 Q. And have you applied a different  
10 cross-section within the Burch Keely unit?

11 A. Yes, I have.

12 Q. And would that be Conoco Exhibit 9?

13 A. Yes, this is Exhibit No. 9.

14 Q. Could you explain this exhibit to the  
15 commissioners?

16 A. This is a cross-section that runs in a  
17 roughly perpendicular direction to the cross-section  
18 we just looked at. In the inset map on the slide  
19 there's a blue dashed line B to B prime. That shows  
20 the location of the cross-section. On the left-hand  
21 side, that well is in the northwest. On the  
22 right-hand side of the screen, that well is in the  
23 southeast.

24 Q. What conclusions have you drawn from  
25 Conoco Exhibit 9 which takes the cross-section from

1 the northwest to the southeast rather than from the  
2 west to the east?

3 A. First, we can see that the 5,000 foot  
4 boundary demarcating the Grayburg Deep unit below  
5 from the expanded Burch Keely unit and  
6 Grayburg-Jackson pool above does not correspond to  
7 any geologic division. I shaded the thickness of  
8 the Paddock formation on this slide in purple.  
9 Below that I shaded the thickness of the Blinebry in  
10 an orange color. You can see that the 5,000 foot  
11 boundary, which is the division between those red  
12 arrows pointing upward above for the Burch Keely  
13 unit and the green pointing below for the Grayburg  
14 Deep unit, that boundary does not correspond to any  
15 geologic division or change.

16 Another important conclusion from this  
17 slide is that as you move from the northwest to the  
18 southeast, while the thickness of the Paddock does  
19 not vary significantly, the thickness of the  
20 underlying Blinebry, the orange shaded section,  
21 varies significantly. It thickens dramatically to  
22 the southeast, and this results in a significant  
23 change in the proportion of the Blinebry Paddock  
24 thickness that lies above 5,000 feet relative to the  
25 portion that's below 5,000 feet.

1           With the current demarcation at 5,000  
2   feet, the only way to develop the full thickness of  
3   the Paddock and Blinebry is with separate  
4   development above 5,000 feet and below 5,000 feet.  
5   This actually leads to an issue of stranded  
6   reserves.

7           If we look to the southeast on the  
8   right-hand side of the cross-section, you can see  
9   that the Paddock and the portion of the Yeso that  
10   are above 5,000 feet get very thin. The Yeso  
11   actually begins to cut into the Paddock towards the  
12   southeast -- or excuse me, the 5,000-foot boundary  
13   cuts into the Paddock to the southeast. This means  
14   there's a reduced thickness of the Paddock or the  
15   Yeso in the southeast above 5,000 feet.

16           We would expect a well in the Burch Keely  
17   unit and the Grayburg-Jackson pool that targets the  
18   Yeso to have poor economics in this region because  
19   there's less thickness available to produce so  
20   there's not an incentive. There's a reduced  
21   incentive for an operator to drill a Burch Keely and  
22   a Grayburg-Jackson well this that location.

23           Likewise, if we look below the 5,000 foot  
24   boundary in the Grayburg Deep unit, if we look at  
25   the left-hand side of the cross-section in the

1    northwestern area of the unit, there's a reduced  
2    thickness of Blinebry that's below 5,000 feet. We  
3    would expect a Grayburg Deep unit well targeting the  
4    Blinebry to have poor economics in this area.  
5    There's reduced incentive for an operator to drill a  
6    Blinebry well in the area so this separate  
7    development leads to an issue of stranded reserves  
8    in the Grayburg Deep pool to the northwest.

9                    You can see that I have marked on this  
10   cross-section the previous base of the Burch Keely  
11   unit and the Grayburg-Jackson pool prior to this  
12   application to expand them down to 5,000 feet.  
13   That's a heavy brown line that's just below the  
14   purple shaded area of the Paddock. It may be  
15   difficult to see. It says "previous base of BKU."

16                   So between that line and the 5,000-foot  
17   boundary is what we have been referring to as the  
18   sliver. In the southeast, the sliver pinches out  
19   and goes to nothing as that 500 feet below the top  
20   of Paddock previous boundary collides with the  
21   5,000-foot boundary that's been applied for.

22                   So even with the grant of these  
23   applications, it's not doing anything to improve the  
24   economics of the Yeso well targeting the Paddock in  
25   the Burch Keely unit in the southeastern part of the



1 unit.

2           There is also an issue of impairment of  
3 correlative rights if these applications are  
4 granted. If Concho is permitted to complete in the  
5 Paddock and Blinebry all the way down to 5,000 feet,  
6 if they perforate and initiate a hydraulic fracture  
7 just above 5,000 feet, because there's no geologic  
8 boundary or change corresponding to the 5,000-foot  
9 boundary there's nothing that we would expect to  
10 stop the fracture from growing downward into the  
11 Grayburg Deep unit and draining reserves that are  
12 not part of the Burch Keely unit or Grayburg-Jackson  
13 pool. My colleague will elaborate on this during  
14 his testimony.

15           Regarding the dramatic thickening of the  
16 section as we move to the southeast, my colleague,  
17 Kim Head, will elaborate on this during his  
18 testimony.

19           In the current separate development above  
20 5,000 and below 5,000 scenario, in order to develop  
21 the full thickness of the formation at any given  
22 location, one wellbore is required to produce the  
23 Yeso above 5,000 feet. A second twin well, as we  
24 discussed, is required to produce the portion of the  
25 formation that's below 5,000 feet. As I pointed

1 out, there may be areas in the southeast where  
2 there's not sufficient incentive for an operator in  
3 the Burch Keely unit/Grayburg-Jackson pool to drill  
4 the well there. There may be areas in the northwest  
5 where there is not sufficient incentive for an  
6 operator in the Grayburg Deep unit to drill the well  
7 there.

8 For these reasons, ConocoPhillips believes  
9 that the most efficient way to produce the entire  
10 thickness of the formation, which is what's  
11 happening elsewhere across the shelf -- operators  
12 are drilling through the Paddock and Blinebry and  
13 producing it all together, as Mr. Broughton  
14 mentioned -- is to enter into some sort of joint  
15 development agreement that allows a single wellbore  
16 to penetrate the full thickness of the  
17 Paddock/Blinebry in this area and produce it all.

18 Q. What is Exhibit 10?

19 A. Exhibit 10 is a map that I prepared  
20 showing the thickness of the Paddock that falls  
21 below 5,000 feet. It shows the same geographic  
22 sections of the cross-section as the previous slide.  
23 The color shaded contours show the thickness of  
24 Paddock below 5,000 feet. In the areas where it's  
25 white or blank, that's because none of the Paddock

1 falls below 5,000 feet. You can see that in the far  
2 southeastern portion of the Burch Keely unit, the  
3 Paddock below 5,000 feet reaches a thickness up to  
4 250 feet so that's up to 250 feet of Paddock that is  
5 not available to Concho to be developed even if the  
6 applications are granted.

7 Q. Can you provide the commissioners with  
8 your opinion whether the grant of Concho's  
9 application will prevent waste and protect  
10 correlative rights?

11 A. To the contrary. I believe the grant of  
12 these applications will effect waste in the form of  
13 stranded reserves in the Burch Keely unit, the  
14 Grayburg-Jackson pool, in the southeastern part of  
15 the unit and in the Grayburg Deep unit in the  
16 northwestern part of the unit. It will result in  
17 the impairment of correlative rights in the form of  
18 unrestricted fractured growth across the arbitrary  
19 5,000-foot boundary and it will result in the  
20 drilling of additional wells in order to target and  
21 produce the entire thickness of the Paddock and  
22 Blinberry.

23 MR. CAMPBELL: Ma'am Chairwoman, we move  
24 the admission of Conoco Exhibits 6 through 10.

25 CHAIRWOMAN BAILEY: Any objection?

1 MS. LEACH: No.

2 CHAIRWOMAN BAILEY: So admitted.

3 (Note: COP Exhibits 6 through 10  
4 admitted.)

5 MR. CAMPBELL: Thank you. That's all I  
6 have.

7 CROSS-EXAMINATION

8 BY MS. LEACH

9 Q. Good afternoon. I'm Carol Leach. I am  
10 counsel for Concho today and I have a couple  
11 questions for you. Starting with the exhibit before  
12 this one that has the inset down here, I don't know  
13 if you have it in front of you or if we need to pull  
14 it up again, but when we started with the chart a  
15 while ago we had this map. Do you recall seeing  
16 that? It is Grayburg Deep unit and the Burch Keely  
17 unit COP Exhibit 1. Do you remember this?

18 A. Yes.

19 Q. And we basically ascertained that this was  
20 not an accurate map of the Grayburg Deep unit. Do  
21 you recall that testimony?

22 A. I recall that testimony.

23 Q. And I believe that same map is now showing  
24 up on your Exhibit 9; is that correct?

25 A. Yes, the same boundaries presented on that

1 exhibit are presented to this exhibit.

2 Q. It's still the same incorrect boundaries;  
3 is that correct?

4 A. It's the same boundaries.

5 Q. They are not correct or are you disputing  
6 what Mr. Scarborough said?

7 A. I'm not disputing.

8 Q. So we continue to show the Commission  
9 incorrect information; is that right?

10 A. Yes, this is the same incorrect  
11 information presented before.

12 Q. Thank you. Okay. You basically were  
13 talking about part of your job is working with the  
14 capital budget and planning future drilling; is that  
15 correct?

16 A. I provide geologic input. I am not the  
17 person who makes decisions as to what we will drill  
18 when.

19 Q. Do you know what the capital budget is for  
20 drilling for ConocoPhillips in Southeastern New  
21 Mexico?

22 A. I do not know the exact number and I  
23 believe our company regards that as confidential and  
24 would not want me to disclose that here.

25 Q. Are you planning any wells in the Grayburg

1 Deep unit in the next year?

2 A. It is not simply a matter of  
3 ConocoPhillips planning wells in the Grayburg Deep  
4 unit because there are additional ownership -- there  
5 are additional interest owners involved.

6 Q. Do you expect there to be any wells  
7 drilled in the Grayburg Deep unit in the upcoming  
8 year?

9 A. To my understanding, that depends on the  
10 outcome of this hearing. In the event that these  
11 applications are granted and we are not able to come  
12 to any sort of joint development agreement, in my  
13 opinion, the logical approach is to drill wells  
14 below 5,000 feet to defend our rights.

15 Q. Who makes the decision? You said there  
16 were a number of owners so how does the decision to  
17 drill, how is that made?

18 A. The most accurate answer to that would  
19 come from my colleague, Tom Scarborough. I don't  
20 know all the details of the ownership and the  
21 agreements in place regarding the Grayburg Deep  
22 unit.

23 Q. But is ConocoPhillips the operator of the  
24 Grayburg Deep unit?

25 A. Again, the details of that are a question

1 for Tom Scarborough.

2 Q. Not details, just generally, is  
3 ConocoPhillips the operator?

4 A. My understanding is that there are times  
5 when a well is not operated by ConocoPhillips.  
6 There are times when the well is operated by  
7 ConocoPhillips within the Grayburg Deep unit and I  
8 am not able to provide you with details on what  
9 determines whether it's operated by ConocoPhillips  
10 or not.

11 Q. It's a unit, so isn't there usually a unit  
12 operator or doesn't it have a unit operator?

13 A. I don't know the extent that it is common  
14 to have a designated unit operator.

15 Q. But are you telling me that ConocoPhillips  
16 is not the designated unit operator?

17 A. Again, this is a question for Tom  
18 Scarborough.

19 Q. Looking at the exhibit that is still up  
20 there, which I believe is 10?

21 A. This is Exhibit 9.

22 Q. Thank you. You heard Mr. Broughton  
23 testify on behalf of Concho a while ago; is that  
24 correct?

25 A. Yes.

1           Q.     Do you see some disagreement between your  
2 testimony and that of Mr. Broughton as it goes to  
3 the depth or the deepness, the thickness of the  
4 Blinebry below 5,000 feet?

5           A.     I do see that the thickness of Blinebry  
6 below 5,000 feet on this cross-section differs from  
7 that portrayed on the cross-section Mr. Broughton  
8 presented, but this is reasonable and to be expected  
9 because of the orientation of those respective  
10 cross-sections. The cross-section that Mr.  
11 Broughton presented was approximately parallel to  
12 the trend of the Yeso shelf margin, so we would not  
13 expect significant thickness differences. This  
14 cross-section is perpendicular to that.

15                 As we move to the southeast we are getting  
16 closer to the basin which is a topographic low, more  
17 accommodation space in which a thicker section of  
18 rock can be deposited.

19           Q.     Are you certain that the wells you used  
20 are in the Grayburg Deep unit, in the true Grayburg  
21 Deep unit that has been sort of been restricted over  
22 time?

23           A.     Since we have established the boundaries  
24 on this map are incorrect, I cannot state with 100  
25 percent certainty that all of the wells are within



1 the correct boundaries.

2 Q. Thank you. It wouldn't be unusual for  
3 geologists to disagree what a thickness of a certain  
4 formation could be, is it?

5 A. No, disagreements occur. You may have  
6 disagreements between different operators. Within  
7 one operator you may have different interpretations.  
8 When a geologist picks a top on a log, one geologist  
9 say, "I believe the top of this formation is here  
10 where the gamma ray spikes to the right." Another  
11 may say, "Well, I think it's actually ten feet above  
12 that where the formation of the gamma ray is very  
13 low to the left."

14 Generally, these differences are not  
15 great. If each geologist correlates consistently,  
16 they will be consistent across a given area.

17 Q. Would you say that generally the more a  
18 geologist looks at logs or a certain area, the more  
19 accurate they are likely to be in estimating the  
20 thickness of formations in the area?

21 A. I would say that looking at logs in a  
22 given area over an extended period of time can  
23 improve the accuracy of formations but there are  
24 other things that can improve the accuracy of  
25 formations. For example, checking well logs and

1 seismic data to see if the interpreted tops on the  
2 well logs correspond to the appropriate interpretive  
3 reflectors on the seismic table.

4 Q. And you were encouraging basically some  
5 sort of joint development arrangement; is that  
6 correct?

7 A. I was saying that ConocoPhillips believes  
8 that is the scenario that achieves the most  
9 efficient development of the entire thickness of the  
10 Paddock and Blinebry.

11 Q. And basically wouldn't that agreement take  
12 some allocation, some negotiation of the allocation  
13 of production from that area between the two  
14 parties?

15 A. Yes. And I would expect that there will  
16 be some negotiation involved in any sort of  
17 agreement.

18 Q. Wouldn't that basically have to look at  
19 what information each party gets from their  
20 respective geologist as to the possible production  
21 zones and their thickness?

22 A. Any type of agreement would involve.

23 Q. That would take some negotiations if the  
24 geologists disagreed of the thickness; is that  
25 correct?

1 A. My understanding is it would.

2 Q. Thank you. You were talking -- I think  
3 you still have in front of you, perhaps, a document  
4 from the OCD files?

5 A. Yes.

6 Q. And did you notice the name of the  
7 operator of the well at the time that the well was  
8 drilled?

9 A. On the notice, the sundry notice that  
10 refers to a TB and 5100, I recall seeing COG the  
11 operator.

12 Q. Who drilled the well originally?

13 A. If it was drilled in September/October  
14 2010, I don't know what the status was of COG  
15 acquiring Marbob on that date.

16 Q. If I tell you that basically the closing  
17 of the acquisition of Marbob assets by COG was  
18 October 7th, would you think that would be correct?  
19 October 7, 2010?

20 A. Are you asking if I would believe that  
21 you're telling me the truth?

22 Q. Yes.

23 A. I think that's reasonable, yes.

24 Q. And if that date is correct, that would be  
25 after the date the well was drilled; isn't that

1 accurate?

2 A. Yes.

3 Q. You were talking about twin wells and you  
4 have to do the twin wells. Is the twin well another  
5 name for an offset well?

6 A. Yes, my understanding is that they are the  
7 same. There may be instances where offset well is a  
8 term that's applied to the closest well which may  
9 not be as close as a well that is deliberately  
10 drilled as a twin.

11 Q. And would you drill wells if you didn't  
12 have information that there would be a productive  
13 zone from which to produce?

14 A. In a development setting, the answer may  
15 be different than in an exploration setting. This  
16 is a development setting where we have recognized  
17 and Mr. Broughton has testified that we expect the  
18 Blinebry to be productive across the Burch Keely  
19 unit and the underlying Grayburg Deep unit.

20 Q. But ConocoPhillips hasn't developed any  
21 wells in the Blinebry in this area, have you?

22 A. Correct.

23 Q. We talked about fracturing, and you would  
24 expect the fractures, from as you described it, a  
25 well drilled down to 5,000 and it would be a

1 horizontal well and it would be fractured shortly  
2 above 5,000, but basically you would expect  
3 fractures to go below the 5,000 foot mark; is that  
4 correct?

5 A. I don't recall saying the horizontal well  
6 specifically.

7 Q. Any well?

8 A. Any well. It is possible that the  
9 fracture could go below 5,000 feet. The growth of  
10 the fracture will --

11 Q. Are you a fracturing expert?

12 A. No, my colleague, Brian Dzubin is and will  
13 address this issue in his testimony.

14 Q. You are giving us opinion testimony about  
15 information that you are not qualified as an expert  
16 in?

17 MR. CAMPBELL: Object, Ma'am Chairman.  
18 She is the one that asked the question.

19 MS. LEACH: In follow-up of your  
20 questions.

21 MR. CAMPBELL: You asked him a question  
22 and then you object to the answer on the ground that  
23 he is not qualified. That doesn't sound right.  
24 Either don't ask the question or let him answer one  
25 way or the other.

1 MS. LEACH: Let's start over.

2 Q. Are you an expert on fracturing?

3 A. I am not an expert. I have a geologist's  
4 understanding of it.

5 Q. When you were asked the questions by  
6 Mr. Campbell, you weren't responding as an expert in  
7 fracture treatment, were you?

8 A. No, I was responding as an industry  
9 professional with general knowledge of hydraulic  
10 fracturing.

11 Q. So that wouldn't really be expert  
12 knowledge, would it?

13 A. No.

14 MR. CAMPBELL: Objection, argumentative.

15 MS. LEACH: I'm just trying to establish  
16 why he was giving opinion testimony in an area in  
17 which he is not an expert.

18 MR. CAMPBELL: He just told you he has  
19 general industry understanding. That's what he  
20 testified to.

21 MS. LEACH: But to give opinions you need  
22 to be qualified as an expert in the area.

23 MR. CAMPBELL: Why don't we wait for  
24 Mr. Dzubin.

25 MS. LEACH: Why didn't you wait for

1 Mr. Dzubin?

2 CHAIRWOMAN BAILEY: Shall we move along?

3 Q. Do you know a reason ConocoPhillips has  
4 not drilled the Blinbry before now in the Grayburg  
5 Deep unit?

6 A. My understanding is there could be a  
7 variety of reasons.

8 Q. What would those be?

9 A. One issue that we have to look at if we  
10 want to produce the Blinbry is whether it's going  
11 to be an efficient production of resources, whether  
12 it's going to be favorable economics. As I have  
13 testified here, we don't believe that drilling the  
14 Blinbry below 5,000 feet in a separate development  
15 scenario is the most efficient way to produce these  
16 reserves and give the best economics.

17 Q. Is there a difference between determining  
18 the most efficient way and determining that the well  
19 to be economic?

20 A. When I say efficient, I am thinking in  
21 terms of waste, stranded resources, whether all of  
22 the resource available for production is produced.

23 Q. But you said basically -- I'm trying to  
24 make sense of what I am hearing. Forgive me, I'm  
25 not a geologist so I have to work through this a

1 little bit. You are saying that basically the  
2 Blinebry in the Burch Keely unit could be producible  
3 in the sense that it could be economic just to  
4 produce it separately but you are not wanting to do  
5 that because of waste issues?

6 A. I have not seen an analysis that indicates  
7 that producing the Blinebry by itself is economic.  
8 I cannot testify that it is or is not economic.

9 Q. Thank you. ConocoPhillips produced in the  
10 Blinebry areas beyond -- outside of the BK unit or  
11 I'm sorry, outside the Grayburg Deep unit?

12 A. Yes. They have a Maljomar field in New  
13 Mexico. ConocoPhillips has produced from the  
14 Blinebry.

15 Q. And at what depths?

16 A. There's no 5,000-foot ownership boundary  
17 in Maljomar. I need to think to recall what the  
18 relative depths are of the Blinebry in Maljomar.  
19 Since we are further east most likely somewhere on  
20 the order of 5800 feet for the top boundary. As Mr.  
21 Broughton testified, the depth varies across the  
22 field.

23 Q. And basically have you had production from  
24 the Blinebry? Is it a successful well?

25 A. Yes.



1 Q. How many wells do you have there?

2 A. We drilled four wells in 2010 with  
3 production that was very encouraging.

4 Q. And those are full wells in the Blinebry?

5 A. To my knowledge of the field, yes.

6 Q. In other fields in Southeast New Mexico?

7 A. To my knowledge those are the first full  
8 wells in the Blinebry in Southeast New Mexico.

9 Q. You said, if I'm correct, ConocoPhillips  
10 currently doesn't have a plan to drill in the  
11 Blinebry area of the Grayburg Deep; is that correct?  
12 Unless --

13 MR. CAMPBELL: Object. Misstates the  
14 testimony that was depending on the outcome of the  
15 hearing.

16 Q. Apparently you have no independent plans  
17 to drill there. It will be determined by the  
18 outcome of the hearing whether you need to drill  
19 twin wells; is that correct?

20 A. Right. The outcome of this hearing.

21 Q. If you were going to drill those wells,  
22 would you drilling vertical or horizontal wells?

23 A. That is an issue that needs more  
24 investigation.

25 Q. And if you are going to drill a vertical

1 well, where would be your first perforation? At  
2 what level?

3 A. If we want to defend our -- protect our  
4 rights under 5,000 feet, it's logical to go just  
5 below 5,000 feet.

6 Q. And there's nothing prohibiting you from  
7 basically perfing at 5001, is there?

8 A. Not to my knowledge, no.

9 Q. No further questions. Thank you.

10 CHAIRWOMAN BAILEY: Any questions?

11 MR. DAWSON: No questions.

12 MR. BALCH: I will hold my questions.

13 CHAIRWOMAN BAILEY: I have a couple  
14 questions. Could you please pull up ConocoPhillips  
15 Exhibit No. 7. The last bullet on the right-hand  
16 side says, "However, the Blinebry is not being  
17 developed within the Burch Keely unit." That  
18 sentence could also be amended to say, "However, the  
19 Blinebry is not being developed within the Grayburg  
20 Deep unit" also.

21 A. That's correct.

22 Q. If ConocoPhillips is interested in the  
23 Blinebry production, what would prevent it from  
24 perforating its current vertical wells and  
25 commingling down?

1           A.       My understanding is the current vertical  
2       wells either are producing or I believe there are  
3       some that have been plugged and abandoned. A  
4       reservoir engineer could provide a better answer,  
5       but my understanding is when you have sufficient  
6       production from down hole, it makes sense not to  
7       stop that production in order to do work up hole.  
8       It's better to wait until that production has  
9       dwindled to do a shallow recompletion. I believe  
10      that down-hole production in the Grayburg Deep unit  
11      is primarily gas. That could create an issue of  
12      trying to commingle gas production with shallower  
13      oil production.

14               CHAIRWOMAN BAILEY: Those are all my  
15      questions. Any redirect?

16               MR. CAMPBELL: No, ma'am.

17               CHAIRWOMAN BAILEY: You may be excused.

18               MR. CAMPBELL: We would like to recall Tom  
19      Scarborough very briefly to answer Ms. Leach's  
20      suggestion we submitted incorrect exhibits.

21               CHAIRWOMAN BAILEY: I think that would be  
22      appropriate.

23                       TOM SCARBOROUGH  
24      after having been previously duly sworn under oath,  
25      was questioned and testified as follows:

1 BY MR. CAMPBELL

2 Q. Mr. Scarborough, there is a suggestion  
3 here that Exhibit No. 1 is incorrect. That is, you  
4 have outlined on this exhibit what you call the  
5 Grayburg Deep unit as nearly co-extensive with what  
6 you have outlined as the Burch Keely unit. And you  
7 had stated that, in fact, the Grayburg Deep unit had  
8 been contracted.

9 A. That is correct.

10 MS. LEACH: That's been asked and  
11 answered. I would object to the line of questions  
12 as repetitive.

13 Q. What is the status --

14 MS. LEACH: Would you let the Commission  
15 respond to my objection?

16 MR. CAMPBELL: Excuse me.

17 CHAIRWOMAN BAILEY: This is repetitive,  
18 but you have brought up the question twice since  
19 this witness was on the stand concerning the  
20 accuracy of this map. I would like to have this  
21 question answered.

22 MS. LEACH: Thank you.

23 Q (By Mr. Campbell) So what we are calling  
24 the Grayburg Deep unit is contracted and smaller  
25 than what is the Burch Keely unit; is that correct?

1 A. That is correct.

2 Q. What is the status of the mineral acreage  
3 outside of the Grayburg Deep unit within the  
4 exterior boundaries of the Burch Keely unit?

5 A. Within the exterior boundaries?

6 Q. Yeah. These are exterior boundaries,  
7 right?

8 A. I will have to -- when we are talking  
9 about outside of both of these units --

10 Q. Not talking about outside. We are under  
11 the impression that the Grayburg Deep unit is a  
12 smaller unit than is the Burch Keely unit, and I'm  
13 trying to ascertain what is the status of the  
14 mineral leases inside the Burch Keely but outside of  
15 the Grayburg Deep. What's the status? Is it nobody  
16 owns the leases?

17 A. No, they are all federal leases that are  
18 held by production.

19 Q. They are held by production?

20 A. Yes.

21 Q. So while they land outside of the Grayburg  
22 Deep unit is not in the Grayburg Deep unit, it  
23 remains active mineral acreage owned by Conoco and  
24 others below 5,000 feet within the Burch Keely unit?

25 A. Yes, that's correct.

1 Q. So in your Exhibit 1 there is a misnomer  
2 in suggesting that the two units are co-extensive  
3 but there is no error in suggesting that mineral  
4 rights exist owned by Conoco and others inside the  
5 Burch Keely from 5,000 feet down, despite the fact  
6 that they are outside the Grayburg Deep?

7 A. That is correct.

8 Q. Those are active mineral acreage?

9 A. Yes, sir.

10 Q. And we have made an error in attempting to  
11 characterize the two units as co-extensive?

12 A. Yes.

13 Q. Go ahead.

14 A. The red outline in this map is the  
15 original Grayburg Deep unit and the only error is  
16 the word "original" does not show up there. The  
17 Grayburg Deep unit was contracted by the BLM. There  
18 is a Grayburg Deep operating agreement that still  
19 covers the entire red outlined area between the  
20 partners, ratified between the partners and that is  
21 still the controlling agreement in the entire area  
22 which includes the contracted -- the acreage that  
23 was contracted out of the Grayburg Deep unit.

24 Q. So there is currently existing active  
25 mineral acreage of which Conoco is a lessee, as are

1 others, from the 5,000 foot ownership level down,  
2 some of it within the Grayburg Deep, some of it  
3 outside the Grayburg Deep but all of this  
4 co-extensive with the Burch Keely unit?

5 A. That is correct.

6 Q. That's all I have.

7 CHAIRWOMAN BAILEY: Any cross?

8 CROSS-EXAMINATION

9 BY MS. LEACH

10 Q. Sir, the Grayburg Deep unit that has  
11 contracted is smaller than what's shown up there; is  
12 that correct?

13 A. The outline of the contracted unit is not  
14 shown. It is around 2500 acres.

15 Q. In the areas between the contracted unit  
16 and the outside boundaries of what was the original  
17 unit, can Conoco propose drilling a well in those  
18 areas?

19 A. We have an agreement with Cimarex where  
20 they are the operator of the wells. We can propose  
21 that they drill wells.

22 Q. I was told that you were the person to ask  
23 about who the operator is. So could you clarify  
24 that for to us?

25 A. ConocoPhillips is the operator in the

1 Grayburg Deep. We have an exploration agreement in  
2 place with Cimarex for all new wells after the  
3 effective date of the agreement, which is in 2004,  
4 so Cimarex can propose wells and drill wells and  
5 remains the operator. They have done so in at least  
6 four different wells in the Grayburg Deep unit so  
7 they are the operator of the Grayburg Deep 16, 17,  
8 18 and 22.

9 Q. So then if Conoco -- I'm trying to  
10 understand what Conoco is the operator of.

11 A. All of the wells in the Grayburg Deep  
12 wells prior to the 2004 exploration agreement with  
13 Cimarex. We continue to operate all of those wells.

14 Q. So in the same area we have Conoco as the  
15 unit operator but for new wells Cimarex is the  
16 operator of the wells?

17 A. Cimarex drilled those and has a  
18 designation of agent agreement with the BLM.

19 Q. So if you were going to propose a well or  
20 development program with Concho, it would have to  
21 involve Cimarex too; is that correct?

22 A. That is correct.

23 Q. Is there an economic difference if Conoco  
24 proposes a well as opposed to Cimarex proposes a  
25 well?



1           A.     I think that would probably be determined  
2     by each company's AFE and contracts they had with  
3     their service providers.

4           Q.     Are there penalties, penalty differences  
5     if you don't participate or something that are  
6     sometimes found in agreements?

7           A.     There is a nonconsent provision in the  
8     Grayburg Deep operating agreement.

9           Q.     But either party -- if it's a new well  
10    then Cimarex really needs to propose it; is that  
11    correct?

12          A.     They need to propose it. However, if they  
13    don't, ConocoPhillips can do that.

14          Q.     ConocoPhillips can propose the new well  
15    also?

16          A.     Yes.

17          Q.     How many wells does Cimarex have to  
18    propose a year?

19          A.     The exploration agreement actually covers  
20    an area of approximately five townships in  
21    geographical area. They are to propose four wells  
22    per year. Well, two wells per year in one area and  
23    an additional two wells in another area.

24          Q.     Has Cimarex proposed any wells in the  
25    Blaine -- in the Grayburg Deep unit?

1 A. No, they have not.

2 Q. Is there a limit to the number of wells  
3 Cimarex could propose in a year?

4 A. No.

5 Q. Have you made Concho aware of this  
6 arrangement with Cimarex and provided them with the  
7 documentation?

8 MR. CAMPBELL: Excuse me. Objection.  
9 This is beyond the scope of the recall here which  
10 was to simply straighten out the issues relating to  
11 the boundaries of the Grayburg Deep and the  
12 existence of valid mineral rights outside of the  
13 area within Burch Keely below 5,000 feet. She is  
14 just asking questions she could have asked on direct  
15 this morning.

16 CHAIRWOMAN BAILEY: Objection sustained.

17 MS. LEACH: No further questions.

18 CHAIRWOMAN BAILEY: Does the Commission  
19 have any?

20 MR. DAWSON: I have a question. This map  
21 on Exhibit 1 depicts a Grayburg Deep unit of  
22 5484.174 acres and you said it was contracted to  
23 2000?

24 THE WITNESS: It's around 2500 acres is  
25 the contracted Grayburg Deep.

1 MR. DAWSON: Do you have an idea where the  
2 contraction outline would be on the map?

3 THE WITNESS: It would include parts of  
4 Sections 19 and 30 and 17 south 30 east. I believe  
5 also portions of 24 and 25 of 1721.

6 MR. DAWSON: So roughly like the  
7 southeastern part of that map?

8 THE WITNESS: Yes, sir.

9 MR. DAWSON: No further questions.

10 MR. CAMPBELL: Just a second. Is the  
11 Commission finished with all questions?

12 CHAIRWOMAN BAILEY: Yes.

13 MR. CAMPBELL: May the witness be excused?

14 CHAIRWOMAN BAILEY: Yes. Do you have  
15 another witness?

16 MR. CAMPBELL: Yes, ma'am. Conoco would  
17 call Kim Head.

18 KIM HEAD  
19 after having been first duly sworn under oath,  
20 was questioned and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. CAMPBELL

23 Q. Please state your name.

24 A. Kim Head.

25 Q. What is your current position with

1 ConocoPhillips?

2 A. I'm a staff geophysicist with the Permian  
3 Flood Development Team.

4 Q. How long have you been with  
5 ConocoPhillips?

6 A. Ten years.

7 Q. Briefly and generally, what did you do  
8 between the time you graduated -- did I ask you  
9 where you graduated from college?

10 A. Not yet.

11 Q. Where did you graduate from college?

12 A. I graduated from the University of British  
13 Columbia with a bachelor's degree in geophysics in  
14 1978. I returned to the university for a master's  
15 in business administration and graduated in 1986.

16 Q. What did you do very briefly between the  
17 time you graduated from college and when you joined  
18 ConocoPhillips?

19 A. I initially worked for Gulf Oil, then for  
20 Saudi Aramco. Then I returned for my MBA. I then  
21 worked briefly outside the industry in a finance  
22 role, and then returned as a geophysicist working  
23 initially for Tecnica and then Veritas before  
24 rejoining Gulf Oil, which was subsequently acquired  
25 by Conoco.

1 Q. What is your technical seniority with  
2 ConocoPhillips?

3 A. My previous roles with ConocoPhillips  
4 include chief geoscientist for the gulf coast and the  
5 lower 48 onshore.

6 Q. Have you been asked to write and speak to  
7 the industry on the topic of industry geophysics?

8 A. I have. I have published several papers  
9 in the World Oil, the Canadian Journal of  
10 Exploration Geophysics, the Society of Exploration  
11 Geophysics Journal, the Society of Petroleum  
12 Engineering Journal and the American Association of  
13 Petroleum Geologists Journal. I published in the  
14 areas of using seismic data for reservoir  
15 characterization, using 3D seismic data to predict  
16 naturally occurring fractures and in the area of  
17 predicting the value of 3D seismic information  
18 before you acquire the data.

19 Q. Have you previously testified before this  
20 Commission?

21 A. I have not.

22 MR. CAMPBELL: We move the recognition of  
23 Mr. Head as an expert in the field of petroleum  
24 geophysics.

25 MS. LEACH: No objection.

1 CHAIRWOMAN BAILEY: So recognized.

2 Q. What's the object of your testimony,  
3 Mr. Head?

4 A. I wish to show the Commission that the  
5 seismic data indicates the dramatic thickening of  
6 the Blinbry section to the southeast area under  
7 discussion as presented earlier by Mr. Angerman. I  
8 would show that the Blinbry section is geologically  
9 continuous with no interruptions that would present  
10 any kind of geological barrier within it, as  
11 discussed by Mr. Angerman and by Mr. Broughton. And  
12 I would like to show that there are some areas where  
13 the section either above or 5,000 feet will become  
14 very thin and would be likely to be a stranded  
15 resource in the absence of joint development.

16 Q. Have you prepared an exhibit to illustrate  
17 your testimony?

18 A. Just one.

19 Q. That would be Conoco Exhibit 11?

20 A. Yes, it would be a great deal easier if I  
21 could approach the screen and point if that would be  
22 okay. This is seismic data from a 3D seismic data  
23 set that covers the whole development area. I've  
24 shown on the left here the Federal One well just to  
25 show the correlation between the well data and the

1 seismic data. So we tie the well data to the  
2 seismic using a synthetic seismograph which is  
3 mathematically calculated from the logs. And it's  
4 shown here.

5           Then we have to make a visual correlation,  
6 sometimes a mathematically assisted visual  
7 correlation, between the well and the seismic. And  
8 that allows us to identify which of these  
9 reflections come from which geological formations.  
10 The reflections shown on the seismic here are the  
11 dark continuous lines. They occur -- seismic data  
12 reflects to the surface -- when the geology changes.  
13 So when one formation changes to another and we  
14 change the velocity and density of the rock we get a  
15 reflection back. That happens when you change the  
16 lithology or the porosity. Occasionally the fluid  
17 content, but more likely that happens in the Gulf  
18 Coast. So typically it's lithology or a porosity  
19 change causes that.

20           So we see reflections here, for example,  
21 at the top of the Paddock. We can see there's a  
22 reflection that's continuous and we can track it  
23 across. We can see the Paddock/Blaine provides a  
24 reflection and down here at the Tubb, as Mr.  
25 Broughton mentioned, was a logical base. You can

1 see there's a reflection indicating the geology has  
2 changed.

3 What we observe is there's no reflection  
4 following along the green 5,000-foot line that I  
5 added to the display, just indicating that the  
6 geology is the same above and below as we heard from  
7 the previous witnesses.

8 We also note here this line of section  
9 that runs northwest/southeast through the mapped  
10 area that we have been discussing, and the original  
11 unit boundaries are indicated on here, and we notice  
12 there are areas where the section above 5,000 feet  
13 becomes very thin and would be subeconomic for  
14 drilling or certainly reduced economics. And there  
15 are areas where the section below becomes very thin  
16 and the same type of corollary effect would occur  
17 economically, likely resulting in stranded resources  
18 in those areas, unless they were drained. I think  
19 that's all I wanted to point out on the screen  
20 unless anyone needed me to stand there to answer any  
21 questions.

22 Q. Based on your study in this area,  
23 Mr. Head, could you provide the commissioners with  
24 your opinion whether the grant of Concho's  
25 applications will prevent waste and protect



1 correlative rights?

2 A. It is my opinion from studying this data  
3 that granting Concho's application would result in  
4 economic waste and probably some stranded resource.  
5 And that the only way to avoid both of those things  
6 from happening is to jointly develop the section  
7 above and below 5,000 feet.

8 MR. CAMPBELL: We would move the admission  
9 of Conoco Exhibit 11.

10 CHAIRWOMAN BAILEY: Any objection?

11 MS. LEACH: No objection.

12 CHAIRWOMAN BAILEY: So admitted.

13 (Note: COP Exhibit 11 admitted.)

14 MR. CAMPBELL: Thank you. No further  
15 questions.

16 MS. LEACH: No questions.

17 CHAIRWOMAN BAILEY: Commissioner Dawson?

18 MR. DAWSON: No questions.

19 CHAIRWOMAN BAILEY: Commissioner Balch?

20 MR. BALCH: No questions.

21 CHAIRWOMAN BAILEY: I don't either. The  
22 witness may be excused.

23 MR. CAMPBELL: Thank you. Last witness,  
24 Mr. Dzubin.

25 MS. LEACH: Ma'am Chairman, you told me

1     that I needed to make objections about fracturing.  
2     I think we are moving to a witness who is going to  
3     talk about fracturing almost all together. I have  
4     tried to not interrupt with objections as we have  
5     gone along and talked about hydraulic fracturing a  
6     little bit because I understand that's an important  
7     part of basically every well, but we are now going  
8     into the area that is nothing but fracturing, which  
9     was the point of my motion this morning and I would  
10    like to renew the objection. You told me I could  
11    make objections whenever they needed to be, and I  
12    guess I would just ask now that you rule on my  
13    objection again.

14               CHAIRWOMAN BAILEY: As necessary as he  
15    makes his comments, you can make your objections  
16    based on his answers to the questions but we cannot  
17    exclude him categorically at this point.

18               BRIAN DZUBIN  
19    after having been first duly sworn under oath,  
20    was questioned and testified as follows:

21               DIRECT EXAMINATION

22               BY MR. CAMPBELL

23               Q.     Please state your name, sir.

24               A.     Brian Dzubin.

25               Q.     What's your current position with

1 ConocoPhillips?

2 A. I'm a senior completions engineer in the  
3 role of completions group at the ConocoPhillips in  
4 Houston, Texas.

5 Q. What's your educational background?

6 A. I graduated with a bachelor of science in  
7 petroleum engineering from the University of Texas  
8 in 1999.

9 Q. How long have you been with  
10 ConocoPhillips?

11 A. Since February of this year.

12 Q. Briefly, what did you do between the time  
13 you graduated from college and when you joined  
14 ConocoPhillips in February of this year?

15 A. Back when oil was about \$10 or \$12 a  
16 barrel I managed to get a small stint as the  
17 production engineer with Bass Enterprises out of  
18 Midland, Texas. Since that time the emphasis moved  
19 from production engineering to primarily hydraulic  
20 fracturing. As I moved to Halliburton Energy  
21 Services from 2000 to 2007. During that time I  
22 started off as a field engineer and worked my way up  
23 to various technical roles, one of which working for  
24 the Houston business development technical team in  
25 Houston and I was later called upon to be an

1 in-house account representative for their office in  
2 the Woodlands, Texas.

3 Since that time I left Halliburton Energy  
4 Services in October of 2007, left for a company  
5 called Stratagen Engineering. We provided  
6 consulting services, specializing in the  
7 developmental type permeability reservoirs, and my  
8 primary functions were the analysis, design and  
9 evaluation of hydraulic fractures.

10 Q. What are your responsibilities as senior  
11 completions engineer since joining ConocoPhillips?

12 A. The responsibilities are, I would say,  
13 similar to my previous role as a consultant. Again,  
14 the design, evaluation, appraisal of hydraulic  
15 fractures. Basically I provide technical support  
16 and services for ConocoPhillips' upstream business  
17 units. I am also called upon from time to time for  
18 the development/mentorship of basically their early  
19 career of engineers as well.

20 Q. You advise ConocoPhillips on  
21 ConocoPhillips' fracking mechanics?

22 A. Yes, that's correct.

23 Q. During your career, have you published  
24 professional papers on the subject of hydraulic  
25 production?

1           A.     I have been the co-author of four papers  
2     published under the Society of Petroleum Engineers.

3           Q.     Specific to the topic of hydraulic  
4     fracturing?

5           A.     Yes.

6           Q.     Have you been asked to speak to the  
7     petroleum engineering professionals on the topic of  
8     hydraulicking?

9           A.     Yes, four separate times.

10          Q.     Have you testified before the Oil  
11     Conservation Division?

12          A.     No, sir, this will be my first testimony.

13                 MR. CAMPBELL: Commissioners, we move  
14     recognition of Mr. Dzubin as an expert specializing  
15     in hydraulic fracturing.

16                 CHAIRWOMAN BAILEY: Any objection?

17                 MS. LEACH: No objection to his  
18     qualifications.

19                 CHAIRWOMAN BAILEY: He is so recognized.

20          Q.     What is the object of your testimony here  
21     today, sir?

22          A.     My object is to provide expert witness  
23     testimony as it pertains to my background of  
24     hydraulic fracturing and provide opinions as to  
25     current practices of hydraulic fracturing in this

1 area.

2 Q. Can you briefly summarize the conclusions  
3 you reached based on your study of Concho's  
4 application in these proceedings and other facts?

5 A. Well, I believe that if the applications  
6 are granted, this will allow Concho Oil and Gas to  
7 drill to a depth of 5,000 feet, complete those wells  
8 using hydraulic fracturing and as a result impair  
9 ConocoPhillips' underlying rights or correlative  
10 rights.

11 Q. Have you prepared exhibits to illustrate  
12 your conclusions?

13 A. Yes, I have. I prepared Exhibits 12  
14 through 17.

15 Q. All right, sir. One moment. Could you  
16 examine and explain Conoco Exhibit 12.

17 A. Here we have a graphic that we adapted  
18 from one of the major services companies. We have  
19 the reference document below. What this is is a  
20 side-view schematic, just trying to generalize a  
21 well that has been cased, cemented, perforated and  
22 completed with a hydraulic frack.

23 Now, some of the primary points I would  
24 like to get out of this particular graphic, and  
25 again, this goes along with some of the, I guess,

1 the topics that were also illustrated in the  
2 reference below -- if I could have you advance  
3 that -- hydraulic fractures may not necessarily be  
4 restricted to the area of the well that we  
5 perforate. Hydraulic fractures can grow, propagate  
6 through a geologic unit some distance both above or  
7 below the area that we perforated.

8 If I could have you advance that one more  
9 time. In context to the hearing that we are  
10 involved with today, we are discussing this  
11 arbitrary boundary line in the case that we're  
12 talking about, 5,000 feet, and I would like to  
13 emphasize that hydraulic fractures don't stop or may  
14 not stop because you tell it that there is an  
15 arbitrary contractual boundary.

16 Within a geological unit, all that the  
17 hydraulic fracture will know is differences in rock  
18 stress, geologic properties. Based on that, the  
19 area shaded in red below that boundary line, I see  
20 that as an impairment on correlative rights as it  
21 pertains to this case.

22 I think we could probably also flip this  
23 slide around in terms of Concho or at least where  
24 they might be worried. Let's go ahead and raise the  
25 boundary line above and say that it's above that

1 perforated height, in which case that fracture might  
2 encroach above into their potential rights.

3 Q. What is Conoco Exhibit 13?

4 A. This was a summary of the work flow that  
5 we used to develop the results of a completion study  
6 for this area. Basically I have summarized that in  
7 the three points that I have listed here. We  
8 started with a well that was in the focus area of  
9 the Grayburg Deep Unit No. 10. We used data from  
10 that well to derive various geologic properties so  
11 it could be used in a hydraulic fracturing  
12 simulator.

13 From there we performed a series of  
14 fracture simulations to explore the height and  
15 length and characteristics of the fracture as it  
16 propagated through the Yeso formation. We based our  
17 simulations on a design that was based on COG's  
18 designs in the West Maljomar field. High injection  
19 rates. Actually, there's a typo. That should be  
20 177,000 pounds, not 167 as I had there. Trying to  
21 treat a 200-foot gross interval of perforations and  
22 then basically allowing the fracture simulator to  
23 show how the fracture would propagate and  
24 subsurface.

25 Q. So your study, Mr. Dzubin, was to simulate



1 the potential height and spread of a fracture?

2 A. Yes, more so the height in this case.

3 That was the primary.

4 Q. Utilizing input data in terms of injection  
5 rate, fluid, perf settings, that you found in  
6 another Concho well?

7 A. It was actually this idea -- I got the  
8 information from the completion engineer working in  
9 the area. He had based his designs for a tourmaline  
10 State No. 2 on some designs that Concho had pumped  
11 in that area. From what he told me, they were very  
12 similar, almost exact.

13 Q. Okay. What is Conoco Exhibit 14?

14 A. This was the treatment schedule that we  
15 simulated within the fracturing simulator.  
16 Basically, what this shows is a sequence of steps.  
17 As we pump in any hydraulic fracturing treatment we  
18 initiate the fracture behind with a fluid not  
19 containing proppant. We refer to it as pad.

20 The remaining stages that I have listed  
21 there in the sequence refer to the slurry.  
22 Basically these are stages where we start to pump  
23 increasing concentrations of proppant into the  
24 hydraulic fracturing treatment. Overall, this is  
25 fairly representative of practices out in the area.

1 These are, in my opinion, relatively low  
2 concentrations but this is how fractures are  
3 executed in the area.

4 Q. So you took all of these components and  
5 put them into a simulator to test the results?

6 A. Yes, that's correct.

7 Q. And what was the simulator you used?

8 A. The simulator that ConocoPhillips used is  
9 a program called Stim Plan. It's one of four  
10 commercial hydraulic fracturing simulators out in  
11 the industry, the other three being Gopher, Practoro  
12 PT and M Frack.

13 Q. Is the frack simulator that Conoco uses a  
14 recognized industry standard as a simulator?

15 A. Yes, it is. Actually, prior to my arrival  
16 at ConocoPhillips it was decided by people that are  
17 a lot smarter than me that this was the technical  
18 way to go in terms of what simulator should be used  
19 for ConocoPhillips.

20 Q. You took all of this data and put it into  
21 the simulator. What was the result?

22 A. The result can be seen on the next slide,  
23 and basically what we have is the overall output of  
24 the model showing the overall extent, height,  
25 length, and a distribution of proppant within the

1 fracture.

2           The first thing I would like to do within  
3 this graphic is to emphasize some of the key points.  
4 I'm going to start on that color track on the left.  
5 What this shows is the gamma ray log showing the  
6 various changes, indicating the lithology for the  
7 Grayburg Deep unit No. 10. What I have also done in  
8 the tract is tried to break out the geologic defined  
9 units. The Paddock, Blinebry, and I have also  
10 broken out the sections of the Blinebry above and  
11 below the 5,000 foot subsurface boundary line and I  
12 have also marked the perforations that we used in  
13 the simulation just slightly to the right of the  
14 track indicated by the hashmarks.

15           Now, the overall conclusion from these  
16 simulations ties into some of the previous testimony  
17 that we have heard today about the homogeneity of  
18 the reservoir. Within the simulation, we can see  
19 that there were no stress contrasts or potential  
20 containment mechanisms that would have prevented  
21 that fracture from stopping at that 5,000-foot  
22 boundary line and preventing further impasse into  
23 the region which I have shaded -- not shaded but  
24 highlighted with that dotted circle. So?

25           Basically the section of the rock

1 represents an area of the reservoir which could be  
2 produced through that conductive flow path of the  
3 hydraulic frack and that that represents basically  
4 impairment of correlative rights.

5 Q. I see that you set the perf string here  
6 roughly 200 feet between 4600 and 4800 below ground  
7 surface?

8 A. Yes.

9 Q. What would you expect to see, Mr. Dzubin,  
10 if you set the perf interval at 200 feet closer to  
11 the 5,000-foot ownership boundary?

12 A. If you put those perforations -- we will  
13 just say right at the base of the yellow-shaded  
14 region, I would say that the fracture would  
15 propagate further downward below the 5,000. It's a  
16 matter of how much real estate does it have to  
17 propagate through to get to the point.

18 Q. If the bottom of the perf was set at 5,000  
19 feet, you would expect the intrusion below 5,000  
20 feet to be --

21 A. To be worse.

22 Q. To be worse. Could you summarize for the  
23 commissioners the conclusions you reached as a  
24 result of your fracture simulation?

25 A. Yes. We summarized our conclusions here

1 as Exhibit 16. Based on our modeling, hydraulic  
2 fracture propagating within the geologic unit is  
3 capable of passing arbitrary defined contractual  
4 boundaries. Just because you say 5,000 feet does  
5 not necessarily mean that it's going to stop there.  
6 Because the hydraulic fracture is a conductive flow  
7 path, any reservoir or rock contacted by the  
8 hydraulic fracture, you could produce hydrocarbons  
9 from the area and that represents an impairment of  
10 correlative rights.

11 Q. In your opinion, Mr. Dzubin, would the  
12 Commission's grant of Concho's application prevent  
13 waste and protect correlative rights?

14 A. Let me answer that in the converse. I  
15 don't think that it would protect correlative rights  
16 just for the reasons that I just stated. And as far  
17 as reducing waste, certainly this would be a concern  
18 for ConocoPhillips. I know we discussed one well  
19 here today that was close to that boundary and  
20 testimony heard earlier suggests that there were  
21 four other wells that may have been perforated and  
22 completed using hydraulic fracturing. I guarantee  
23 that I myself or one of the others on the technical  
24 teams will be looking for that data and for those  
25 wells. You know, certainly twin wells or any sort

1 of completion strategy to make sure that we develop  
2 those resources, we will be looking within those  
3 areas.

4 Q. Assuming the Commission grants the Concho  
5 applications and assuming further that Concho is  
6 unwilling to participate in a joint venture or a  
7 joint development for the entire Blinbry, what  
8 options does Conoco have to protect its correlative  
9 rights?

10 A. Basically you have to drill wells.

11 Q. Have you discussed that with your  
12 management?

13 A. I have not discussed it personally but I  
14 am aware those discussions are currently ongoing.

15 Q. They are going right now?

16 A. Yes.

17 Q. And you expect Conoco to make a decision  
18 based on the decision made by this Commission?

19 A. Yes. And the overall development strategy  
20 would be development on which side of the so-called  
21 sliver are you on or at least below the 5,000 foot  
22 line. Can we drain that adequately with vertical  
23 wells or would it be more prudent to drill  
24 horizontal and complete with hydraulic fracture.

25 Q. Thank you.

1 MR. CAMPBELL: I move for the admission of  
2 Exhibits 12 through 17.

3 MS. LEACH: My objection to the exhibits  
4 are the objections I have had all along. They do  
5 not concern specific wells or necessarily concern  
6 the BK unit area. It's theoretical and doesn't rely  
7 on a specific case here. It's not about what the  
8 characteristics of the rock of a certain well, what  
9 depth it's going to be, the bottom of the well,  
10 where the perms are. None of that is here so for  
11 the reasons stated earlier I object to the exhibits  
12 and testimony.

13 CHAIRWOMAN BAILEY: Your objection is  
14 denied because the commissioners are fully capable  
15 of keeping the correct perspective on the purpose of  
16 this hearing. So these exhibits will be accepted.

17 (Note: Exhibits 12 through 17 admitted.)

18 CROSS-EXAMINATION

19 BY MS. LEACH

20 Q. Using the exhibit that's up there -- may  
21 as well start there -- for the most part, the  
22 perforation, as I understand it, is bound by the  
23 little marks next to the Blinbry at the top of the  
24 yellow?

25 A. That's correct.

1           Q.     So directly across from the Blinebry at  
2     the 4600 mark and down, there are a number of  
3     different colors that you used. And directly across  
4     from the top-most color you have sort of a -- I  
5     don't know, a khaki color that's there at the 4600  
6     mark and that indicates far less penetration than  
7     the pink; is that correct?

8           A.     No. Not necessarily penetration. I would  
9     say that the overall extent of the fracture is in  
10    any of the colored regions. So the color, the  
11    changes in color represent various concentrations of  
12    proppant that have been placed in that particular  
13    section.

14                So in the case of the outer edges towards,  
15    the top -- I guess you would call it khaki -- it  
16    looks like we had a little bit of settling of  
17    proppant out of the khaki-shaded region. And as you  
18    move back towards the wellbore you get to the hotter  
19    reds, the pinks, which represent higher proppant  
20    concentrations. In any hydraulic frack that's  
21    ideally what you want. You want the higher  
22    concentrations towards the wellbore because that's  
23    the section of the well that will have to support  
24    100 percent of the production from the frack.

25           Q.     When you say back towards the wellbore,



1 what do you mean?

2 A. Okay. Let's focus on the bottom of that  
3 schematic that gives a fracture penetration distance  
4 in feet, 200, 400, 600, 800. If we were to move  
5 backwards and get to the zero point within that  
6 schematic, that represents the point where the  
7 wellbore is. And we're showing one wing of the  
8 fracture that's propagating away from the wellbore  
9 from that point.

10 Q. But the highest concentration in that pink  
11 area, a large amount is substantially below the  
12 perforations?

13 A. And that would be expected. You know,  
14 gravity will take over and materials, heavy  
15 materials such as proppants, will settle.

16 Q. Even at the zero mark?

17 A. Yes.

18 Q. And basically you said that the fractures  
19 stop going upwards? Did I get your words down  
20 correctly?

21 A. For the geology of this particular  
22 wellbore, yes.

23 Q. And the geology of this particular  
24 wellbore is the Grayburg Deep 10, is that correct?

25 A. Yes.

1 Q. When was the well log done on that well?

2 A. I don't recall when the logs were done.

3 The information was provided to me by the Charlie

4 Angerman. I did not look at the date. However,

5 using our process work flow for hydraulic

6 fracturing, the date on the log is really

7 irrelevant. What we are looking for is the various

8 lithological changes from the top to bottom in the

9 column.

10 Q. Does the accuracy of the well log have

11 anything to do with the accuracy of the results you

12 get in your simulation?

13 A. I have not seen any data that would lend

14 to that, but what we're looking at here is for

15 relative changes in the lithology based on the gamma

16 ray. That's how we basically define our layers, and

17 overall, with this particular simulator, grid cells

18 within the model.

19 Q. So the fact that you don't really have a

20 great deal of information in the log for the

21 Grayburg Deep about the Blinbry because that's not

22 where it was completed, that really doesn't impact

23 the accuracy of your simulation?

24 A. No. I have worked with less in past wells

25 and got reasonable results.

1 Q. Did you have a digital sonolog for this  
2 area in the Blinebry?

3 A. There was a Delta T or basically a  
4 compressional wave arrival time in the data set, and  
5 as it was indicated to me a synthetic sheer wave  
6 which was used to derive rock properties for this  
7 reservoir. By rock properties, what I mean is first  
8 Young's modulus and Poisson's ratio and ultimately  
9 we are using those to derive a stress field within  
10 this well.

11 Now, the results that we came up with,  
12 Young's modulus is in the range of six million PSI,  
13 which I felt was typical for other analysis done in  
14 the Yeso.

15 Q. But the Delta T sheer was really in  
16 the morrow reservoir, not in the Blinebry, isn't  
17 that correct?

18 A. It was a synthetic curve that was  
19 generated back to surface.

20 Q. So an estimate and then you are taking the  
21 estimate and using it in your simulation and you are  
22 saying that doesn't affect the outcome of the  
23 information you get?

24 A. Could you repeat the question?

25 Q. You are saying you basically didn't have a

1 Delta T share at the Blinebry so you used an  
2 estimation to come up with -- you took that  
3 estimation for what would be the information you  
4 needed for the Blinebry, used that in the simulator.  
5 So you did estimates into the simulator which would  
6 make more estimates to come up with a result that  
7 basically I am questioning if that's an accurate way  
8 to get the results from the simulator.

9 A. I would be worried about the accuracy if  
10 the values for the rock properties were off. Like I  
11 said, the Young's modulus for this particular  
12 simulation is in the range of six million PSI. I  
13 would say five to seven million is typical for the  
14 Yeso in this area, and as far as using data or  
15 synthetic data and transferring over, there is  
16 published information out there by Bob Baree, who  
17 developed the hydraulic fracturing simulator Gopher,  
18 he has often advocated what do you do when you don't  
19 have a sonic log. You basically have to derive the  
20 properties synthetically and it's accepted practice.  
21 We get the results.

22 Q. You heard the testimony from the geologist  
23 that the area differs greatly from well to well,  
24 haven't you?

25 A. Maybe the porosity and the overall physics

1 in terms of water saturation, but that would not be  
2 my background. The thing that I would be more  
3 concerned with was the overall stress field that  
4 would influence the propagation of the hydraulic  
5 frack through the subsurface.

6 Q. Thank you. I really thought I was asking  
7 a yes or no question. Did you hear that testimony?

8 A. I'm sorry. I apologize. Yes, I did.

9 Q. So you based your entire fracture  
10 simulation on an important value that was calculated  
11 instead of actual; isn't that correct?

12 A. That's correct.

13 Q. Thank you. I would like for you to go  
14 back to Exhibit 12, please. I believe you said this  
15 was adapted for a simulator from September 2002; is  
16 that correct?

17 A. Yes, that's correct.

18 Q. And how much has the technology changed in  
19 fracking since 2002?

20 A. In terms of hydraulic fracturing, I would  
21 say there's not much in the way of how the process  
22 is done. You are using a fluid to exert a hydraulic  
23 pressure against the rock until you exceed a certain  
24 failure criteria, in which case the hydraulic  
25 fracture will propagate vertically, laterally into

1 the rock.

2 Q. You are telling me we don't know more  
3 about hydraulic fracking now than we did in 2002; is  
4 that correct?

5 A. I am generalizing the overall process. In  
6 terms of the technologies, you may be referring to  
7 various materials or completion techniques that  
8 allow us to, instead of perforating maybe we use a  
9 sliding sleeve configuration that prevents that  
10 operation from happening. So basically technologies  
11 that improve the efficiency of the operations have  
12 advanced, but the overall process of hydraulic  
13 fracturing, hit it with a hammer, make a crack and  
14 they really haven't changed since it was initially  
15 developed in the late '40s.

16 Q. So you were saying hit it with it hammer,  
17 I assume you are saying hitting the rock with a  
18 hammer?

19 A. Hydraulic hammer.

20 Q. Does it matter what the rock is?

21 A. The rock will impact how that fracture  
22 propagates. In the case of this environment, we  
23 have relatively high Young's Modulus, relatively low  
24 permeability, so I'm going to say you will get large  
25 fractures. However, if we had sediment like in the

1 Gulf of Mexico, low Young's Modulus, unconsolidated  
2 sands with high permeability and high porosity, you  
3 will probably get very, very short-stunted  
4 fractures.

5 Q. Will you tell me what you changed in this  
6 from the published version?

7 A. Really not much. We did this just to get  
8 around the copyright issues.

9 Q. Well, it says it's adapted, so I was  
10 wondering what the changes were. You're not  
11 purporting to say that this drawing, cartoon,  
12 illustration, in any way, shape or form mirrors what  
13 would happen in the Blinebry, are you?

14 A. We are.

15 Q. That's fine. That's a yes or no question.  
16 We are. And you are saying that because the  
17 Blinebry looks like what you have pictured here --  
18 okay. Is that correct?

19 A. Define look.

20 Q. Let's start with the drawing. Where is  
21 the bottom of the well?

22 A. We didn't reference any depth lines except  
23 for something conceptually around the arbitrary  
24 boundary line.

25 Q. Does the arbitrary boundary line, would

1 that basically represent the 5,000-foot mark?

2 A. Sure.

3 Q. So the well must be bottomed somewhere  
4 below the 5,000 mark?

5 A. Yes.

6 Q. That would not be the situation for the  
7 Concho well in the Blinbry; is that correct?

8 A. Well, the data that I have seen here  
9 yesterday about the Burch Keely Unit 411, that well  
10 was TD'd to 5100 feet, based on my recollection.

11 Q. You have one well that is drilled by  
12 Marbob prior to the ownership of COG. From that  
13 you're going to conclude that the entire unit should  
14 not be expanded because you are going to expect  
15 Concho to drill every well past 5,000 feet? Is that  
16 correct?

17 A. Well, with the way casing strings are  
18 designed, you have to drill past -- well, if you  
19 intend on perforating within a close proximity of  
20 5,000 feet, you would have to drill past it  
21 primarily because you leave what's called a shoe  
22 track in the casing string. Basically what it is is  
23 a series of one-way check valves that when you pump  
24 the cement job and displace the cement outside the  
25 casing and into the annulus, you have these check



1 valves in place to hold -- essentially what would be  
2 considered contaminated cement but more importantly  
3 prevent fallback of the cement back into the pipe.

4 Q. How deep is that? How many feet are  
5 involved in that?

6 A. I would say two to three joints a casing,  
7 so that's probably about 80 to 120 feet. Depending  
8 on depth, you may want to put more for deeper  
9 string, higher pressures.

10 Q. So the well bottoms at 5,000 feet and you  
11 are telling me they have to back up 80 to 120 feet  
12 for the first perforation from the bottom?

13 A. No. I would say based on the testimony  
14 this morning, I would repeat that ConocoPhillips has  
15 moved away from that position. So --

16 Q. You are talking about the buffer again.  
17 I'm not talking about the buffer. I'm talking about  
18 what you just testified about the casing and having  
19 to -- basically you couldn't put the perforations at  
20 the very bottom of the well because of what you were  
21 describing, the shoe, the joints, being able to pump  
22 the cement out or the contaminated cement. You were  
23 saying that was 120 feet?

24 A. Typically.

25 Q. So that would be -- the first perforation

1 would be above that, wouldn't it?

2 A. Yes.

3 Q. So if the well bottoms at 5,000 feet, you  
4 are talking about moving up 80 to 100 feet, so  
5 you're talking about 4900; is that correct?

6 A. Sure.

7 Q. So if Concho was proposing to drill a well  
8 at, say, 4850, they would still have to perforate at  
9 100 feet up above that, right?

10 A. They could.

11 Q. Under your description of needing to be 80  
12 to 120 feet off the bottom of the well, wouldn't the  
13 first perforation then be basically more like at 47?

14 A. I'm curious about this line of questioning  
15 because I think we are getting away -- this is more  
16 well construction practices rather than hydraulic  
17 fracturing. If you have to specify, I suppose we  
18 can.

19 Q. I'm just trying to be realistic about  
20 basically if you drill a well and you bottom the  
21 well at 48, then basically your first perforation is  
22 going to be at 47 or above. So you have that much  
23 more space if a frack should go down before it would  
24 get to the 5,000-foot mark, and I think that is  
25 something worth talking about in the hearing since

1 you want to make it about fracturing; isn't that  
2 correct?

3 A. I think ConocoPhillips' position is not  
4 about establishing stand-off boundaries.

5 Q. I didn't ask you about that. I asked you  
6 about the testimony here today is about fracturing  
7 and about that we don't want this sliver to be  
8 incorporated in the Burch Keely unit or the  
9 Grayburg-Jackson pool because you are afraid that  
10 the fracking will come across the 5,000-foot mark;  
11 isn't that correct?

12 A. That's correct.

13 Q. I'm telling you that if the well is  
14 bottomed at 4800 feet or above and you have to  
15 basically perf 80 to 120 feet above that, then you  
16 have several hundred feet before the fracture will  
17 get to the 5,000-foot mark; isn't that correct?

18 A. Basically what you have is a situation  
19 like in Exhibit 15 that Michael put on the screen  
20 for us. So what you are talking about 4800 feet, I  
21 still say there's risk involved that yes, you will  
22 establish and propagate a hydraulic frack into  
23 ConocoPhillips' lease rights.

24 Q. And there's a risk?

25 A. Yes.

1 Q. You are not saying it's absolutely going  
2 to be there, are you? You are saying it could be;  
3 isn't that correct?

4 A. That's correct.

5 Q. That can be, not that it will be; is that  
6 correct?

7 A. That's correct.

8 Q. So you basically want to deny putting this  
9 sliver into the Burch Keely unit or the  
10 Grayburg-Jackson because it is possible that if  
11 things were all the done the way you believe they  
12 would be, which would include regularly drilling  
13 wells below the 5,000 foot mark, that then there  
14 could be fractured going below the 5,000 foot mark;  
15 is that correct?

16 A. Yes, is and it would --

17 Q. Thank you.

18 MR. CAMPBELL: The witness is permitted to  
19 finish an answer beyond what Ms. Leach used to be an  
20 answer. He was about to explain his full answer.  
21 She can't cut him off, Ma'am Chairwoman.

22 MS. LEACH: You can come back and have him  
23 answer the questions.

24 MR. CAMPBELL: No. This is a question of  
25 letting him complete your answer to his question.

1 MS. LEACH: He is going off into speeches  
2 instead of answering the question I asked. That's  
3 why I'm trying to rein him in.

4 MR. CAMPBELL: You are reining him in by  
5 not letting you complete the answer to your  
6 question.

7 CHAIRWOMAN BAILEY: I think the Commission  
8 would like to hear the complete answer, so please do  
9 allow him to complete his answer.

10 Q (By Ms. Leach) I believe you mentioned --

11 MR. CAMPBELL: Excuse me, Counsel. Have  
12 you finished your answer to her question or do you  
13 have something more?

14 A. I would like to make statement. And yes,  
15 based on the risks, based on our concerns, yes, we  
16 see this situation happening. And as a result, yes,  
17 our only course of action would be to drill what's  
18 been referred to as a twin well or some well that  
19 would allow us to make sure we get access to those  
20 resources that have been potentially contacted by  
21 that frack and allow us to drain it.

22 Q. You said that's your only course of  
23 action?

24 A. Well, based on discussions that I have  
25 heard it would seem, in my opinion, Concho has been

1 unwilling to respond and talk about the development  
2 options.

3 Q. Why don't you have an option to protect  
4 your correlative rights by protesting application  
5 for a permit to drill if you felt the well was too  
6 close to the 5,000-foot mark and basically the  
7 fractures might go across the line?

8 A. Well, this seems to be a permitting issue  
9 which is outside of my area of expertise, more  
10 regulatory issues. However, I would offer my  
11 opinion that usually when you permit a well it's  
12 permitted to a depth but does not specify anything  
13 about how the well will be completed.

14 Q. And if you filed a protest to the  
15 application and you were granted a hearing before  
16 the commission of hearing examiners, do you think  
17 you could raise those issues?

18 A. You probably could, but I would see that  
19 as a waste of the Commission's time.

20 Q. So it would just be more efficient to keep  
21 us out of the unit; is that correct? The sliver out  
22 of the unit; is that correct?

23 A. I'm not sure if I follow you.

24 Q. That's okay. You were talking about the  
25 well, the Concho -- Marbob/Concho well that was

1 drilled originally by Marbob. Are you aware that  
2 there's never been production in that area?

3 A. I'm not aware of that.

4 Q. So you wouldn't know that there's never  
5 been any production from the perforations that are  
6 in the area of the sliver or the expansion area?

7 A. I'm not aware of that. As was mentioned,  
8 I became aware of this yesterday, so additional  
9 details regarding the well, I don't have knowledge  
10 of.

11 Q. Thank you. I believe you testified -- but  
12 I'm not sure that I got it all down -- because  
13 you're saying that you design your simulation based  
14 on COG designs in the west Maljomar field; is that  
15 correct?

16 A. Yes, that's correct.

17 Q. And was ConocoPhillips involved in an  
18 agreement with COG in the Maljomar area?

19 A. As far as I'm aware, there was some data  
20 sharing, but I don't have any details regarding  
21 agreements in place. I was called upon for the  
22 Maljomar area regarding the drilling completion  
23 program that we have ongoing for four wells this  
24 year and the possibility of additional development  
25 in the area.

1 Q. Joint completion program with Concho?  
2 COG?

3 A. No, as far as the details that I'm aware  
4 of, this is a project that I was called in for  
5 specifically for ConocoPhillips.

6 Q. Are you aware that there was an agreement  
7 between the two parties in the Maljomar area?

8 A. No, it's outside of my realm and basically  
9 my job description.

10 Q. I believe you said something about getting  
11 the COG design from a completion engineer in the  
12 area?

13 A. Yes, Stewart Archibald.

14 Q. Does he work for COG?

15 A. He works for ConocoPhillips.

16 Q. How did he obtain the knowledge about the  
17 fracture techniques of COG?

18 A. As far as that data sharing agreement that  
19 I spoke of, we do have data on COG's wells within  
20 that area.

21 Q. What data do you have?

22 A. Completion reports, treatment schedules.  
23 I haven't personally reviewed them.

24 Q. Are you talking about the completion  
25 reports filed with OCD?



1           A.     That I'm not sure.

2           Q.     So your information came from another  
3 engineer at ConocoPhillips. Is he here available to  
4 testify?

5           A.     No, he is not here today.

6           Q.     So basically your information is from  
7 someone who is not here to testify and, therefore,  
8 is relatively hearsay information in this format,  
9 and you used that to build your simulation; is that  
10 correct?

11          A.     Well, I'm trying to recall if this was  
12 taken from -- actually, I know for a fact that the  
13 job design that we inputted in the schedule was  
14 taken from the completion procedure and those were  
15 based off the overall or similar job designs that  
16 Concho had pumped in the area. Now, looking at the  
17 overall job designs, based on what I saw from the  
18 Burch Keely Unit 411, I didn't see dissimilar  
19 properties. You had roughly about 200-foot  
20 perforation intervals. Each one of the perforation  
21 clusters from the top to the subsequent bottom of  
22 the next stage was spaced roughly 100 feet apart.

23                 As a matter of fact, the Burch Keely unit,  
24 the very first stage that had the most potential for  
25 contact into that area below 5,000 pumped a larger

1 job than what we simulated in the treatment  
2 schedule. It was 200,000 pounds versus the 177  
3 simulated here. By nature of the larger job design  
4 I would imagine that the overall fracture dimensions  
5 would be larger.

6 Q. You are not telling me that the rock in  
7 the Burch Keely area is exactly the same as the rock  
8 in the Maljomar field, are you?

9 A. I would say in terms of rock properties,  
10 yes.

11 Q. Including porosity?

12 A. Petrophysics, no.

13 Q. Thank you. What is Conoco's design for  
14 fracking?

15 A. Well, it's basically as you saw in the  
16 treatment schedule. High injection rates.

17 Q. Conoco's?

18 A. ConocoPhillips, like I said, the treatment  
19 schedule that we have outlined in Exhibit 14 and  
20 that's the Tourmaline State No. 2.

21 Q. So that's the Conoco treatment schedule,  
22 not the Concho treatment schedule?

23 A. Based off of Concho Oil and Gas treatment  
24 designs.

25 CHAIRWOMAN BAILEY: Do you have many more

1 questions?

2 MS. LEACH: No, I don't.

3 Q. So then you can drill a well through the  
4 Burch Keely into the Grayburg Deep and you can perf  
5 a 5001 feet; is that correct?

6 A. That's correct.

7 Q. And you can use whatever fracking  
8 technique you want to; is that correct?

9 A. Probably correct.

10 Q. And then if you did that and your  
11 fractures weren't up to some extent, as you have  
12 shown us in your exhibit, then you would have  
13 fractures that would be drained from above 5,000  
14 feet, wouldn't you?

15 A. That's certainly the dilemma of the entire  
16 case. You have a competitive situation which really  
17 benefits neither party.

18 Q. Is anyone complaining about your proposed  
19 fracking in that area?

20 A. Not yet, because based on previous  
21 testimony we have not built that area.

22 Q. Do you expect someone to complain?

23 A. Yes. I imagine that this probably won't  
24 be the last time that these parties are here in  
25 front of the Commission.

1 Q. But there's nothing immediately to stop  
2 you from fracking just below 5,000 feet?

3 A. No.

4 Q. And there's nothing that Concho isn't  
5 going to try to stop you from fracking just below  
6 5,000 feet, is there?

7 A. No.

8 MS. LEACH: No further questions.

9 CHAIRWOMAN BAILEY: Let's take a  
10 ten-minute break.

11 (Note: The hearing stood in recess at  
12 4:15 to 4:24.)

13 CHAIRWOMAN BAILEY: The counsel has  
14 indicated he would like findings and conclusions  
15 from both parties within two weeks if that would be  
16 at all possible.

17 MR. CAMPBELL: Does that change your  
18 issuance of the preliminary decision tomorrow?

19 CHAIRWOMAN BAILEY: No. It helps me draft  
20 the order. All right. We were about to have  
21 questions from the Commission.

22 MR. DAWSON: I have no questions.

23 MR. BALCH: I have several questions.  
24 Does the model allow for heterogeneity in another  
25 than the vertical direction.

1 THE WITNESS: No, it doesn't.

2 MR. BALCH: Same question. This is purely  
3 a forward model. You don't have any data to go back  
4 and compare the two to see if the fracture model is  
5 correct?

6 THE WITNESS: Further calibration points,  
7 say like the natural treatment, no. We wouldn't  
8 have that data.

9 MR. BALCH: Are you aware of any other  
10 Yeso data that might give you confidence in your  
11 model?

12 THE WITNESS: I have confidence in the  
13 model and I would certainly be willing to take a  
14 look at any treatment data from either direction.

15 MR. BALCH: There was some question about  
16 the data that went into the stress field, and I have  
17 some questions about the stress field as well. You  
18 will have an error bar associated with any of the  
19 calculations that you make in the stress field. Do  
20 you do multiple models or one model based on the  
21 calculations? Or do you do models that incorporated  
22 the error bars and the stress field calculations to  
23 see if there was significant variance?

24 THE WITNESS: You could do those  
25 exercises. I would say that we opted not to do a

1 sensitivity analysis because the overall stress  
2 contrasts seemed in line with previous model in the  
3 Yeso.

4 MR. BALCH: The last question is at what  
5 point in your proppant, amount pounds out there, do  
6 you start to lose conductivity from the reservoir?

7 THE WITNESS: You start to have a partial  
8 monolier of proppant at a concentration of about .2  
9 pounds per square foot, which based on our graphic,  
10 there was a portion of the reservoir which was  
11 contacted by those low concentrations.

12 However, as we found in various  
13 reservoirs, and I'm just going to pull the Barnett  
14 shale as probably one of the biggest examples, when  
15 you have a brittle rock and you have broken it up  
16 and moved sections of the rock face away from each  
17 other, it's possible for the walls of the fracture  
18 face to close but not completely, and those  
19 asperities that you cause and leave behind are also  
20 conductive flow paths which can contribute to  
21 additional production.

22 CHAIRWOMAN BAILEY: Any redirect?

23 MR. CAMPBELL: No, ma'am.

24 CHAIRWOMAN BAILEY: The witness may be  
25 excused. Do you have any other witnesses?

1 MR. CAMPBELL: No, ma'am.

2 CHAIRWOMAN BAILEY: Are you ready to do  
3 closing?

4 MS. LEACH: I have to recall a couple  
5 people for small rebuttal. I would like to recall  
6 David Evans.

7 DAVID EVANS

8 DIRECT EXAMINATION

9 BY MS. LEACH

10 Q. Mr. Evans, do you recognize COG Exhibit  
11 22?

12 A. I do.

13 Q. What is that?

14 A. This is prepared at my request. It's  
15 prepared of the Burch Keely royalty ownership versus  
16 the Grayburg Deep as we know it.

17 Q. What is the yellow show?

18 A. The yellow is the common ownership between  
19 the two units.

20 Q. And then in white the names are not  
21 common?

22 A. Not common.

23 Q. Are the majority of the names in white?

24 A. In the Burch Keely unit.

25 Q. So there are more names in white, more

1 names in the Burch Keely unit --

2 A. Yes.

3 Q. -- than the Grayburg Deep unit?

4 A. Significantly.

5 MS. LEACH: With that, I offer Exhibit 22  
6 into evidence.

7 CHAIRWOMAN BAILEY: Any objection?

8 MR. CAMPBELL: Just one or two voir dire  
9 questions if I could.

10 VOIR DIRE EXAMINATION

11 BY MR. CAMPBELL

12 Q. Mr. Evans, is it your suggestion that the  
13 overrides would have to participate in any joint  
14 development in which the unit, the two current units  
15 are merged into one unit?

16 A. Yes, they would.

17 Q. Would it be your opinion as well that the  
18 overrides would have to be consulted and approve a  
19 joint development plan that does not contemplate the  
20 merger of the two units?

21 A. Part of the joint development agreement  
22 would include a commutization agreement. Then the  
23 overriding royalty owners would be required to sign.

24 Q. Then we have a difference of opinion. So  
25 your view is that it's just too tough to do a joint



1 development agreement because you have all these  
2 overrides out there that have to be consulted? Is  
3 that your testimony?

4 A. That's not my testimony.

5 Q. So your testimony is not that the presence  
6 of overrides would preclude a joint development  
7 between Concho and ConocoPhillips, correct?

8 A. If you come to an agreement and the  
9 parties agree to agree, we can make things happen.

10 Q. Thank you.

11 MS. LEACH: Would you admit my exhibit?

12 CHAIRWOMAN BAILEY: We will admit Exhibit

13 22.

14 (Note: Exhibit 22 admitted.)

15 CHAIRWOMAN BAILEY: You may be excused.

16 MS. LEACH: I call Ken Craig back very  
17 quickly.

18 KEN CRAIG

19 DIRECT EXAMINATION

20 BY MS. LEACH

21 Q. Mr. Craig, would you tell us what Exhibits  
22 23 and 24 are?

23 A. No. 23 is an in-house program that we use  
24 called PERC which allows us to track our daily  
25 activity on our well work.

1 Q. This is a record from a COG file?

2 A. Yes.

3 Q. What does it tell you about the well  
4 that's API 30-015-36263?

5 A. That would be the Burch Keely Unit 411?

6 Q. Right.

7 A. The activity appears that we went in to  
8 prepare the equipment failure and that as they were  
9 going down to clean out the well they tagged up at  
10 4511 and were unable to get below that depth. Later  
11 on in their comments after they had rerun the  
12 equipment, the comment is it was determined there  
13 was a cast iron bridge plug set at 4515.

14 Q. So then this well was plugged off at 4515;  
15 is that correct?

16 A. That's correct.

17 Q. And that would be above the area that  
18 we're calling the sliver; is that correct?

19 A. I believe that's right.

20 Q. And Exhibit 24, can you tell us what that  
21 is?

22 A. This is a sundry notice for Burch Keely  
23 Unit 411.

24 Q. And what does it tell us about Burch Keely  
25 Unit 411?

1           A.     In Line 13 is the completion operation  
2     detail and it will be on a day-by-day basis,  
3     sometimes not depending on the activity. It shows  
4     that the well, after rigging up -- after drilling  
5     the well, coming in and rigging up, drilling out, it  
6     shows the perforations and the stimulation and then,  
7     of course, the date that we ran the down-hole  
8     equipment in the hole.

9           Q.     So basically there was perforation, there  
10    was stimulation, but then there was a bridge plug  
11    put in. So was there ever production from the  
12    sliver area from this well?

13          A.     No, there was not.

14          Q.     So because there wasn't production from  
15    the sliver area, would it be a blue dot on the map  
16    that Mr. Broughton testified about?

17          A.     No, I would not put it as a blue dot.

18          Q.     Thank you. No further questions.

19                   CROSS-EXAMINATION

20           BY MR. CAMPBELL

21          Q.     When was the plug set, sir?

22          A.     The plug was set October -- I'm sorry, I  
23    have an E-mail that lets us know there was a cast  
24    iron bridge set at 4511.

25          Q.     My question is when was that set?

1 A. I believe October are 15th.

2 Q. Do you know why that is on the sundry  
3 notice?

4 A. I do not. That's something we need to  
5 fix.

6 Q. Should have been there?

7 A. Should have been there.

8 Q. Now, did Concho file the sundry notice or  
9 did Marbob?

10 A. I don't file these so I don't know whose  
11 office filed that.

12 Q. Well, you agree with me that the absence  
13 of the notice on the sundry order which should have  
14 been there stating a plug was placed, might have  
15 changed our perception of the sundry notice?

16 A. Yes, sir.

17 Q. And where on your Exhibit 23 do we see the  
18 plug was set?

19 A. You will not see it on Exhibit 23. This  
20 was work that was done in February of 2011.

21 Q. So if the plug is not shown to be set on  
22 either 23 or 24 -- am I correct with that?

23 A. Yes. Well, there's reference to the plug  
24 on 23.

25 Q. My question is where is the reference to

1 the plug on 23?

2 A. It was on the report date, February 16th,  
3 2011. It would be the last ten words of that  
4 paragraph.

5 Q. Why don't you read me where we are  
6 notified that a plug was set.

7 A. The plug was not set during this  
8 operation. They went in to repair an equipment  
9 failure and when they tried to get down they hit  
10 that plug.

11 Q. So we are assuming the plug was set  
12 sometime before February 16th, right?

13 A. Yes.

14 Q. They just don't know when, right?

15 A. I know when.

16 Q. That's my question. When was the plug  
17 set?

18 A. October 15th.

19 Q. It's not reflected on Exhibit 24?

20 A. That's correct.

21 Q. What is your data source for the plug  
22 being set on October 15th?

23 A. It would be the field reports that come  
24 in.

25 Q. Well, as I understood the thrust of the

1 two exhibits with your testimony was that a plug had  
2 been set in this well?

3 A. Yes.

4 Q. Well, that a plug had been set in this  
5 well is reflected in either Exhibit 23 or 24 other  
6 than the fact that by February 16th going downhole  
7 someone hit the plug. My question to you then was  
8 when was the plug set and you said October 15th.

9 A. Yes.

10 Q. My question to you is where is the  
11 document that says the plug was set October 15th?

12 A. I don't have that document.

13 Q. Is there a document?

14 A. I have an E-mail.

15 Q. But you didn't bring the E-mail with you?

16 A. No, sir.

17 Q. Who is the E-mail from and to?

18 A. It's from the completions representative  
19 we have to numerous people. I didn't get it  
20 personally. I asked for it today.

21 Q. Somebody told you there's an E-mail that  
22 establishes the plug being set October 15th?

23 A. Yes.

24 Q. And they also told you that there's an  
25 E-mail that proves that?

1 A. Yes.

2 Q. And you have seen the E-mail?

3 A. Yes.

4 Q. But you don't have it here with you?

5 A. I didn't print it out. I don't have the  
6 means to do that.

7 Q. Do you know the process that follows with  
8 respect to an ADP?

9 A. Somewhat.

10 Q. Do you know -- I mean, Concho has filed  
11 hundreds in the last few months, haven't they?

12 A. Yes.

13 Q. All you show on the ADP is the depth of  
14 the well, correct?

15 A. I believe that's correct.

16 Q. If the depth of the well is within the  
17 pool boundary, what protest would Conoco have to  
18 oppose the issuance of a permit to drill?

19 MS. LEACH: Seems to be beyond the scope  
20 of the rebuttal questions that were very limited in  
21 their scope.

22 CHAIRWOMAN BAILEY: I have to agree.

23 MR. CAMPBELL: You don't have to answer  
24 me.

25 THE WITNESS: Okay.

1 CHAIRWOMAN BAILEY: Do you have any other  
2 questions?

3 MR. CAMPBELL: No, ma'am. Thank you, sir.

4 CHAIRWOMAN BAILEY: Are there any  
5 questions from the Commission?

6 MS. LEACH: I move for admission of 23 and  
7 24, please.

8 CHAIRWOMAN BAILEY: Any objection?

9 MR. CAMPBELL: We would object on the lack  
10 of completeness relative to the testimony regarding  
11 the presence of a plug on October 15th. Neither of  
12 the documents establish that fact. They document  
13 one which apparently does but has not been tendered  
14 so we object to the admission of these two on the  
15 basis of incompleteness.

16 MS. LEACH: I just want these admitted for  
17 the basis of what they contain in that certainly by  
18 February there was a plug set at 4515 mark and he is  
19 exactly right, we don't have a document that covers  
20 exactly when the plug was in place.

21 CHAIRWOMAN BAILEY: So on the basis that  
22 it only reflects what it reflects, they will be  
23 accepted.

24 (Note: Exhibits 23 and 24 admitted.)

25 MR. BALCH: I have one question. Between



1     October and February was that well re-entered?

2                 THE WITNESS:   No.

3                 MR. BALCH:   No further questions.

4                 MR. DAWSON:   No questions.

5                 CHAIRWOMAN BAILEY:   You may be excused.

6     Any other witnesses?

7                 MS. LEACH:   No, I am happy to report.

8                 CHAIRWOMAN BAILEY:   Would you care to do a  
9     closing?

10                MS. LEACH:   Would you like a closing now?  
11     I promised you a two or three-minute closing.

12                         CLOSING STATEMENTS

13                 We are interested in having the sliver  
14     added at the bottom of the Burch Keely unit and the  
15     Grayburg-Jackson pool.   We believe we have met the  
16     requirements.   Everyone today has testified about  
17     this is all in the same pool.   There is no dispute  
18     that it's a common source of supply.   But the unit  
19     under the Statutory Unitization Act, there's a  
20     description of waste that goes beyond the definition  
21     of the Oil and Gas Act which specifically says that  
22     if the unit will help increase production, if  
23     including it will increase production, then  
24     basically that is a good reason to put lands in the  
25     unit because that prevents waste.

1           It's a broader definition than exists in  
2   the Oil and Gas Act which looks much more at  
3   dissipating the reservoir of energy. Since we are  
4   going to do findings and conclusions, I'm sure I can  
5   write more about that but I will reiterate that in  
6   making the statutory requirements for the units and  
7   pools, we met those burdens and what we have is  
8   diversion of focus of the fracturing case and I'm  
9   sure I said enough about that already today. Thank  
10   you.

11           CHAIRWOMAN BAILEY: Mr. Campbell?

12           MR. CAMPBELL: Ma'am chairman, there is no  
13   debate here that the 5,000 foot line is an  
14   artificial line designating only ownership and no  
15   geologic boundary barrier. We are faced with a  
16   rather unusual situation here.

17           The object of the Oil and Gas Act as  
18   statutorily charged is to prevent waste and protect  
19   correlative rights. We have demonstrated here that  
20   the most efficient, least wasteful, most protected  
21   method of correlative rights is to jointly develop  
22   this acreage. Mr. Broughton on the stand said yes,  
23   the best way to develop the Blinebry is to jointly  
24   develop it.

25           There has been no movement towards joint

1 development. We cannot force them to jointly  
2 develop it with us. This is not going to be a  
3 statutory unitization. Arguably, the Commission can  
4 force them to negotiate with us. We are exploring  
5 the prospect of some sort of vertical forced pooling  
6 to resolve this controversy. I don't know whether  
7 that will work, but I ask the Commission to consider  
8 in my opening pushing Concho to negotiate joint  
9 development here.

10 Their own expert, their engineering  
11 geologist, a highly qualified individual, said the  
12 best way to develop the resource with the least  
13 waste and the most protection of correlative rights  
14 is joint development. So the question is what  
15 should the Commission do if they won't force them.

16 We submit to you that the best way to do  
17 that and what the evidence compels is to deny these  
18 applications. Because to deny these applications  
19 will force them to negotiate a joint development of  
20 this resource to the benefit of everybody. It's all  
21 well and good that they want another sliver to get  
22 their rights and interests. It apparently doesn't  
23 matter to them that that will cause us to drill twin  
24 wells when we shouldn't have to do that. It is  
25 uneconomic for us to do it. It would be uneconomic

1 for them to do it if they were in our shoes, so how  
2 can you -- how can you push the parties towards  
3 negotiating what is the most efficient development  
4 of this resource.

5 We submit to you it is to deny these  
6 applications and make them recognize that the  
7 economics in the prospect of granted resources is  
8 enough to make them sit down. These agreements are  
9 negotiated all the time. It is the best way to do  
10 things here. It should not matter that Conoco has  
11 not yet begun development in the Grayburg Deep. If  
12 you grant the application and they want to capture  
13 reserves to 5,000 with their fracking mechanics they  
14 are going to intrude across the 5,000 line. And as  
15 a management responsibility, ConocoPhillips will  
16 have to respond, and a drilling war, expensive and  
17 wasteful, will ensue.

18 On that basis, we urge you to deny this  
19 application which will force Concho to negotiate in  
20 good faith with us. If you don't, the only thing we  
21 can do is to drill twin wells. This suggestion that  
22 we have the opportunity to protect our correlative  
23 rights by protesting every ADP is just nonsense. If  
24 they bottom-hole their well at 5499 inside the  
25 extended pool boundary, what basis do we have to

1 oppose it? What possible basis would the Commission  
2 have or the Division have to deny it?

3 No frack information is contained in ADP.  
4 We have no remedy here to protect ourselves in  
5 protesting ADP. It just doesn't work. So we urge  
6 you here. This is a difficult case. It's an  
7 important case because we do not want to have to go  
8 to war. The most efficient way to proceed here is  
9 jointly. These are responsible companies and the  
10 way to make Concho look at the issue differently  
11 rather than just their own issue to protect the  
12 correlative rights and prevent waste is to give some  
13 leverage relative to the refusal to negotiate. You  
14 do that by denying this application. Thank you all  
15 for your time and attention. Conoco appreciates it  
16 very much.

17 MS. LEACH: Thank you indeed.


18 CHAIRWOMAN BAILEY: And thank you. Please  
19 submit findings and a proposed order within two  
20 weeks so counsel will have an easier time drafting  
21 the order. We will meet tomorrow morning at 9:00  
22 o'clock to begin deliberations on this case and the  
23 remaining case on the docket for today. So this  
24 hearing is continued until tomorrow morning at 9:00  
25 o'clock.

1 (Note: The hearing was concluded at  
2 4:50.)  
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## REPORTER'S CERTIFICATE

I, JAN GIBSON, Certified Court Reporter for the State of New Mexico, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings and was reduced to printed form under my direct supervision.

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

  
\_\_\_\_\_  
JAN GIBSON, CCR-RPR-CRR  
New Mexico CCR No. 194  
License Expires: 12/31/11