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-EELY 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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INDEX

INDEX CONTINUED

EXHIBITS

INDEX CONTINUED

COG EXHIBITS CONTINUED ADMITTED

COP EXHIBITS

(Note: In session at 9:05.)

CHAIRWOMAN BAILEY: So now we have Case 14558, Application of Marbob Energy Corporation for Vertical Expansion of the Burch Keely Unit, Eddy County, New Mexico; and Case No. 14577, Application of the COG 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.

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

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

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

MR. DAWSON: I have no objection.

MR. BALCH: None.

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

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

CHAIRWOMAN BAILEY: Okay.

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

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

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

motion.

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

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

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

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

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

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

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

Mr. Bruce's argument.

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

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

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

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

MR. CAMPBELL: Yes, ma'am.

CHAIRWOMAN BAILEY: Is that representative?

MR. CAMPBELL: Yes, ma'am.

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

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

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

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

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

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

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

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

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

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

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

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

MR. BALCH: I will so move.

MR. DAWSON: I will second, yes.

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

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

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

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

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

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

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

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

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

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

In a later pleading Mr. Campbell first

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

CHAIRWOMAN BAILEY: Thank you.

MR. SMITH: Do you want to withdraw that?

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

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

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

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

pool in this case to give them protection from fracking.

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

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

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

industry.

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

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

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

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

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

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

feet and 5,000 feet is hereby denied."

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

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

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

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

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

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

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

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

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

MR. DAWSON: Yes, ma'am.

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

MR. BALCH: I will make the motion.

MR. DAWSON: I will second.

CHAIRWOMAN BAILEY: All in favor? All those opposed?

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

CHAIRWOMAN BAILEY: That was denied.

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

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

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

OPENING STATEMENTS

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

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

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

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

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

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

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

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

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

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

CHAIRWOMAN BAILEY: Mr. Campbell?

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

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

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

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

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

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

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

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

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

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

Testimony in this case will demonstrate

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

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

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

CHAIRWOMAN BAILEY: All right. Do you

want to call your first witness?

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

MR. CAMPBELL: Oh, absolutely, Carol.

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

DAVID R. EVANS

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

DIRECT EXAMINATION

BY MS. LEACH

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

A. David Ray Evans.

Q. And by whom are you employed?

A. COG Operating, LLC also known as Concho.

Q. For how long have you worked with them?

A. Nine months.
Q. What do you do for them?
A. I'm the lead for the New Mexico Shelf Team, which is kind of the manager over the landmen that work the shelf.
Q. What do landmen do for COG?
A. Landmen clear title, take leases, negotiate all kinds of items.
Q. Would you please give the Commission a brief summary of your education and training to be a landman?
A. I'm a University of Tulsa graduate of 1980, degree in science. I've taken extensive oil and gas courses throughout the 32 years, 28 years of Oxy out of Midland, two-and-a-half years with ConocoPhillips and the rest with Concho.
Q. We have two applications in this case before the Commission. One is for the unit expansion which is for the Burch Keely unit and the other is for the pool expansion, the Grayburg-Jackson pool. Are you familiar with those?
A. I am.
Q. Have you testified at division level hearings concerning these?
A. I did.

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

A. Yes, I was.

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

A. I have been.

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

MR. CAMPBELL: No objection.

CHAIRWOMAN BAILEY: His qualifications are accepted.

Q. What is the New Mexico shelf?

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

Q. Where is that?

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

Q. Talking about sections?

A. Yes.

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

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

Q. Is there another part to Exhibit 1?
A. Unit and the pool.
Q. These are both --
A. The Grayburg-Jackson expansion. Application for approval down to 5,000 feet.
Q. Why does COG want the application to be approved?
A. There's a sliver of formation between 250 feet to 500 feet to the west that was not brought in under our ownership, was not originally brought into the unit, nor was the pool vertically expanded. We are simply expanding the remaining depth that we own 100 percent into the unit so we can enjoy and produce the oil and gas that's there.
Q. How does having it as part of the same unit and pool facilitate production?
A. This increases the economic viability of the unit and the life of the unit, allows us to use the additional equipment, wellbores, facilities, disposal without having to go to a bunch of agreements between ourselves and it reduces the cost upon the Commission for all the commingling applications.
Q. I would ask you to look at Exhibit 2, please, and tell the Commission what that is.

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

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

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

Q. Who controls -- who owns the minerals?

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

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

A. The Bureau of Land Management, 100 percent.

Q. How many acres is there?

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

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

A. Currently there are 366 wells with 29 injections.

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

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

Q. To the 5,000 feet?

A. Yes.

Q. Who holds the leases in the expansion area?

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

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

A. Control 100 percent of the working interest.

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

A. That's correct.

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

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

Q. And could I get you to identify Exhibit 4

for the record, please.

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

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

A. Yes, it is.

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

A. Phillips Petroleum Company now known as ConocoPhillips.

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

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

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

A. Correct.

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

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

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

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

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

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

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

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

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

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

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

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

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

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CHAIRWOMAN BAILEY: Sustained.

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

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

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

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

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

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

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

A. Yes.

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

A. It does.

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

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

Q. And in terms of the unit agreement?

A. That's right.

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

A. Yes.

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

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

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

Q. And that the unit for secondary recovery?

A. Yes.

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

A. That is correct.

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

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

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

A. That's correct.

Q. And that's --

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

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

at that point. Is that still the case?

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

Q. We could just call it COG?

A. COG.

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

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

Q. So which was the lesser?

A. 5,000 feet.

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

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

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

A. Right.

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

A. That's correct.

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

A. Yes, that's right.

Q. Does the unit agreement allow for that extension?

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

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

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

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

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

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

A. We are.

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

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

Q. When was that?

A. That is in March 11, 1994.

Q. What expansion is that?

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

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

A. 500 feet.

Q. -- 500 feet into the Paddock?

A. Into the Paddock.

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

A. There was.

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

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

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

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

A. It was.

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

A. The incremental Blinebry and Paddock reserves are developed that are owned by Concho, they see a plus in that.

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

A. That's correct.

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

A. I'm sorry?

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

A. Yes, it does.

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

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

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

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

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

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

A. That's correct.

Q. Overriding royalty interests?

A. There are numerous overriding royalty owners.

Q. And the working interest is held by Concho?

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

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

A. No change would occur to any of the

mineral royalty or overriding royalty owners. No changes.

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

A. Okay.

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

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

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

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

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

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

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

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

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

Q. What depth does that go to?

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

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

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

A. Correct.

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

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

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

A. That's correct.

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

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

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

A. That's correct.

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

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

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

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

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

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

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

A. These are the 1950 orders granting pools

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

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

A. Correct.

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

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

Q. How was that prepared?

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

Q. Do you know Dean Chumley?

A. I do.

Q. Does he still work for COG?

A. He does.

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

A. I have.

Q. Do you believe this notice package meets

the requirements for notice under the OCD rules?

A. I do.

Q. If you could look at Exhibit 13, please. What's Exhibit 13?

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

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

A. Yes.

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

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

Q. And is there another affidavit in the package?

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

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

A. Four total.

Q. Why? What happened?

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

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

A. Yes, they were.

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

CHAIRWOMAN BAILEY: Any objection?

MR. CAMPBELL: No, ma'am chairman.

CHAIRWOMAN BAILEY: They are so admitted.

(Note: Exhibits 1 through 14 admitted.)

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

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

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

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

Q. That's a significant undertaking?

A. It is a significant undertaking.

Q. That would prevent the waste of that

resource; is that correct?

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

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

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

MS. LEACH: Pass the witness.

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

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

CROSS-EXAMINATION

BY MR. CAMPBELL

Q. Good morning, Mr. Evans.

A. Good morning.

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

A. That's correct.

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

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

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

is it not?

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

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

A. It's more like 4500.

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

A. I was one of two.

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

A. That's correct.

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

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

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

A. If that's what it says.

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

want.

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

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

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

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

A. Would you repeat the question again?

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

A. That's correct.

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

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

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

the pool definition?

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

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

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

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

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

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

A. We can drill below a unitized interval

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

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

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

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

A. Time. Time and money.

Q. I will try to let you --

A. Sorry.

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

A. I agree with that.

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

A. Absolutely.

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

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

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

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

A. Repeat the question.

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

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

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

A. Certainly. The least expensive.

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

A. I don't know how that happens.

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

A. I plan to be.

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

which I believe is Concho Exhibit 4 --

A. No, I believe it's 5.

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

A. Five.

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

A. That's correct.

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

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

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

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

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

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

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

A. I believe so.

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

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

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

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

Q. Slowing you down. Okay.

A. You have no interest in the property.

Q. In which property?

A. The Burch Keely unit.

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

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

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

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

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

Q. Were you working for ConocoPhillips then?

A. I do not know when that occurred.

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

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

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

CHAIRWOMAN BAILEY: Do we have any questions, Commissioners?

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

MS. LEACH: Yes.

MR. DAWSON: No questions.

CHAIRWOMAN BAILEY: Any rebuttal on the questions?

MS. LEACH: One redirect question to

clarify.

REDIRECT EXAMINATION

BY MS. LEACH

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

A. That's correct.

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

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

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

HARVIN BROUGHTON

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

DIRECT EXAMINATION

BY MS. LEACH

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

A. Harvin Broughton.

Q. Who do you work for?

A. Concho Resources, COG, LLC.

Q. What do you do for them?

A. I'm a geologist.

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

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

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

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

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

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

A. The Commission, yes, ma'am.

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

A. They were.

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

CHAIRWOMAN BAILEY: Any objection?

MR. CAMPBELL: No, ma'am.

CHAIRWOMAN BAILEY: So admitted.

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

A. I am.

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

A. Yes.

Q. And the Grayburg-Jackson pool?

A. Yes, ma'am.

Q. And the proposed extension, expansion vertically?

A. Yes, ma'am.

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

A. We do.

Q. Why do you want those?

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

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

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

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

A. No.

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

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

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

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

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

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

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

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

A. In the current Grayburg-Jackson pool is the Seven Rivers, the Queen, the Grayburg, the San Andres, the Glorietta, the Paddock and in places parts of the Blinebry.

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

not. Pardon me for confusing you.

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

Q. That's the 500 feet?

A. Yes, ma'am.

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

A. Yes, it does.

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

A. I'm sorry.

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

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

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

developed?

A. Yes. Yes, it will.

Q. Why is that?

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

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

A. That's correct.

Q. Is it wider in some other areas?

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

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

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

fall within what we call the Blinebry formation.

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

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

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

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

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

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

Q. Does it also reference in the case

creating the Burch Keely unit as a reference log?

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

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

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

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

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

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

Q. Are there common sources?

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

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

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

Q. What about the top of the Blinebry?

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

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

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

Q. Okay.

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

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

ownership number; is that correct?

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

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

A. Actually, I have.

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

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

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

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

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

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

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

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

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

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

if you were looking at the entire interval.

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

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

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

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

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

Q. So then the rock and the Blinebry changes

from well to well?

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

Q. So it could be very different --

A. Yes.

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

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

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

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

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

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

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

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

Burch Keely unit.

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

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

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

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

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

A. There are not.

Q. Why is that?

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

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

A. Yes.

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

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

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

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

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

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

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

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

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

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

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

Q. But they give us information?

A. Yes.

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

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

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

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

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

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

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

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

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

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

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

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

A. Yes, typically a fairly low porosity rock.
Q. Is there a number assigned to that?
A. Low is a relative term, but typically in the maximum of maybe 5 percent. We would complete down to 3 percent, but I mean a lot of it is between zero and 3 percent.
Q. So we have had testimony earlier, and I think from you, that we can't drill in the Blinebry without having the expansion included in the unit of the pool; is that correct?
A. I'm not a landman but my understanding is we can, yes.
Q. Do you think it makes more sense to include the Blinebry in the unit and the pool? The top portion, the sliver portion of the Blinebry pool?
A. I think it does. I mean, we would like to be completing this interval. We certainly think that it's creating waste, to use that term, if we are not allowed to.
Q. Do you use a vertical well to basically pick up from the Paddock and from the Blinebry down to the 5,000 foot mark?
A. Yes, we would drill a well to just shy of 5,000 feet and then we would complete upward from

that.

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

A. Yes.

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

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

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

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

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

here?

A. Right.

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

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

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

A. I do, yes.

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

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

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

A. Yes, ma'am.

Q. Were they prepared from basically the

records that you keep normally and allow in your business?

A. Yes, ma'am.

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

CHAIRWOMAN BAILEY: Any objections?

MR. CAMPBELL: No, ma'am.

CHAIRWOMAN BAILEY: They are so admitted.

(Note: Exhibits 15 through 19 admitted.)

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

CROSS-EXAMINATION

BY MR. CAMPBELL

Q. Good morning, Mr. Broughton.

A. Good morning, sir.

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

A. I was not, sir, no.

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

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

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

A. He is.

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

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

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

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

Q. Did you review any of it?

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

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

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

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

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

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

A. I will agree with that, yes.

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

difficulty with that testimony, would you?

A. I would hope not, no, sir.

Q. Could you retrieve Concho Exhibit 15, please.

A. Yes, sir, I have it.

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

A. Yes, sir.

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

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

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

A. That is true, yes, sir.

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

A. Less economic?

Q. Yes.

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

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

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

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

A. Right.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A. It depends on the arrangement of the terms

but it's possible that's true.

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

A. Then I will agree with you.

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

A. Yes, sir.

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

A. Yes, sir, that is correct.

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

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

Q. How far above 5,000 feet?

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

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

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

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

A. Section 18?

Q. Yes, sir.

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

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

A. No, sir, I would not.

Q. Would you know what a sundry notice is?

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

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

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

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

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

A. I will be glad to.

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

A. That's fine.

Q. Would you retrieve Concho Exhibit 18.

A. I have it.

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

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

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

A. That's correct. Yes, sir.

Q. And you operate that well?

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

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

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

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

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

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

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

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

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

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

A. Yes, sir.

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

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

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

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

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

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

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

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

Q. And you would have to drill?

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

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

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

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

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

Q. Well, prudent companies like Concho and

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

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

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

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

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

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

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

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

Q. Understood.

A. Okay.

Q. Your testimony was that this stippled

area --

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

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

A. Yes, the blue area.

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

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

Q. Does that contemplate any effect of fracking?

A. Excuse me?

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

A. No.

Q. I mean --

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

Q. I mean, you drilled some horizontal wells,

haven't you? Your company?

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

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

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

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

A. Not necessarily.

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

A. Absolutely.

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

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

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

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

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

A. Stipple.

Q. Stippled reserves here, would there not be?

A. Not necessarily.

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

A. I will do my best with that.

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

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

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

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

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

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

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

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

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

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

MR. CAMPBELL: I will after lunch.

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

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

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

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

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

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

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

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

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

A. The one that you handed out?

Q. Yes.

A. Yes, I do.

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

A. Okay.

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

A. I do.

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

below?

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

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

A. Yes, sir, I see that.

Q. Do you agree with that?

A. Yes, I do.

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

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

Mr. Reyes says, "Yes."

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

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

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

REDIRECT EXAMINATION

BY MS. LEACH

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

A. Yes, the Paddock and the Blinebry wells.

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

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

Q. How many that show completion?

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

Q. So --

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

Q. Thank you. Looking at Exhibit 17, there are a couple things I wanted to clarify. Mr. Campbell seemed very concerned over the right-hand well log and the thinness of the Blinebry there. Do you remember that conversation with him?

A. Yes, I do.

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

A. It is just east, yes.

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

A. Yes.

Q. Or a thinner part of the expansion area?

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

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

A. Yes, right.

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

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

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

A. That represents the actual perforations in

that wellbore; yes, ma'am.

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

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

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

A. Oh, absolutely.

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

A. Yes, ma'am.

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

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

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

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

Q. What else?

A. The gamma ray curve to see how clean it

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

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

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

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

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

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

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

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

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

Q. No further questions. Thank you.

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

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

CHAIRWOMAN BAILEY: Mr. Balch?

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

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

MR. BALCH: Approximately how much oil per well?

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

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

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

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

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

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

KEN CRAIG

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

DIRECT EXAMINATION

BY MS. LEACH

Q. Good afternoon, Mr. Craig.

A. Good afternoon.

Q. How are you?

A. Doing well.

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

A. Ken Craig.

Q. Where do you work?

A. For Concho.

Q. What do you do for Concho?

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

Q. And in that capacity have you worked on

the Burch Keely unit in Grayburg-Jackson pool?

A. Yes.

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

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

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

A. I have.

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

A. Yes, they were.

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

CHAIRWOMAN BAILEY: Any objection?

MR. CAMPBELL: No, ma'am.

CHAIRWOMAN BAILEY: He is so accepted.

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

A. Yes, I am.

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

A. We have.

Q. And what did you determine?

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

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

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

A. Yes.

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

A. Okay.

Q. Would you tell us what that is?

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

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

Since that time, we have also come up with

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

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

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

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

A. Yes.

Q. What is your development plan for this area?

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

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

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

A. Yes.

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

A. That was the target that we had.

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

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

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

A. No, we would not.

Q. Why is that?
A. If you were drilling from just the upper Blinebry alone, the economics would be very low.
Q. So if that were the case, then it would appear to be more likely that these reserves would be left on the ground; is that correct?
A. Yes.
Q. And if something has happened and you are not allowed to produce in the upper Blinebry, would that deny Concho's correlative rights?
A. Yes.
Q. So did you create Exhibits 20 and 21?
A. I did.
MS. LEACH: With that, I move the admission of Exhibits 20 and 21.
MR. CAMPBELL: No objection.
CHAIRWOMAN BAILEY: Admitted.
(Note: Exhibits 20 and 21 admitted.)
MS. LEACH: Pass the witness.

CROSS-EXAMINATION

BY MR. CAMPBELL
Q. I'm sorry, your name is Mr. Craig, right?
A. Yes, sir.
Q. Exhibit 20, do I sense from your testimony that this is not currently the plan of development

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

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

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

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

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

A. That's right.

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

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

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

A. I expect that we would.

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

A. Yes.

Q. Are you with me?

A. Yes, sir.

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

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

Q. One section?

A. Yeah, about a mile.

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

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

Q. You say you evaluated the sliver in

Exhibit 21?

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

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

A. In the Burch Keely, no.

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

A. No, sir, I did not.

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

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

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

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

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

5,000 feet.

A. Okay.

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

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

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

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

MR. CAMPBELL: Okay.

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

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

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

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

A. Okay.

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

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

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

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

Q. With twin wells?

A. Twin wells -- who would we twin?

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

A. They would be twin wells.

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

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

Q. You now switched to horizontal wells?

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

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

A. Okay.

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

A. No.

Q. What would you recommend?

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

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

A. I am not.

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

A. No, I'm not.

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

CHAIRWOMAN BAILEY: Does the Commission have any questions?

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

THE WITNESS: It's ten, sir.

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

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

CHAIRWOMAN BAILEY: Any other questions? Mr. Dawson?

MR. DAWSON: I have no questions.

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

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

CHAIRWOMAN BAILEY: The witness may be excused.

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

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

MR. CAMPBELL: ConocoPhillips calls Tom Scarborough.

TOM SCARBOROUGH

after having been first duly sworn under oath,

was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. CAMPBELL

Q. Please state your name for the commissioners.

A. My name is Tom Scarborough.

Q. What is your current position with ConocoPhillips?

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

Q. What is your educational background?

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

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

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

Q. Are you a certified landman?

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

Q. What are your current responsibilities for the company?

A. I am the landman responsible for all of

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

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

A. Yes.

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

CHAIRWOMAN BAILEY: Any objection?

MS. LEACH: No.

CHAIRWOMAN BAILEY: So recognized.

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

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

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

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

Q. Would you identify Exhibit 1?

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

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

Q. Would you identify Exhibit 2?

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

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

A. 1954.

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

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

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

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

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

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

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

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

A. Yes, it would.

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

A. Well, both units are covered by Federal Oil and Gas leases. They are the same gases --

Q. The Burch Keely and --

A. The Burch Keely and the Grayburg Deep unit are both covered by the same Federal Oil and Gas leases that were initiated in the time between the 1930s and the late 1940s. These leases cover all depths. Currently COG has the ownership rights above 5,000 rights in the Burch Keely unit. ConocoPhillips and its partners have the ownership rights below 5,000 feet in the Grayburg Deep unit. The royalty interests are the same throughout all

formations. The overrides vary slightly in the Burch Keely unit as opposed to the Grayburg Deep unit.

Q. Would you identify Exhibit 3?

A. Exhibit 3 is my graph detailing various parties in the Burch Keely and the Grayburg Deep unit. I broke it out to show the different ownership above 5,000 feet and below 5,000 feet. It does reflect the federal leases and the royalty rights and they are all the same in both above and below the 5,000 feet.

Q. Would you identify and explain Exhibit 4.

A. Exhibit 4 is an unsolicited offer from Marbob in 1992 to acquire Phillips' interest from the surface down to 5,000 feet.

Q. Were you aware of any effort by Concho to purchase Conoco's interest below 5,000 feet?

A. I'm not aware of an effort, no.

Q. What is Exhibit 5, Mr. Scarborough?

A. Exhibit 5 is a letter by ConocoPhillips to COG June 3, 2011 which proposed certain discussion points around a joint development agreement. It was an introductory letter to begin discussions, conversations to hopefully arrive at a means to jointly develop the Yeso formation across the Burch

Keely and Grayburg units.

Q. To your knowledge, has Concho responded to the letter?

A. We have received no response to the letter.

Q. Why, in your opinion, is joint development necessary in the area encompassed by the applications?

A. Well, in our view, the Yeso formation is continuous. It's both above 5,000 feet and below 5,000 feet, and the marker was set in the prior agreement. We believe that anything less than a joint development arrangement would create unnecessary wells being drilled, constitute waste and would impair our correlative rights if the application were approved.

Q. In your view, would a grant of Concho's application result in the prevention of waste and the protection of correlative rights?

A. No, not at all.

Q. Why not?

A. The ownership interests of Conoco and our partners directly below 5,000 feet is clearly a part of the Yeso formation. It's one formation. There's no distinction at 5,000 feet. Our only recourse

would be to drill a twin well to protect our correlative rights, which would result in waste.

MR. CAMPBELL: Ma'am chairman, we move the admission of Conoco Exhibits 1 through 5.

CHAIRWOMAN BAILEY: Any objection?

MS. LEACH: I have an objection to 2 because I think it stops abruptly at Page 12 and it's not clear to me who the parties are. I think the points you wanted to make were probably made without the document.

MR. CAMPBELL: We were only referring to Paragraph 3, which is attached. I mean, if you find it necessary that you think there's cross-examination on the basis of the pages missing.

MS. LEACH: I don't know because I haven't seen them so we can't agree to its admission.

MR. CAMPBELL: We move its admission.

MS. LEACH: I object to its admission because it's not a complete document so it's a little difficult to say what exactly it is or who it applies to.

CHAIRWOMAN BAILEY: Talking about the unit agreement for the development and operation of Grayburg Deep unit?

MS. LEACH: Yes.

CHAIRWOMAN BAILEY: Which has 12 pages consecutively but not the remainder of the document.

MS. LEACH: Right. You can't tell if it was ever signed.

CHAIRWOMAN BAILEY: I have to agree with you that it is not a complete document and we should exclude this.

MS. LEACH: Thank you.

MR. CAMPBELL: Are the rest are admitted, Madam Chairwoman?

CHAIRWOMAN BAILEY: No objections to the rest. Yes, they are admitted.

(Note: Exhibits 1, 3, 4 and 5 admitted.)

MR. CAMPBELL: Pass the witness.

CROSS-EXAMINATION

BY MS. LEACH

Q. Well, Mr. Scarborough, I'm Carol Leach. I represent Concho or COG Operating. Nice to meet you.

A. Nice to meet you.

Q. I have a couple questions about the documents that have been admitted. We may as well start with the first one. I believe you testified that this is a portrayal of the Burch Keely unit and the Grayburg Deep unit; is that correct?

A. Yes, I did.

Q. And this, to the best of your knowledge, is an accurate and complete document?

A. According to the records, yes, it is.

Q. And it's current as of the date of June 28, 2011?

A. Yes.

Q. And that's when we originally thought this hearing was going to take place? That's why it's dated that date?

A. Yes.

Q. Now, what's confusing to me is comparing that document with your Exhibit 5. If you could do that, please. In the Paragraph 1 with the No. 1 with the closing parentheses, it says the Grayburg Deep unit is 2534.22 acres. In your Exhibit 1 it says the Grayburg Deep unit is 5484.17 acres. So that's a significant discrepancy, isn't it?

A. It is.

Q. Thank you. So there's a problem with one of these documents. They are in conflict to some extent, aren't they?

A. The Grayburg Deep unit was contracted by the BLM.

Q. But you didn't show the contraction in

Exhibit 1 that you just gave the Commission, did you?

A. I did not.

Q. You provided in Exhibit 3 a listing of the ownership in the Grayburg Deep unit as compared with the Burch Keely unit; is that correct?

A. That's correct.

Q. I'm going to show you a document. I think we will put stickers on it so it will take me a minute. Would you like to take a break?

CHAIRWOMAN BAILEY: We will take a ten-minute break and return at five after 2:00.

(Note: The hearing stood in recess at 1:55 to 2:05.)

Q (By Ms. Leach) We were talking about Exhibit 3 that details the ownership of the parties involved in the Burch Keely unit and the Grayburg Deep unit; is that correct?

A. Yes, ma'am.

Q. That's not really all the people that are involved in the unit, is it?

A. We did not include the overriding royalty owners.

Q. Let me show you -- and I believe this is in the nature of a rebuttal exhibit so it was not

part of what was originally introduced. Have you had a chance to look at it, Mr. Scarborough?

A. Yes.

Q. I represent to you that the document was prepared by COG and it is listing of the Burch Keely overriding royalty ownership and the Grayburg Deep overriding ownership, and the highlighted areas show the common ownership. My question to you is would all these people have to be involved if you were going to combine the two units, as has been suggested?

A. What do you mean exactly by combine the two units?

Q. Your joint development agreement, approve the joint development agreement? I'm not exactly sure what Conoco's proposal is, if there was one.

A. Our letter was to initiate discussions about the best way.

Q. If you are going to jointly develop it would you have to have the approval of the interest royalty owners including the overriding royalty owners?

A. Yes, you would.

Q. And that would take basically the participation of the people listed on this and the

people listed on your Exhibit 3; is that correct?

A. If you were to form a new unit, you would have to have the appropriate percentage of owners execute and ratify a new unit agreement.

Q. And most of the ownership indicated in the white areas basically indicate those are ones that are not in common between the two units. So the majority of the owners are not owners in both units, are they?

A. Well, taking what you've prepared and presented, it does appear that there are ownership differences in the overriding royalty of the units.

MS. LEACH: I would probably have to call a witness to lay the foundation so we will not move admission at this time, but we will come back to it.

Q. Going back to your documents, let's look at Exhibit 5 again. I believe at least in the opening statements Mr. Campbell said that the Conoco had made an offer, a proposal to Concho and heard nothing back. Would your testimony agree with that statement?

A. ConocoPhillips made a proposal to initiate discussions.

Q. But what of the proposal exactly -- for the operating agreement that was a proposal to start

discussions; is that correct?

A. That's correct.

Q. As far as you know, there of his no response back to Conoco?

A. As far as I know.

Q. Would you be aware if there was a response back from Concho, say, to your legal counsel?

A. Our legal counsel is very aware of this action and had they received a proposal back from COG we would have heard that.

Q. What if COG contacted your legal counsel and had a telephone conversation with your legal counsel. Would you have been informed of that?

A. I'm aware of that, yes.

Q. You are aware of that? You are aware that happened?

A. I'm aware that there was a conversation.

Q. Was that about the possibilities of meeting about your joint development plan?

A. I was not privy to that conversation.

Q. But you were informed the conversation took place?

A. Yes, ma'am.

Q. And do you know what the nature of the conversation was at all?

A. I don't have any of the details.
Q. Do you know what the topic of the conversation was?
A. I don't know.
Q. Do you know even if it addressed the Burch Keely unit at all?
A. No. I was not informed of that conversation. I don't know.
Q. But yet you knew a conversation took place between counsel from Concho and counsel for Conoco?
A. Yes. I know of it but I don't know what the contents of the conversation was.
Q. If that conversation included some discussion of the Burch Keely unit or the Grayburg Deep unit, then that might be a response of some sort to the request for meeting --
MR. CAMPBELL: Object to the form of the question. It's vague, calls for speculation.
CHAIRWOMAN BAILEY: Would you care to reword that?
Q. Sure. I would be happy to do that. Basically, if counsel talked about the possibilities of considering a meeting or a possible proposal for joint development agreement, you wouldn't know anything about that, would you?

A. I do not know if that was the topic of discussion.

Q. Thank you. Are you aware of a discussion about the possibility of a confidentiality agreement needing to be in place before communications could take place about the suggestion in Exhibit 5 that there be a meeting?

A. Yes, I am.

Q. So there was at least a response that talked about the need for a confidentiality agreement?

A. Yes, there was.

Q. Was a confidentiality agreement ever entered into?

A. No, ma'am.

Q. So it's really not fair to say there was no response to Exhibit 5, is it? Is it fair to say there was no response to Exhibit 5?

A. If by the discussion of the confidentiality agreement you mean a response, then no, there was no written response to our written letter.

Q. But there are other kinds of responses that talked about a confidentiality agreement that you are aware of, aren't you?

A. Yes, ma'am.

Q. You are proposing joint development between the Grayburg Deep unit and the Burch Keely unit; is that correct?

A. Yes, ma'am.

Q. And do you think not having the area we are calling the sliver in the unit, is that going to help or hurt the possibility of working out some sort of joint arrangement?

A. It's our view that the entire Yeso column which would include the sliver should be a part of the Burch Keely unit.

Q. Would it be a part of the Burch Keely unit?

A. I'm going to have to say it would at this time as a part of the Yeso.

Q. So it would be helpful to have the expansion area considered a part of the Burch Keely unit if you were going to work out a joint development agreement?

A. Only if we were able to work out a joint development agreement. If not, the parties would have to drill their own wells, which would result in waste.

Q. You expect the Commission to order Concho

to work out a joint development agreement with Conoco?

A. I'm not sure that it's in the Commission's right to order the parties to do any kind of agreement.

MR. CAMPBELL: Could I ask you to keep your voice up a little bit?

Q. So what does Conoco gain by not having the expansion include in the Burch Keely unit? If it doesn't help you move towards joint development, what do you get from having the unit expansion denied?

A. Can you repeat the question?

Q. Sure. What do you get -- what does Conoco get by asking that the expansion of the unit be denied?

A. If the proposal is approved, then our correlative rights suffer unless a twin well is drilled which would result in waste.

Q. Why do you say that?

A. Because we feel that the Yeso is a continuous column up above and below 5,000 feet.

Q. If it is, why does that impact your correlative rights? What are you concerned about?

A. We would have to drill a twin well to

protect our correlative rights, which would result in waste.

Q. If there was a well in the unit and the well was proposed with an application for a permit to drill and you knew where the well was going to be and how deep it was going to be, why couldn't you just protest that application for a permit to drill?

A. Certainly that would be one way to do it.

Q. So then denying the expansion is not the only way you can protect your correlative rights, is it?

A. It would be a protest option.

Q. And that would let you look at each well specifically, wouldn't it?

A. It would.

Q. No further questions.

CHAIRWOMAN BAILEY: Does the Commission have any questions? Mr. Dawson, do you have any questions?

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

CHAIRWOMAN BAILEY: Dr. Balch?

MR. BALCH: No questions.

CHAIRWOMAN BAILEY: I do. The Grayburg Deep is an exploratory unit or a water flood?

THE WITNESS: It was an exploratory unit.

CHAIRWOMAN BAILEY: The sliver in question could not be statutorily unitized, could it? Since it would not be a water flood unit that would be formed which would include the sliver? That was poorly asked. The discussions concerning joint development, which would include the sliver, that joint agreement cannot be statutorily unitized by this Commission; isn't that correct?

THE WITNESS: I believe so, yes.

CHAIRWOMAN BAILEY: So the only discussions for a combined development of any area which would include the sliver would have to be through voluntary agreements between the two companies; isn't that correct?

THE WITNESS: Yes.

CHAIRWOMAN BAILEY: How many wells has the Grayburg Deep unit drilled that include the portion of the Blinebry below 5,000 feet?

THE WITNESS: We do not have any wells in Grayburg Deep currently in that formation. All of our wells are deeper, 8 to 11,000 foot wells.

CHAIRWOMAN BAILEY: So any claims that correlative rights for the Blinebry formation should take into account that the Grayburg Deep unit has not even attempted to produce from the formation?

A. We have been looking at the Yeso formation and in turn we are gathering data. We do not have the Yeso well on the current drilling program.

CHAIRWOMAN BAILEY: Those are all the questions I have. Do you have any redirect?

REDIRECT EXAMINATION

BY MR. CAMPBELL

Q. Ms. Leach's suggestion that we can protect correlative rights by protesting APDs Mr. Scarborough, do the APDs list frack information?

A. No, they do not.

Q. Do they show where the perfs are?

A. They do not.

Q. So just protesting an ADP would not have the ability to protest based upon the depth of the perfs or the frack model to be employed, would it?

A. Yes.

Q. This as yet untendered Exhibit 22 showing lack of commonality among overriding royalty owners, your testimony was that the overrides would have to be consulted only with respect to a joint development that combined the Burch Keely and the Grayburg Deep unit, correct?

A. Yes. Anything that would form a new unit with approval by the BLM would require the approval

of the owners.

Q. But a joint development effort does not necessarily have to reform the unit that is already formed, is it?

A. It does not.

Q. So a joint development could occur without the threatened burden of consent by overrides?

A. Absolutely.

MR. CAMPBELL: Ma'am Examiner, I have obtained a full copy of Exhibit 2, the complete agreement. I showed it to Ms. Leach and she would have no objection to re-tendering it for the record. I only have one copy though. I'm not going to ask any more questions on it, so I would like to retender the complete copy of COP Exhibit 2.

CHAIRWOMAN BAILEY: We will accept it at this time with the copies to be brought and stand in for the normal distribution. So now you would like to tender Exhibit 2?

MR. CAMPBELL: Yes.

MS. LEACH: No objection.

CHAIRWOMAN BAILEY: Exhibit 2 is accepted.

MR. CAMPBELL: May I approach? Who gets the copy? We will give it to the court reporter.

(Note: COP Exhibit 2 admitted.)

MR. CAMPBELL: No further questions.

CHAIRWOMAN BAILEY: This witness may be excused.

MR. CAMPBELL: We call Charles E. Angerman.

CHARLES ANGERMAN

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

DIRECT EXAMINATION

BY MR. CAMPBELL

Q. Please state your name.

A. Charles Angerman.

Q. What's your current position with ConocoPhillips?

A. I'm a senior geologist in the Permian Southeast New Mexico Development Team.

Q. What's your educational background?

A. In 2002 I received a BA in geology from Miami University in Oxford, Ohio. In 2006 I received a master's degree in geoscience from Penn State University.

Q. Did you go to work for Conoco immediately?

A. Yes. I started in 2006. I initially worked on some of the company's assets in North Louisiana. I joined the permian team in September

of 2008 and I have been there ever since.

Q. What are your current responsibilities for the company?

A. I support onshore development drilling programs in the Yeso and Grayburg San Andres formations in the Permian Basin in Southeast New Mexico. I conduct geological studies, interpret logs, choose completion intervals and wells, I support planning and front end loading of development programs for the company. In that work I have studied the Yeso extensively.

Q. Have your credentials as a geologist been previously recognized by the Commission?

A. Yes.

MR. CAMPBELL: I move the recognition of Mr. Angerman as an expert in geology.

MS. LEACH: No objection.

CHAIRWOMAN BAILEY: So admitted.

Q. Mr. Angerman, what is the purpose of your testimony today?

A. My object is to, one, demonstrate the consistency of the Yeso group over the area encompassed in Concho's applications; two, demonstrate the 5,000 demarcation point referenced by those applications is artificial and not

geologic; and three, demonstrate that the grant of those applications would effect waste and result in the impairment of ConocoPhillips' correlative rights.

Q. Have you prepared certain exhibits to demonstrate your testimony?

A. Yes, I prepared Exhibits 6 through 10.

Q. Could you examine and explain Exhibit 6?

A. This shows a portion of an interpreted well log from a well that falls within the geographic area of the Burch Keely unit and Grayburg Deep unit. It's the Grayburg Deep unit. It illustrates the general geology of the Yeso formation and the Paddock and Blinebry.

Q. What conclusions do you draw from Conoco Exhibit 6?

A. The Paddock and Blinebry members are primarily dolomite with minor sandstones and minor anhydrite. They are productive across the northwest shelf. Operators typically drill through both the Paddock and the Blinebry, complete both formations and produce them together as Mr. Broughton referenced.

Q. What is Conoco Exhibit 7?

A. This is an exhibit that was originally

submitted by Concho. It's a map showing development of the Yeso and the Burch Keely unit in the immediately adjacent area.

Q. Did you hear the Concho witnesses testify that as of the date of this map, which I think was portrayed to be January 4 of 2011, that they had completed no wells in the Blinebry?

A. Yes, I did hear that.

Q. Have you investigated certain facts relative to that assertion?

A. Yes.

Q. Did you locate a sundry notice and report on wells submitted to the Bureau of Land Management by Concho, Debbie Wilborne, on October 8, 2010?

A. I located a sundry notice. My understanding was that it was submitted to the N.M. OCD.

Q. But it was submitted presumably on October the 8th, 2010?

A. If I can find the date here.

Q. Right under the heading Authorized Representative.

A. Yes, October 8, 2010.

Q. Does this sundry notice --

MS. LEACH: Objection. He is testifying

clearly from a document that we haven't seen. It was not in your exhibits and it doesn't seem to be available now for the rest of us to look at.

MR. CAMPBELL: You are welcome to see it.

MS. LEACH: I really think it's one that we are going to have to have the argument again about not including it in the prehearing statement.

MR. CAMPBELL: You didn't identify your exhibits in the prehearing statement. You are going to object to this filing that your company made on the grounds that it wasn't in the prehearing exhibits. I'm not going to introduce it as an exhibit. I'm going to use it to refresh his recollection as to what he found when he looked in the records. You are welcome to have a copy if you would like.

MS. LEACH: I would like a copy.

MR. CAMPBELL: I don't intend to introduce it. The Commissioners are certainly -- if you would like a copy, I will give you a copy.

CHAIRWOMAN BAILEY: If he is going to testify to it, I would like to see what he is testifying from.

Q. Does this sundry notice, Mr. Angerman, state that Concho, with respect to Burch Keely unit

411 well drilled to a total depth on September 26, 2010 of 5100 feet?

A. Yes, it does, in Section 13 of this sundry notice.

Q. Do you know the status of the orders of the Division below as to the extension of the Grayburg-Jackson pool and the Burch Keely unit in September of 2010?

A. I do not recall the exact status at that date.

Q. Exhibit No. 2, Concho Exhibit 2 reflects the division order extending the Burch Keely unit was not issued until January 31, 2011. Can you confirm then that Concho drilled this well to 5100 feet approximately three months before the division issued its order extending the unit?

A. Yes.

Q. Have you also discovered in your search of records recently that Concho fracked this well to a depth of 4975 feet in October of 2010?

A. Yes. An additional sundry notice dated December 16, 2010 documents this.

MS. LEACH: Same objection. I don't have it and the Commission doesn't have it.

MR. CAMPBELL: May I approach? I am

helping the witness reflect and refresh on what investigation he made on recent records. Ms. Leach demanded I produce the document.

MS. LEACH: If you are refreshing, shouldn't you ask first whether he needs help refreshing his memory.

CHAIRWOMAN BAILEY: There's no foundation at this time.

Q. You made an investigation with respect to recent drilling activities of Concho below 5,000 feet?

A. The initial intent of the investigation was to learn the status of any pending permits that would involve perforating within what we have been referring to as the sliver. The intent was to know where Concho intended to perforate and frack within the sliver so we would know if we needed to drill twin wells to defend our assets below 5,000 feet, where we would first need to first drill those twin wells.

While looking for the permits, I found evidence that this well had been drilled to a depth of 5100 feet and subsequently perforated and fracked within the sliver.

Q. How far above the 5,000-foot line did

Concho perf and frack this well in October of 2010?

A. The sundry notice states that on October 6, 2010 the lower boundary was perforated from 4789 to --

MS. LEACH: Objection. He is testifying from a document that we don't have.

MR. CAMPBELL: May I approach?

A. Should I continue to answer the question?

MR. CAMPBELL: I don't know yet. Let me try this. We would move for the admission of Conoco Exhibits 18 and 19.

CHAIRWOMAN BAILEY: Any objection?

MS. LEACH: Yes, there is an objection. These were not included as part of exhibits to be submitted with the prehearing statement which is required by the rules of New Mexico OCD and, therefore, I would ask you to not allow him to use the exhibits because basically there's no reasons given for them being introduced. Apparently they were OCD records so I can't understand why they were not produced.

MR. CAMPBELL: May I respond?

CHAIRWOMAN BAILEY: Yes.

MR. CAMPBELL: This hearing has been postponed once.

Q. When did you find the documents?

A. Monday afternoon of this week. That would have been July 25th.

Q. And the purpose of your search?

A. To provide my supervisor with the location of pending permits for Concho wells that would involve perforating within the sliver so we could know if we needed to drill wells to twin the wells to defend our assets, where would we need to drill the wells.

Q. Would this 411 well that Concho drilled indicate this is an area you would now have to drill to defend your assets?

MS. LEACH: I thought we were talking about the document itself. I think what he is expecting us to say is, "Gee, they didn't get around to investigating this until after it was identified as an exhibit and for that reason they should be allowed to introduce it now." I don't think that meets the rules or the spirit of the rules.

CHAIRWOMAN BAILEY: We will have to exclude the documents.

Q. The documents have been excluded. Nevertheless, your investigation as testified to by you discovered that Concho drilled a well below

5,000 feet and fracked it 25 feet above the ownership demarcation; is that correct?

A. Yes, but it's actually 37 feet, because I believe that the perf depths will be reference to the Kelly Bushing whereas the 5,000-foot boundary is reference to surface elevation or ground level. When I looked at the logs for this particular well on the N.M. OCD website, they listed a Kelly Bushing elevation of 12 feet above ground level so it's an additional 12 feet.

Q. So it would appear that the Concho exhibit that you have reflected as Conoco Exhibit 7 should have had, if it was made January 2011, should have had a blue dot inside the Burch Keely unit, correct?

A. The updated version of this exhibit that Concho has provided today should have. I believe that the exhibit that we made for COP Exhibit 7 was an earlier version of their map.

Q. Well, none of their maps have a purple dot in the Burch Keely, do they?

A. Correct. Neither map has a blue dot there.

Q. And it would appear both should have, right?

A. Correct.

Q. I note in Exhibit 7 there's a cross-section line A to A prime. What is that meant to illustrate?

A. This is a cross-section that was initially submitted by Concho. The A to A prime on this exhibit shows the location of the wells in that cross-section.

Q. And you have shown that A to A prime cross-section on a Conoco Exhibit 8, correct?

A. Yes. Before we move on, there's one more conclusion I need to state regarding the previous exhibit. The lack of Blinebry development shown within the Burch Keely unit on this map also corresponds to a lack of Blinebry development in the underlying Grayburg Deep unit. One of the reasons contributing to that lack of Blinebry development is an issue of stranded reserves. I will illustrate this issue with a later exhibit.

Q. This is the same cross-section map that Concho utilized this morning, is it not?

A. Yes.

Q. What conclusions do you draw from this exhibit?

A. The Yeso group, both the Paddock and the Blinebry members, are generally consistent across

the Burch Keely unit. In this exhibit, the total thickness of the Paddock and Blinebry is relatively constant from west to east across the unit. You can see that there is some variation in the proportion of the Yeso above 5,000 versus below 5,000, but in this cross-section that variation is not dramatic.

Q. And this was the Concho exhibit?

A. Yes.

Q. And have you applied a different cross-section within the Burch Keely unit?

A. Yes, I have.

Q. And would that be Conoco Exhibit 9?

A. Yes, this is Exhibit No. 9.

Q. Could you explain this exhibit to the commissioners?

A. This is a cross-section that runs in a roughly perpendicular direction to the cross-section we just looked at. In the inset map on the slide there's a blue dashed line B to B prime. That shows the location of the cross-section. On the left-hand side, that well is in the northwest. On the right-hand side of the screen, that well is in the southeast.

Q. What conclusions have you drawn from Conoco Exhibit 9 which takes the cross-section from

the northwest to the southeast rather than from the west to the east?

A. First, we can see that the 5,000 foot boundary demarcating the Grayburg Deep unit below from the expanded Burch Keely unit and Grayburg-Jackson pool above does not correspond to any geologic division. I shaded the thickness of the Paddock formation on this slide in purple. Below that I shaded the thickness of the Blinebry in an orange color. You can see that the 5,000 foot boundary, which is the division between those red arrows pointing upward above for the Burch Keely unit and the green pointing below for the Grayburg Deep unit, that boundary does not correspond to any geologic division or change.

Another important conclusion from this slide is that as you move from the northwest to the southeast, while the thickness of the Paddock does not vary significantly, the thickness of the underlying Blinebry, the orange shaded section, varies significantly. It thickens dramatically to the southeast, and this results in a significant change in the proportion of the Blinebry Paddock thickness that lies above 5,000 feet relative to the portion that's below 5,000 feet.

With the current demarcation at 5,000 feet, the only way to develop the full thickness of the Paddock and Blinebry is with separate development above 5,000 feet and below 5,000 feet. This actually leads to an issue of stranded reserves.

If we look to the southeast on the right-hand side of the cross-section, you can see that the Paddock and the portion of the Yeso that are above 5,000 feet get very thin. The Yeso actually begins to cut into the Paddock towards the southeast -- or excuse me, the 5,000-foot boundary cuts into the Paddock to the southeast. This means there's a reduced thickness of the Paddock or the Yeso in the southeast above 5,000 feet.

We would expect a well in the Burch Keely unit and the Grayburg-Jackson pool that targets the Yeso to have poor economics in this region because there's less thickness available to produce so there's not an incentive. There's a reduced incentive for an operator to drill a Burch Keely and a Grayburg-Jackson well this that location.

Likewise, if we look below the 5,000 foot boundary in the Grayburg Deep unit, if we look at the left-hand side of the cross-section in the

northwestern area of the unit, there's a reduced thickness of Blinebry that's below 5,000 feet. We would expect a Grayburg Deep unit well targeting the Blinebry to have poor economics in this area. There's reduced incentive for an operator to drill a Blinebry well in the area so this separate development leads to an issue of stranded reserves in the Grayburg Deep pool to the northwest.

You can see that I have marked on this cross-section the previous base of the Burch Keely unit and the Grayburg-Jackson pool prior to this application to expand them down to 5,000 feet. That's a heavy brown line that's just below the purple shaded area of the Paddock. It may be difficult to see. It says "previous base of BKU."

So between that line and the 5,000-foot boundary is what we have been referring to as the sliver. In the southeast, the sliver pinches out and goes to nothing as that 500 feet below the top of Paddock previous boundary collides with the 5,000-foot boundary that's been applied for.

So even with the grant of these applications, it's not doing anything to improve the economics of the Yeso well targeting the Paddock in the Burch Keely unit in the southeastern part of the

unit.

There is also an issue of impairment of correlative rights if these applications are granted. If Concho is permitted to complete in the Paddock and Blinebry all the way down to 5,000 feet, if they perforate and initiate a hydraulic fracture just above 5,000 feet, because there's no geologic boundary or change corresponding to the 5,000-foot boundary there's nothing that we would expect to stop the fracture from growing downward into the Grayburg Deep unit and draining reserves that are not part of the Burch Keely unit or Grayburg-Jackson pool. My colleague will elaborate on this during his testimony.

Regarding the dramatic thickening of the section as we move to the southeast, my colleague, Kim Head, will elaborate on this during his testimony.

In the current separate development above 5,000 and below 5,000 scenario, in order to develop the full thickness of the formation at any given location, one wellbore is required to produce the Yeso above 5,000 feet. A second twin well, as we discussed, is required to produce the portion of the formation that's below 5,000 feet. As I pointed

out, there may be areas in the southeast where there's not sufficient incentive for an operator in the Burch Keely unit/Grayburg-Jackson pool to drill the well there. There may be areas in the northwest where there is not sufficient incentive for an operator in the Grayburg Deep unit to drill the well there.

For these reasons, ConocoPhillips believes that the most efficient way to produce the entire thickness of the formation, which is what's happening elsewhere across the shelf -- operators are drilling through the Paddock and Blinebry and producing it all together, as Mr. Broughton mentioned -- is to enter into some sort of joint development agreement that allows a single wellbore to penetrate the full thickness of the Paddock/Blinebry in this area and produce it all.

Q. What is Exhibit 10?

A. Exhibit 10 is a map that I prepared showing the thickness of the Paddock that falls below 5,000 feet. It shows the same geographic sections of the cross-section as the previous slide. The color shaded contours show the thickness of Paddock below 5,000 feet. In the areas where it's white or blank, that's because none of the Paddock

falls below 5,000 feet. You can see hat in the far southeastern portion of the Burch Keely unit, the Paddock below 5,000 feet reaches a thickness up to 250 feet so that's up to 250 feet of Paddock that is not available to Concho to be developed even if the applications are granted.

Q. Can you provide the commissioners with your opinion whether the grant of Concho's application will prevent waste and protect correlative rights?

A. To the contrary. I believe the grant of these applications will effect waste in the form of stranded reserves in the Burch Keely unit, the Grayburg-Jackson pool, in the southeastern part of the unit and in the Grayburg Deep unit in the northwestern part of the unit. It will result in the impairment of correlative rights in the form of unrestricted fractured growth across the arbitrary 5,000-foot boundary and it will result in the drilling of additional wells in order to target and produce the entire thickness of the Paddock and Blinebry.

MR. CAMPBELL: Ma'am Chairwoman, we move the admission of Conoco Exhibits 6 through 10.

CHAIRWOMAN BAILEY: Any objection?

MS. LEACH: No.

CHAIRWOMAN BAILEY: So admitted.

(Note: COP Exhibits 6 through 10 admitted.)

MR. CAMPBELL: Thank you. That's all I have.

CROSS-EXAMINATION

BY MS. LEACH

Q. Good afternoon. I'm Carol Leach. I am counsel for Concho today and I have a couple questions for you. Starting with the exhibit before this one that has the inset down here, I don't know if you have it in front of you or if we need to pull it up again, but when we started with the chart a while ago we had this map. Do you recall seeing that? It is Grayburg Deep unit and the Burch Keely unit COP Exhibit 1. Do you remember this?

A. Yes.

Q. And we basically ascertained that this was not an accurate map of the Grayburg Deep unit. Do you recall that testimony?

A. I recall that testimony.

Q. And I believe that same map is now showing up on your Exhibit 9; is that correct?

A. Yes, the same boundaries presented on that

exhibit are presented to this exhibit.

Q. It's still the same incorrect boundaries; is that correct?

A. It's the same boundaries.

Q. They are not correct or are you disputing what Mr. Scarborough said?

A. I'm not disputing.

Q. So we continue to show the Commission incorrect information; is that right?

A. Yes, this is the same incorrect information presented before.

Q. Thank you. Okay. You basically were talking about part of your job is working with the capital budget and planning future drilling; is that correct?

A. I provide geologic input. I am not the person who makes decisions as to what we will drill when.

Q. Do you know what the capital budget is for drilling for ConocoPhillips in Southeastern New Mexico?

A. I do not know the exact number and I believe our company regards that as confidential and would not want me to disclose that here.

Q. Are you planning any wells in the Grayburg

Deep unit in the next year?

A. It is not simply a matter of ConocoPhillips planning wells in the Grayburg Deep unit because there are additional ownership -- there are additional interest owners involved.

Q. Do you expect there to be any wells drilled in the Grayburg Deep unit in the upcoming year?

A. To my understanding, that depends on the outcome of this hearing. In the event that these applications are granted and we are not able to come to any sort of joint development agreement, in my opinion, the logical approach is to drill wells below 5,000 feet to defend our rights.

Q. Who makes the decision? You said there were a number of owners so how does the decision to drill, how is that made?

A. The most accurate answer to that would come from my colleague, Tom Scarborough. I don't know all the details of the ownership and the agreements in place regarding the Grayburg Deep unit.

Q. But is ConocoPhillips the operator of the Grayburg Deep unit?

A. Again, the details of that are a question

for Tom Scarborough.

Q. Not details, just generally, is ConocoPhillips the operator?

A. My understanding is that there are times when a well is not operated by ConocoPhillips. There are times when the well is operated by ConocoPhillips within the Grayburg Deep unit and I am not able to provide you with details on what determines whether it's operated by ConocoPhillips or not.

Q. It's a unit, so isn't there usually a unit operator or doesn't it have a unit operator?

A. I don't know the extent that it is common to have a designated unit operator.

Q. But are you telling me that ConocoPhillips is not the designated unit operator?

A. Again, this is a question for Tom Scarborough.

Q. Looking at the exhibit that is still up there, which I believe is 10?

A. This is Exhibit 9.

Q. Thank you. You heard Mr. Broughton testify on behalf of Concho a while ago; is that correct?

A. Yes.

Q. Do you see some disagreement between your testimony and that of Mr. Broughton as it goes to the depth or the deepness, the thickness of the Blinebry below 5,000 feet?

A. I do see that the thickness of Blinebry below 5,000 feet on this cross-section differs from that portrayed on the cross-section Mr. Broughton presented, but this is reasonable and to be expected because of the orientation of those respective cross-sections. The cross-section that Mr. Broughton presented was approximately parallel to the trend of the Yeso shelf margin, so we would not expect significant thickness differences. This cross-section is perpendicular to that.

As we move to the southeast we are getting closer to the basin which is a topographic low, more accommodation space in which a thicker section of rock can be deposited.

Q. Are you certain that the wells you used are in the Grayburg Deep unit, in the true Grayburg Deep unit that has been sort of been restricted over time?

A. Since we have established the boundaries on this map are incorrect, I cannot state with 100 percent certainty that all of the wells are within

the correct boundaries.

Q. Thank you. It wouldn't be unusual for geologists to disagree what a thickness of a certain formation could be, is it?

A. No, disagreements occur. You may have disagreements between different operators. Within one operator you may have different interpretations. When a geologist picks a top on a log, one geologist say, "I believe the top of this formation is here where the gamma ray spikes to the right." Another may say, "Well, I think it's actually ten feet above that where the formation of the gamma ray is very low to the left."

Generally, these differences are not great. If each geologist correlates consistently, they will be consistent across a given area.

Q. Would you say that generally the more a geologist looks at logs or a certain area, the more accurate they are likely to be in estimating the thickness of formations in the area?

A. I would say that looking at logs in a given area over an extended period of time can improve the accuracy of formations but there are other things that can improve the accuracy of formations. For example, checking well logs and

seismic data to see if the interpreted tops on the well logs correspond to the appropriate interpretive reflectors on the seismic table.

Q. And you were encouraging basically some sort of joint development arrangement; is that correct?

A. I was saying that ConocoPhillips believes that is the scenario that achieves the most efficient development of the entire thickness of the Paddock and Blinebry.

Q. And basically wouldn't that agreement take some allocation, some negotiation of the allocation of production from that area between the two parties?

A. Yes. And I would expect that there will be some negotiation involved in any sort of agreement.

Q. Wouldn't that basically have to look at what information each party gets from their respective geologist as to the possible production zones and their thickness?

A. Any type of agreement would involve.

Q. That would take some negotiations if the geologists disagreed of the thickness; is that correct?

A. My understanding is it would.

Q. Thank you. You were talking -- I think you still have in front of you, perhaps, a document from the OCD files?

A. Yes.

Q. And did you notice the name of the operator of the well at the time that the well was drilled?

A. On the notice, the sundry notice that refers to a TB and 5100, I recall seeing COG the operator.

Q. Who drilled the well originally?

A. If it was drilled in September/October 2010, I don't know what the status was of COG acquiring Marbob on that date.

Q. If I tell you that basically the closing of the acquisition of Marbob assets by COG was October 7th, would you think that would be correct? October 7, 2010?

A. Are you asking if I would believe that you're telling me the truth?

Q. Yes.

A. I think that's reasonable, yes.

Q. And if that date is correct, that would be after the date the well was drilled; isn't that

accurate?

A. Yes.

Q. You were talking about twin wells and you have to do the twin wells. Is the twin well another name for an offset well?

A. Yes, my understanding is that they are the same. There may be instances where offset well is a term that's applied to the closest well which may not be as close as a well that is deliberately drilled as a twin.

Q. And would you drill wells if you didn't have information that there would be a productive zone from which to produce?

A. In a development setting, the answer may be different than in an exploration setting. This is a development setting where we have recognized and Mr. Broughton has testified that we expect the Blinebry to be productive across the Burch Keely unit and the underlying Grayburg Deep unit.

Q. But ConocoPhillips hasn't developed any wells in the Blinebry in this area, have you?

A. Correct.

Q. We talked about fracturing, and you would expect the fractures, from as you described it, a well drilled down to 5,000 and it would be a

horizontal well and it would be fractured shortly above 5,000, but basically you would expect fractures to go below the 5,000 foot mark; is that correct?

A. I don't recall saying the horizontal well specifically.

Q. Any well?

A. Any well. It is possible that the fracture could go below 5,000 feet. The growth of the fracture will --

Q. Are you a fracturing expert?

A. No, my colleague, Brian Dzubin is and will address this issue in his testimony.

Q. You are giving us opinion testimony about information that you are not qualified as an expert in?

MR. CAMPBELL: Object, Ma'am Chairman. She is the one that asked the question.

MS. LEACH: In follow-up of your questions.

MR. CAMPBELL: You asked him a question and then you object to the answer on the ground that he is not qualified. That doesn't sound right. Either don't ask the question or let him answer one way or the other.

MS. LEACH: Let's start over.

Q. Are you an expert on fracturing?

A. I am not an expert. I have a geologist's understanding of it.

Q. When you were asked the questions by Mr. Campbell, you weren't responding as an expert in fracture treatment, were you?

A. No, I was responding as an industry professional with general knowledge of hydraulic fracturing.

Q. So that wouldn't really be expert knowledge, would it?

A. No.

MR. CAMPBELL: Objection, argumentative.

MS. LEACH: I'm just trying to establish why he was giving opinion testimony in an area in which he is not an expert.

MR. CAMPBELL: He just told you he has general industry understanding. That's what he testified to.

MS. LEACH: But to give opinions you need to be qualified as an expert in the area.

MR. CAMPBELL: Why don't we wait for Mr. Dzubin.

MS. LEACH: Why didn't you wait for

Mr. Dzubin?

CHAIRWOMAN BAILEY: Shall we move along?

Q. Do you know a reason ConocoPhillips has not drilled the Blinebry before now in the Grayburg Deep unit?

A. My understanding is there could be a variety of reasons.

Q. What would those be?

A. One issue that we have to look at if we want to produce the Blinebry is whether it's going to be an efficient production of resources, whether it's going to be favorable economics. As I have testified here, we don't believe that drilling the Blinebry below 5,000 feet in a separate development scenario is the most efficient way to produce these reserves and give the best economics.

Q. Is there a difference between determining the most efficient way and determining that the well to be economic?

A. When I say efficient, I am thinking in terms of waste, stranded resources, whether all of the resource available for production is produced.

Q. But you said basically -- I'm trying to make sense of what I am hearing. Forgive me, I'm not a geologist so I have to work through this a

little bit. You are saying that basically the Blinebry in the Burch Keely unit could be producible in the sense that it could be economic just to produce it separately but you are not wanting to do that because of waste issues?

A. I have not seen an analysis that indicates that producing the Blinebry by itself is economic. I cannot testify that it is or is not economic.

Q. Thank you. ConocoPhillips produced in the Blinebry areas beyond -- outside of the BK unit or I'm sorry, outside the Grayburg Deep unit?

A. Yes. They have a Maljomar field in New Mexico. ConocoPhillips has produced from the Blinebry.

Q. And at what depths?

A. There's no 5,000-foot ownership boundary in Maljomar. I need to think to recall what the relative depths are of the Blinebry in Maljomar. Since we are further east most likely somewhere on the order of 5800 feet for the top boundary. As Mr. Broughton testified, the depth varies across the field.

Q. And basically have you had production from the Blinebry? Is it a successful well?

A. Yes.

Q. How many wells do you have there?
A. We drilled four wells in 2010 with production that was very encouraging.
Q. And those are full wells in the Blinebry?
A. To my knowledge of the field, yes.
Q. In other fields in Southeast New Mexico?
A. To my knowledge those are the first full wells in the Blinebry in Southeast New Mexico.
Q. You said, if I'm correct, ConocoPhillips currently doesn't have a plan to drill in the Blinebry area of the Grayburg Deep; is that correct? Unless --
MR. CAMPBELL: Object. Misstates the testimony that was depending on the outcome of the hearing.
Q. Apparently you have no independent plans to drill there. It will be determined by the outcome of the hearing whether you need to drill twin wells; is that correct?
A. Right. The outcome of this hearing.
Q. If you were going to drill those wells, would you drilling vertical or horizontal wells?
A. That is an issue that needs more investigation.
Q. And if you are going to drill a vertical

well, where would be your first perforation? At what level?

A. If we want to defend our -- protect our rights under 5,000 feet, it's logical to go just below 5,000 feet.

Q. And there's nothing prohibiting you from basically perfing at 5001, is there?

A. Not to my knowledge, no.

Q. No further questions. Thank you.

CHAIRWOMAN BAILEY: Any questions?

MR. DAWSON: No questions.

MR. BALCH: I will hold my questions.

CHAIRWOMAN BAILEY: I have a couple questions. Could you please pull up ConocoPhillips Exhibit No. 7. The last bullet on the right-hand side says, "However, the Blinebry is not being developed within the Burch Keely unit." That sentence could also be amended to say, "However, the Blinebry is not being developed within the Grayburg Deep unit" also.

A. That's correct.

Q. If ConocoPhillips is interested in the Blinebry production, what would prevent it from perforating its current vertical wells and commingling down?

A. My understanding is the current vertical wells either are producing or I believe there are some that have been plugged and abandoned. A reservoir engineer could provide a better answer, but my understanding is when you have sufficient production from down hole, it makes sense not to stop that production in order to do work up hole. It's better to wait until that production has dwindled to do a shallow recompletion. I believe that down-hole production in the Grayburg Deep unit is primarily gas. That could create an issue of trying to commingle gas production with shallower oil production.

CHAIRWOMAN BAILEY: Those are all my questions. Any redirect?

MR. CAMPBELL: No, ma'am.

CHAIRWOMAN BAILEY: You may be excused.

MR. CAMPBELL: We would like to recall Tom Scarborough very briefly to answer Ms. Leach's suggestion we submitted incorrect exhibits.

CHAIRWOMAN BAILEY: I think that would be appropriate.

TOM SCARBOROUGH

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

BY MR. CAMPBELL

Q. Mr. Scarborough, there is a suggestion here that Exhibit No. 1 is incorrect. That is, you have outlined on this exhibit what you call the Grayburg Deep unit as nearly co-extensive with what you have outlined as the Burch Keely unit. And you had stated that, in fact, the Grayburg Deep unit had been contracted.

A. That is correct.

MS. LEACH: That's been asked and answered. I would object to the line of questions as repetitive.

Q. What is the status --

MS. LEACH: Would you let the Commission respond to my objection?

MR. CAMPBELL: Excuse me.

CHAIRWOMAN BAILEY: This is repetitive, but you have brought up the question twice since this witness was on the stand concerning the accuracy of this map. I would like to have this question answered.

MS. LEACH: Thank you.

Q (By Mr. Campbell) So what we are calling the Grayburg Deep unit is contracted and smaller than what is the Burch Keely unit; is that correct?

A. That is correct.

Q. What is the status of the mineral acreage outside of the Grayburg Deep unit within the exterior boundaries of the Burch Keely unit?

A. Within the exterior boundaries?

Q. Yeah. These are exterior boundaries, right?

A. I will have to -- when we are talking about outside of both of these units --

Q. Not talking about outside. We are under the impression that the Grayburg Deep unit is a smaller unit than is the Burch Keely unit, and I'm trying to ascertain what is the status of the mineral leases inside the Burch Keely but outside of the Grayburg Deep. What's the status? Is it nobody owns the leases?

A. No, they are all federal leases that are held by production.

Q. They are held by production?

A. Yes.

Q. So while they land outside of the Grayburg Deep unit is not in the Grayburg Deep unit, it remains active mineral acreage owned by Conoco and others below 5,000 feet within the Burch Keely unit?

A. Yes, that's correct.

Q. So in your Exhibit 1 there is a misnomer in suggesting that the two units are co-extensive but there is no error in suggesting that mineral rights exist owned by Conoco and others inside the Burch Keely from 5,000 feet down, despite the fact that they are outside the Grayburg Deep?

A. That is correct.

Q. Those are active mineral acreage?

A. Yes, sir.

Q. And we have made an error in attempting to characterize the two units as co-extensive?

A. Yes.

Q. Go ahead.

A. The red outline in this map is the original Grayburg Deep unit and the only error is the word "original" does not show up there. The Grayburg Deep unit was contracted by the BLM. There is a Grayburg Deep operating agreement that still covers the entire red outlined area between the partners, ratified between the partners and that is still the controlling agreement in the entire area which includes the contracted -- the acreage that was contracted out of the Grayburg Deep unit.

Q. So there is currently existing active mineral acreage of which Conoco is a lessee, as are

others, from the 5,000 foot ownership level down, some of it within the Grayburg Deep, some of it outside the Grayburg Deep but all of this co-extensive with the Burch Keely unit?

A. That is correct.

Q. That's all I have.

CHAIRWOMAN BAILEY: Any cross?

CROSS-EXAMINATION

BY MS. LEACH

Q. Sir, the Grayburg Deep unit that has contracted is smaller than what's shown up there; is that correct?

A. The outline of the contracted unit is not shown. It is around 2500 acres.

Q. In the areas between the contracted unit and the outside boundaries of what was the original unit, can Conoco propose drilling a well in those areas?

A. We have an agreement with Cimarex where they are the operator of the wells. We can propose that they drill wells.

Q. I was told that you were the person to ask about who the operator is. So could you clarify that for to us?

A. ConocoPhillips is the operator in the

Grayburg Deep. We have an exploration agreement in place with Cimarex for all new wells after the effective date of the agreement, which is in 2004, so Cimarex can propose wells and drill wells and remains the operator. They have done so in at least four different wells in the Grayburg Deep unit so they are the operator of the Grayburg Deep 16, 17, 18 and 22.

Q. So then if Conoco -- I'm trying to understand what Conoco is the operator of.

A. All of the wells in the Grayburg Deep wells prior to the 2004 exploration agreement with Cimarex. We continue to operate all of those wells.

Q. So in the same area we have Conoco as the unit operator but for new wells Cimarex is the operator of the wells?

A. Cimarex drilled those and has a designation of agent agreement with the BLM.

Q. So if you were going to propose a well or development program with Concho, it would have to involve Cimarex too; is that correct?

A. That is correct.

Q. Is there an economic difference if Conoco proposes a well as opposed to Cimarex proposes a well?

A. I think that would probably be determined by each company's AFE and contracts they had with their service providers.

Q. Are there penalties, penalty differences if you don't participate or something that are sometimes found in agreements?

A. There is a nonconsent provision in the Grayburg Deep operating agreement.

Q. But either party -- if it's a new well then Cimarex really needs to propose it; is that correct?

A. They need to propose it. However, if they don't, ConocoPhillips can do that.

Q. ConocoPhillips can propose the new well also?

A. Yes.

Q. How many wells does Cimarex have to propose a year?

A. The exploration agreement actually covers an area of approximately five townships in geographical area. They are to propose four wells per year. Well, two wells per year in one area and an additional two wells in another area.

Q. Has Cimarex proposed any wells in the Blinebry -- in the Grayburg Deep unit?

A. No, they have not.

Q. Is there a limit to the number of wells Cimarex could propose in a year?

A. No.

Q. Have you made Concho aware of this arrangement with Cimarex and provided them with the documentation?

MR. CAMPBELL: Excuse me. Objection. This is beyond the scope of the recall here which was to simply straighten out the issues relating to the boundaries of the Grayburg Deep and the existence of valid mineral rights outside of the area within Burch Keely below 5,000 feet. She is just asking questions she could have asked on direct this morning.

CHAIRWOMAN BAILEY: Objection sustained.

MS. LEACH: No further questions.

CHAIRWOMAN BAILEY: Does the Commission have any?

MR. DAWSON: I have a question. This map on Exhibit 1 depicts a Grayburg Deep unit of 5484.174 acres and you said it was contracted to 2000?

THE WITNESS: It's around 2500 acres is the contracted Grayburg Deep.

MR. DAWSON: Do you have an idea where the contraction outline would be on the map?

THE WITNESS: It would include parts of Sections 19 and 30 and 17 south 30 east. I believe also portions of 24 and 25 of 1721.

MR. DAWSON: So roughly like the southeastern part of that map?

THE WITNESS: Yes, sir.

MR. DAWSON: No further questions.

MR. CAMPBELL: Just a second. Is the Commission finished with all questions?

CHAIRWOMAN BAILEY: Yes.

MR. CAMPBELL: May the witness be excused?

CHAIRWOMAN BAILEY: Yes. Do you have another witness?

MR. CAMPBELL: Yes, ma'am. Conoco would call Kim Head.

KIM HEAD

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

DIRECT EXAMINATION

BY MR. CAMPBELL

Q. Please state your name.

A. Kim Head.

Q. What is your current position with

ConocoPhillips?

A. I'm a staff geophysicist with the Permian Flood Development Team.

Q. How long have you been with ConocoPhillips?

A. Ten years.

Q. Briefly and generally, what did you do between the time you graduated -- did I ask you where you graduated from college?

A. Not yet.

Q. Where did you graduate from college?

A. I graduated from the University of British Columbia with a bachelor's degree in geophysics in 1978. I returned to the university for a master's in business administration and graduated in 1986.

Q. What did you do very briefly between the time you graduated from college and when you joined ConocoPhillips?

A. I initially worked for Gulf Oil, then for Saudi Aramco. Then I returned for my MBA. I then worked briefly outside the industry in a finance role, and then returned as a geophysicist working initially for Tecnica and then Veritas before rejoining Gulf Oil, which was subsequently acquired by Conoco.

Q. What is your technical seniority with ConocoPhillips?

A. My previous roles with ConocoPhillips include chief geoscientist for the gulf cost and the lower 48 onshore.

Q. Have you been asked to write and speak to the industry on the topic of industry geophysics?

A. I have. I have published several papers in the World Oil, the Canadian Journal of Exploration Geophysics, the Society of Exploration Geophysics Journal, the Society of Petroleum Engineering Journal and the American Association of Petroleum Geologists Journal. I published in the areas of using seismic data for reservoir characterization, using 3D seismic data to predict naturally occurring fractures and in the area of predicting the value of 3D seismic information before you acquire the data.

Q. Have you previously testified before this Commission?

A. I have not.

MR. CAMPBELL: We move the recognition of Mr. Head as an expert in the field of petroleum geophysics.

MS. LEACH: No objection.

CHAIRWOMAN BAILEY: So recognized.

Q. What's the object of your testimony, Mr. Head?

A. I wish to show the Commission that the seismic data indicates the dramatic thickening of the Blinebry section to the southeast area under discussion as presented earlier by Mr. Angerman. I would show that the Blinebry section is geologically continuous with no interruptions that would present any kind of geological barrier within it, as discussed by Mr. Angerman and by Mr. Broughton. And I would like to show that there are some areas where the section either above or 5,000 feet will become very thin and would be likely to be a stranded resource in the absence of joint development.

Q. Have you prepared an exhibit to illustrate your testimony?

A. Just one.

Q. That would be Conoco Exhibit 11?

A. Yes, it would be a great deal easier if I could approach the screen and point if that would be okay. This is seismic data from a 3D seismic data set that covers the whole development area. I've shown on the left here the Federal One well just to show the correlation between the well data and the

seismic data. So we tie the well data to the seismic using a synthetic seismograph which is mathematically calculated from the logs. And it's shown here.

Then we have to make a visual correlation, sometimes a mathematically assisted visual correlation, between the well and the seismic. And that allows us to identify which of these reflections come from which geological formations. The reflections shown on the seismic here are the dark continuous lines. They occur -- seismic data reflects to the surface -- when the geology changes. So when one formation changes to another and we change the velocity and density of the rock we get a reflection back. That happens when you change the lithology or the porosity. Occasionally the fluid content, but more likely that happens in the Gulf Coast. So typically it's lithology or a porosity change causes that.

So we see reflections here, for example, at the top of the Paddock. We can see there's a reflection that's continuous and we can track it across. We can see the Paddock/Blinebry provides a reflection and down here at the Tubb, as Mr. Broughton mentioned, was a logical base. You can

see there's a reflection indicating the geology has changed.

What we observe is there's no reflection following along the green 5,000-foot line that I added to the display, just indicating that the geology is the same above and below as we heard from the previous witnesses.

We also note here this line of section that runs northwest/southeast through the mapped area that we have been discussing, and the original unit boundaries are indicated on here, and we notice there are areas where the section above 5,000 feet becomes very thin and would be subeconomic for drilling or certainly reduced economics. And there are areas where the section below becomes very thin and the same type of corollary effect would occur economically, likely resulting in stranded resources in those areas, unless they were drained. I think that's all I wanted to point out on the screen unless anyone needed me to stand there to answer any questions.

Q. Based on your study in this area, Mr. Head, could you provide the commissioners with your opinion whether the grant of Concho's applications will prevent waste and protect

correlative rights?

A. It is my opinion from studying this data that granting Concho's application would result in economic waste and probably some stranded resource. And that the only way to avoid both of those things from happening is to jointly develop the section above and below 5,000 feet.

MR. CAMPBELL: We would move the admission of Conoco Exhibit 11.

CHAIRWOMAN BAILEY: Any objection?

MS. LEACH: No objection.

CHAIRWOMAN BAILEY: So admitted.

(Note: COP Exhibit 11 admitted.)

MR. CAMPBELL: Thank you. No further questions.

MS. LEACH: No questions.

CHAIRWOMAN BAILEY: Commissioner Dawson?

MR. DAWSON: No questions.

CHAIRWOMAN BAILEY: Commissioner Balch?

MR. BALCH: No questions.

CHAIRWOMAN BAILEY: I don't either. The witness may be excused.

MR. CAMPBELL: Thank you. Last witness, Mr. Dzubin.

MS. LEACH: Ma'am Chairman, you told me

that I needed to make objections about fracturing. I think we are moving to a witness who is going to talk about fracturing almost all together. I have tried to not interrupt with objections as we have gone along and talked about hydraulic fracturing a little bit because I understand that's an important part of basically every well, but we are now going into the area that is nothing but fracturing, which was the point of my motion this morning and I would like to renew the objection. You told me I could make objections whenever they needed to be, and I guess I would just ask now that you rule on my objection again.

CHAIRWOMAN BAILEY: As necessary as he makes his comments, you can make your objections based on his answers to the questions but we cannot exclude him categorically at this point.

BRIAN DZUBIN

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

DIRECT EXAMINATION

BY MR. CAMPBELL

Q. Please state your name, sir.

A. Brian Dzubin.

Q. What's your current position with

ConocoPhillips?

A. I'm a senior completions engineer in the role of completions group at the ConocoPhillips in Houston, Texas.

Q. What's your educational background?

A. I graduated with a bachelor of science in petroleum engineering from the University of Texas in 1999.

Q. How long have you been with ConocoPhillips?

A. Since February of this year.

Q. Briefly, what did you do between the time you graduated from college and when you joined ConocoPhillips in February of this year?

A. Back when oil was about $10 or $12 a barrel I managed to get a small stint as the production engineer with Bass Enterprises out of Midland, Texas. Since that time the emphasis moved from production engineering to primarily hydraulic fracturing. As I moved to Halliburton Energy Services from 2000 to 2007. During that time I started off as a field engineer and worked my way up to various technical roles, one of which working for the Houston business development technical team in Houston and I was later called upon to be an

in-house account representative for their office in the Woodlands, Texas.

Since that time I left Halliburton Energy Services in October of 2007, left for a company called Stratagen Engineering. We provided consulting services, specializing in the developmental type permeability reservoirs, and my primary functions were the analysis, design and evaluation of hydraulic fractures.

Q. What are your responsibilities as senior completions engineer since joining ConocoPhillips?

A. The responsibilities are, I would say, similar to my previous role as a consultant. Again, the design, evaluation, appraisal of hydraulic fractures. Basically I provide technical support and services for ConocoPhillips' upstream business units. I am also called upon from time to time for the development/mentorship of basically their early career of engineers as well.

Q. You advise ConocoPhillips on ConocoPhillips' fracking mechanics?

A. Yes, that's correct.

Q. During your career, have you published professional papers on the subject of hydraulic production?

A. I have been the co-author of four papers published under the Society of Petroleum Engineers.

Q. Specific to the topic of hydraulic fracturing?

A. Yes.

Q. Have you been asked to speak to the petroleum engineering professionals on the topic of hydraulicking?

A. Yes, four separate times.

Q. Have you testified before the Oil Conservation Division?

A. No, sir, this will be my first testimony.

MR. CAMPBELL: Commissioners, we move recognition of Mr. Dzubin as an expert specializing in hydraulic fracturing.

CHAIRWOMAN BAILEY: Any objection?

MS. LEACH: No objection to his qualifications.

CHAIRWOMAN BAILEY: He is so recognized.

Q. What is the object of your testimony here today, sir?

A. My object is to provide expert witness testimony as it pertains to my background of hydraulic fracturing and provide opinions as to current practices of hydraulic fracturing in this

area.

Q. Can you briefly summarize the conclusions you reached based on your study of Concho's application in these proceedings and other facts?

A. Well, I believe that if the applications are granted, this will allow Concho Oil and Gas to drill to a depth of 5,000 feet, complete those wells using hydraulic fracturing and as a result impair ConocoPhillips' underlying rights or correlative rights.

Q. Have you prepared exhibits to illustrate your conclusions?

A. Yes, I have. I prepared Exhibits 12 through 17.

Q. All right, sir. One moment. Could you examine and explain Conoco Exhibit 12.

A. Here we have a graphic that we adapted from one of the major services companies. We have the reference document below. What this is is a side-view schematic, just trying to generalize a well that has been cased, cemented, perforated and completed with a hydraulic frack.

Now, some of the primary points I would like to get out of this particular graphic, and again, this goes along with some of the, I guess,

the topics that were also illustrated in the reference below -- if I could have you advance that -- hydraulic fractures may not necessarily be restricted to the area of the well that we perforate. Hydraulic fractures can grow, propagate through a geologic unit some distance both above or below the area that we perforated.

If I could have you advance that one more time. In context to the hearing that we are involved with today, we are discussing this arbitrary boundary line in the case that we're talking about, 5,000 feet, and I would like to emphasize that hydraulic fractures don't stop or may not stop because you tell it that there is an arbitrary contractual boundary.

Within a geological unit, all that the hydraulic fracture will know is differences in rock stress, geologic properties. Based on that, the area shaded in red below that boundary line, I see that as an impairment on correlative rights as it pertains to this case.

I think we could probably also flip this slide around in terms of Concho or at least where they might be worried. Let's go ahead and raise the boundary line above and say that it's above that

perforated height, in which case that fracture might encroach above into their potential rights.

Q. What is Conoco Exhibit 13?

A. This was a summary of the work flow that we used to develop the results of a completion study for this area. Basically I have summarized that in the three points that I have listed here. We started with a well that was in the focus area of the Grayburg Deep Unit No. 10. We used data from that well to derive various geologic properties so it could be used in a hydraulic fracturing simulator.

From there we performed a series of fracture simulations to explore the height and length and characteristics of the fracture as it propagated through the Yeso formation. We based our simulations on a design that was based on COG's designs in the West Maljomar field. High injection rates. Actually, there's a typo. That should be 177,000 pounds, not 167 as I had there. Trying to treat a 200-foot gross interval of perforations and then basically allowing the fracture simulator to show how the fracture would propagate and subsurface.

Q. So your study, Mr. Dzubin, was to simulate

the potential height and spread of a fracture?

A. Yes, more so the height in this case. That was the primary.

Q. Utilizing input data in terms of injection rate, fluid, perf settings, that you found in another Concho well?

A. It was actually this idea -- I got the information from the completion engineer working in the area. He had based his designs for a tourmaline State No. 2 on some designs that Concho had pumped in that area. From what he told me, they were very similar, almost exact.

Q. Okay. What is Conoco Exhibit 14?

A. This was the treatment schedule that we simulated within the fracturing simulator. Basically, what this shows is a sequence of steps. As we pump in any hydraulic fracturing treatment we initiate the fracture behind with a fluid not containing proppant. We refer to it as pad.

The remaining stages that I have listed there in the sequence refer to the slurry. Basically these are stages where we start to pump increasing concentrations of proppant into the hydraulic fracturing treatment. Overall, this is fairly representative of practices out in the area.

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These are, in my opinion, relatively low concentrations but this is how fractures are executed in the area.

Q. So you took all of these components and put them into a simulator to test the results?

A. Yes, that's correct.

Q. And what was the simulator you used?

A. The simulator that ConocoPhillips used is a program called Stim Plan. It's one of four commercial hydraulic fracturing simulators out in the industry, the other three being Gopher, Practoro PT and M Frack.

Q. Is the frack simulator that Conoco uses a recognized industry standard as a simulator?

A. Yes, it is. Actually, prior to my arrival at ConocoPhillips it was decided by people that are a lot smarter than me that this was the technical way to go in terms of what simulator should be used for ConocoPhillips.

Q. You took all of this data and put it into the simulator. What was the result?

A. The result can be seen on the next slide, and basically what we have is the overall output of the model showing the overall extent, height, length, and a distribution of proppant within the

fracture.

The first thing I would like to do within this graphic is to emphasize some of the key points. I'm going to start on that color track on the left. What this shows is the gamma ray log showing the various changes, indicating the lithology for the Grayburg Deep unit No. 10. What I have also done in the tract is tried to break out the geologic defined units. The Paddock, Blinebry, and I have also broken out the sections of the Blinebry above and below the 5,000 foot subsurface boundary line and I have also marked the perforations that we used in the simulation just slightly to the right of the track indicated by the hashmarks.

Now, the overall conclusion from these simulations ties into some of the previous testimony that we have heard today about the homogeneity of the reservoir. Within the simulation, we can see that there were no stress contrasts or potential containment mechanisms that would have prevented that fracture from stopping at that 5,000-foot boundary line and preventing further impasse into the region which I have shaded -- not shaded but highlighted with that dotted circle. So?

Basically the section of the rock

represents an area of the reservoir which could be produced through that conductive flow path of the hydraulic frack and that that represents basically impairment of correlative rights.

Q. I see that you set the perf string here roughly 200 feet between 4600 and 4800 below ground surface?

A. Yes.

Q. What would you expect to see, Mr. Dzubin, if you set the perf interval at 200 feet closer to the 5,000-foot ownership boundary?

A. If you put those perforations -- we will just say right at the base of the yellow-shaded region, I would say that the fracture would propagate further downward below the 5,000. It's a matter of how much real estate does it have to propagate through to get to the point.

Q. If the bottom of the perf was set at 5,000 feet, you would expect the intrusion below 5,000 feet to be --

A. To be worse.

Q. To be worse. Could you summarize for the commissioners the conclusions you reached as a result of your fracture simulation?

A. Yes. We summarized our conclusions here

as Exhibit 16. Based on our modeling, hydraulic fracture propagating within the geologic unit is capable of passing arbitrary defined contractual boundaries. Just because you say 5,000 feet does not necessarily mean that it's going to stop there. Because the hydraulic fracture is a conductive flow path, any reservoir or rock contacted by the hydraulic fracture, you could produce hydrocarbons from the area and that represents an impairment of correlative rights.

Q. In your opinion, Mr. Dzubin, would the Commission's grant of Concho's application prevent waste and protect correlative rights?

A. Let me answer that in the converse. I don't think that it would protect correlative rights just for the reasons that I just stated. And as far as reducing waste, certainly this would be a concern for ConocoPhillips. I know we discussed one well here today that was close to that boundary and testimony heard earlier suggests that there were four other wells that may have been perforated and completed using hydraulic fracturing. I guarantee that I myself or one of the others on the technical teams will be looking for that data and for those wells. You know, certainly twin wells or any sort

of completion strategy to make sure that we develop those resources, we will be looking within those areas.

Q. Assuming the Commission grants the Concho applications and assuming further that Concho is unwilling to participate in a joint venture or a joint development for the entire Blinebry, what options does Conoco have to protect its correlative rights?

A. Basically you have to drill wells.

Q. Have you discussed that with your management?

A. I have not discussed it personally but I am aware those discussions are currently ongoing.

Q. They are going right now?

A. Yes.

Q. And you expect Conoco to make a decision based on the decision made by this Commission?

A. Yes. And the overall development strategy would be development on which side of the so-called sliver are you on or at least below the 5,000 foot line. Can we drain that adequately with vertical wells or would it be more prudent to drill horizontal and complete with hydraulic fracture.

Q. Thank you.

MR. CAMPBELL: I move for the admission of Exhibits 12 through 17.

MS. LEACH: My objection to the exhibits are the objections I have had all along. They do not concern specific wells or necessarily concern the BK unit area. It's theoretical and doesn't rely on a specific case here. It's not about what the characteristics of the rock of a certain well, what depth it's going to be, the bottom of the well, where the perfs are. None of that is here so for the reasons stated earlier I object to the exhibits and testimony.

CHAIRWOMAN BAILEY: Your objection is denied because the commissioners are fully capable of keeping the correct perspective on the purpose of this hearing. So these exhibits will be accepted.

(Note: Exhibits 12 through 17 admitted.)

CROSS-EXAMINATION

BY MS. LEACH

Q. Using the exhibit that's up there -- may as well start there -- for the most part, the perforation, as I understand it, is bound by the little marks next to the Blinebry at the top of the yellow?

A. That's correct.

Q. So directly across from the Blinebry at the 4600 mark and down, there are a number of different colors that you used. And directly across from the top-most color you have sort of a -- I don't know, a khaki color that's there at the 4600 mark and that indicates far less penetration than the pink; is that correct?

A. No. Not necessarily penetration. I would say that the overall extent of the fracture is in any of the colored regions. So the color, the changes in color represent various concentrations of proppant that have been placed in that particular section.

So in the case of the outer edges towards, the top -- I guess you would call it khaki -- it looks like we had a little bit of settling of proppant out of the khaki-shaded region. And as you move back towards the wellbore you get to the hotter reds, the pinks, which represent higher proppant concentrations. In any hydraulic frack that's ideally what you want. You want the higher concentrations towards the wellbore because that's the section of the well that will have to support 100 percent of the production from the frack.

Q. When you say back towards the wellbore,

what do you mean?

A. Okay. Let's focus on the bottom of that schematic that gives a fracture penetration distance in feet, 200, 400, 600, 800. If we were to move backwards and get to the zero point within that schematic, that represents the point where the wellbore is. And we're showing one wing of the fracture that's propagating away from the wellbore from that point.

Q. But the highest concentration in that pink area, a large amount is substantially below the perforations?

A. And that would be expected. You know, gravity will take over and materials, heavy materials such as proppants, will settle.

Q. Even at the zero mark?

A. Yes.

Q. And basically you said that the fractures stop going upwards? Did I get your words down correctly?

A. For the geology of this particular wellbore, yes.

Q. And the geology of this particular wellbore is the Grayburg Deep 10, is that correct?

A. Yes.

Q. When was the well log done on that well?

A. I don't recall when the logs were done. The information was provided to me by the Charlie Angerman. I did not look at the date. However, using our process work flow for hydraulic fracturing, the date on the log is really irrelevant. What we are looking for is the various lithological changes from the top to bottom in the column.

Q. Does the accuracy of the well log have anything to do with the accuracy of the results you get in your simulation?

A. I have not seen any data that would lend to that, but what we're looking at here is for relative changes in the lithology based on the gamma ray. That's how we basically define our layers, and overall, with this particular simulator, grid cells within the model.

Q. So the fact that you don't really have a great deal of information in the log for the Grayburg Deep about the Blinebry because that's not where it was completed, that really doesn't impact the accuracy of your simulation?

A. No. I have worked with less in past wells and got reasonable results.

Q. Did you have a digital sonolog for this area in the Blinebry?

A. There was a Delta T or basically a compressional wave arrival time in the data set, and as it was indicated to me a synthetic sheer wave which was used to derive rock properties for this reservoir. By rock properties, what I mean is first Young's modulus and Poisson's ratio and ultimately we are using those to derive a stress field within this well.

Now, the results that we came up with, Young's modulus is in the range of six million PSI, which I felt was typical for other analysis done in the Yeso.

Q. But the Delta T sheer was really in the morrow reservoir, not in the Blinebry, isn't that correct?

A. It was a synthetic curve that was generated back to surface.

Q. So an estimate and then you are taking the estimate and using it in your simulation and you are saying that doesn't affect the outcome of the information you get?

A. Could you repeat the question?

Q. You are saying you basically didn't have a

Delta T share at the Blinebry so you used an estimation to come up with -- you took that estimation for what would be the information you needed for the Blinebry, used that in the simulator. So you did estimates into the simulator which would make more estimates to come up with a result that basically I am questioning if that's an accurate way to get the results from the simulator.

A. I would be worried about the accuracy if the values for the rock properties were off. Like I said, the Young's modulus for this particular simulation is in the range of six million PSI. I would say five to seven million is typical for the Yeso in this area, and as far as using data or synthetic data and transferring over, there is published information out there by Bob Baree, who developed the hydraulic fracturing simulator Gopher, he has often advocated what do you do when you don't have a sonic log. You basically have to derive the properties synthetically and it's accepted practice. We get the results.

Q. You heard the testimony from the geologist that the area differs greatly from well to well, haven't you?

A. Maybe the porosity and the overall physics

in terms of water saturation, but that would not be my background. The thing that I would be more concerned with was the overall stress field that would influence the propagation of the hydraulic frack through the subsurface.

Q. Thank you. I really thought I was asking a yes or no question. Did you hear that testimony?

A. I'm sorry. I apologize. Yes, I did.

Q. So you based your entire fracture simulation on an important value that was calculated instead of actual; isn't that correct?

A. That's correct.

Q. Thank you. I would like for you to go back to Exhibit 12, please. I believe you said this was adapted for a simulator from September 2002; is that correct?

A. Yes, that's correct.

Q. And how much has the technology changed in fracking since 2002?

A. In terms of hydraulic fracturing, I would say there's not much in the way of how the process is done. You are using a fluid to exert a hydraulic pressure against the rock until you exceed a certain failure criteria, in which case the hydraulic fracture will propagate vertically, laterally into

the rock.

Q. You are telling me we don't know more about hydraulic fracking now than we did in 2002; is that correct?

A. I am generalizing the overall process. In terms of the technologies, you may be referring to various materials or completion techniques that allow us to, instead of perforating maybe we use a sliding sleeve configuration that prevents that operation from happening. So basically technologies that improve the efficiency of the operations have advanced, but the overall process of hydraulic fracturing, hit it with a hammer, make a crack and they really haven't changed since it was initially developed in the late '40s.

Q. So you were saying hit it with it hammer, I assume you are saying hitting the rock with a hammer?

A. Hydraulic hammer.

Q. Does it matter what the rock is?

A. The rock will impact how that fracture propagates. In the case of this environment, we have relatively high Young's Modulus, relatively low permeability, so I'm going to say you will get large fractures. However, if we had sediment like in the

Gulf of Mexico, low Young's Modulus, unconsolidated sands with high permeability and high porosity, you will probably get very, very short-stunted fractures.

Q. Will you tell me what you changed in this from the published version?

A. Really not much. We did this just to get around the copyright issues.

Q. Well, it says it's adapted, so I was wondering what the changes were. You're not purporting to say that this drawing, cartoon, illustration, in any way, shape or form mirrors what would happen in the Blinebry, are you?

A. We are.

Q. That's fine. That's a yes or no question. We are. And you are saying that because the Blinebry looks like what you have pictured here -- okay. Is that correct?

A. Define look.

Q. Let's start with the drawing. Where is the bottom of the well?

A. We didn't reference any depth lines except for something conceptually around the arbitrary boundary line.

Q. Does the arbitrary boundary line, would

that basically represent the 5,000-foot mark?

A. Sure.

Q. So the well must be bottomed somewhere below the 5,000 mark?

A. Yes.

Q. That would not be the situation for the Concho well in the Blinebry; is that correct?

A. Well, the data that I have seen here yesterday about the Burch Keely Unit 411, that well was TD'd to 5100 feet, based on my recollection.

Q. You have one well that is drilled by Marbob prior to the ownership of COG. From that you're going to conclude that the entire unit should not be expanded because you are going to expect Concho to drill every well past 5,000 feet? Is that correct?

A. Well, with the way casing strings are designed, you have to drill past -- well, if you intend on perforating within a close proximity of 5,000 feet, you would have to drill past it primarily because you leave what's called a shoe track in the casing string. Basically what it is is a series of one-way check valves that when you pump the cement job and displace the cement outside the casing and into the annulus, you have these check

valves in place to hold -- essentially what would be considered contaminated cement but more importantly prevent fallback of the cement back into the pipe.

Q. How deep is that? How many feet are involved in that?

A. I would say two to three joints a casing, so that's probably about 80 to 120 feet. Depending on depth, you may want to put more for deeper string, higher pressures.

Q. So the well bottoms at 5,000 feet and you are telling me they have to back up 80 to 120 feet for the first perforation from the bottom?

A. No. I would say based on the testimony this morning, I would repeat that ConocoPhillips has moved away from that position. So --

Q. You are talking about the buffer again. I'm not talking about the buffer. I'm talking about what you just testified about the casing and having to -- basically you couldn't put the perforations at the very bottom of the well because of what you were describing, the shoe, the joints, being able to pump the cement out or the contaminated cement. You were saying that was 120 feet?

A. Typically.

Q. So that would be -- the first perforation

would be above that, wouldn't it?

A. Yes.

Q. So if the well bottoms at 5,000 feet, you are talking about moving up 80 to 100 feet, so you're talking about 4900; is that correct?

A. Sure.

Q. So if Concho was proposing to drill a well at, say, 4850, they would still have to perforate at 100 feet up above that, right?

A. They could.

Q. Under your description of needing to be 80 to 120 feet off the bottom of the well, wouldn't the first perforation then be basically more like at 47?

A. I'm curious about this line of questioning because I think we are getting away -- this is more well construction practices rather than hydraulic fracturing. If you have to specify, I suppose we can.

Q. I'm just trying to be realistic about basically if you drill a well and you bottom the well at 48, then basically your first perforation is going to be at 47 or above. So you have that much more space if a frack should go down before it would get to the 5,000-foot mark, and I think that is something worth talking about in the hearing since

you want to make it about fracturing; isn't that correct?

A. I think ConocoPhillips' position is not about establishing stand-off boundaries.

Q. I didn't ask you about that. I asked you about the testimony here today is about fracturing and about that we don't want this sliver to be incorporated in the Burch Keely unit or the Grayburg-Jackson pool because you are afraid that the fracking will come across the 5,000-foot mark; isn't that correct?

A. That's correct.

Q. I'm telling you that if the well is bottomed at 4800 feet or above and you have to basically perf 80 to 120 feet above that, then you have several hundred feet before the fracture will get to the 5,000-foot mark; isn't that correct?

A. Basically what you have is a situation like in Exhibit 15 that Michael put on the screen for us. So what you are talking about 4800 feet, I still say there's risk involved that yes, you will establish and propagate a hydraulic frack into ConocoPhillips' lease rights.

Q. And there's a risk?

A. Yes.

Q. You are not saying it's absolutely going to be there, are you? You are saying it could be; isn't that correct?

A. That's correct.

Q. That can be, not that it will be; is that correct?

A. That's correct.

Q. So you basically want to deny putting this sliver into the Burch Keely unit or the Grayburg-Jackson because it is possible that if things were all the done the way you believe they would be, which would include regularly drilling wells below the 5,000 foot mark, that then there could be fractured going below the 5,000 foot mark; is that correct?

A. Yes, is and it would --

Q. Thank you.

MR. CAMPBELL: The witness is permitted to finish an answer beyond what Ms. Leach used to be an answer. He was about to explain his full answer. She can't cut him off, Ma'am Chairwoman.

MS. LEACH: You can come back and have him answer the questions.

MR. CAMPBELL: No. This is a question of letting him complete your answer to his question.

MS. LEACH: He is going off into speeches instead of answering the question I asked. That's why I'm trying to rein him in.

MR. CAMPBELL: You are reining him in by not letting you complete the answer to your question.

CHAIRWOMAN BAILEY: I think the Commission would like to hear the complete answer, so please do allow him to complete his answer.

Q (By Ms. Leach) I believe you mentioned --

MR. CAMPBELL: Excuse me, Counsel. Have you finished your answer to her question or do you have something more?

A. I would like to make statement. And yes, based on the risks, based on our concerns, yes, we see this situation happening. And as a result, yes, our only course of action would be to drill what's been referred to as a twin well or some well that would allow us to make sure we get access to those resources that have been potentially contacted by that frack and allow us to drain it.

Q. You said that's your only course of action?

A. Well, based on discussions that I have heard it would seem, in my opinion, Concho has been

unwilling to respond and talk about the development options.

Q. Why don't you have an option to protect your correlative rights by protesting application for a permit to drill if you felt the well was too close to the 5,000-foot mark and basically the fractures might go across the line?

A. Well, this seems to be a permitting issue which is outside of my area of expertise, more regulatory issues. However, I would offer my opinion that usually when you permit a well it's permitted to a depth but does not specify anything about how the well will be completed.

Q. And if you filed a protest to the application and you were granted a hearing before the commission of hearing examiners, do you think you could raise those issues?

A. You probably could, but I would see that as a waste of the Commission's time.

Q. So it would just be more efficient to keep us out of the unit; is that correct? The sliver out of the unit; is that correct?

A. I'm not sure if I follow you.

Q. That's okay. You were talking about the well, the Concho -- Marbob/Concho well that was

drilled originally by Marbob. Are you aware that there's never been production in that area?

A. I'm not aware of that.

Q. So you wouldn't know that there's never been any production from the perforations that are in the area of the sliver or the expansion area?

A. I'm not aware of that. As was mentioned, I became aware of this yesterday, so additional details regarding the well, I don't have knowledge of.

Q. Thank you. I believe you testified -- but I'm not sure that I got it all down -- because you're saying that you design your simulation based on COG designs in the west Maljomar field; is that correct?

A. Yes, that's correct.

Q. And was ConocoPhillips involved in an agreement with COG in the Maljomar area?

A. As far as I'm aware, there was some data sharing, but I don't have any details regarding agreements in place. I was called upon for the Maljomar area regarding the drilling completion program that we have ongoing for four wells this year and the possibility of additional development in the area.

Q. Joint completion program with Concho? COG?

A. No, as far as the details that I'm aware of, this is a project that I was called in for specifically for ConocoPhillips.

Q. Are you aware that there was an agreement between the two parties in the Maljomar area?

A. No, it's outside of my realm and basically my job description.

Q. I believe you said something about getting the COG design from a completion engineer in the area?

A. Yes, Stewart Archibald.

Q. Does he work for COG?

A. He works for ConocoPhillips.

Q. How did he obtain the knowledge about the fracture techniques of COG?

A. As far as that data sharing agreement that I spoke of, we do have data on COG's wells within that area.

Q. What data do you have?

A. Completion reports, treatment schedules. I haven't personally reviewed them.

Q. Are you talking about the completion reports filed with OCD?

A. That I'm not sure.

Q. So your information came from another engineer at ConocoPhillips. Is he here available to testify?

A. No, he is not here today.

Q. So basically your information is from someone who is not here to testify and, therefore, is relatively hearsay information in this format, and you used that to build your simulation; is that correct?

A. Well, I'm trying to recall if this was taken from -- actually, I know for a fact that the job design that we inputted in the schedule was taken from the completion procedure and those were based off the overall or similar job designs that Concho had pumped in the area. Now, looking at the overall job designs, based on what I saw from the Burch Keely Unit 411, I didn't see dissimilar properties. You had roughly about 200-foot perforation intervals. Each one of the perforation clusters from the top to the subsequent bottom of the next stage was spaced roughly 100 feet apart.

As a matter of fact, the Burch Keely unit, the very first stage that had the most potential for contact into that area below 5,000 pumped a larger

job than what we simulated in the treatment schedule. It was 200,000 pounds versus the 177 simulated here. By nature of the larger job design I would imagine that the overall fracture dimensions would be larger.

Q. You are not telling me that the rock in the Burch Keely area is exactly the same as the rock in the Maljomar field, are you?

A. I would say in terms of rock properties, yes.

Q. Including porosity?

A. Petrophysics, no.

Q. Thank you. What is Conoco's design for fracking?

A. Well, it's basically as you saw in the treatment schedule. High injection rates.

Q. Conoco's?

A. ConocoPhillips, like I said, the treatment schedule that we have outlined in Exhibit 14 and that's the Tourmaline State No. 2.

Q. So that's the Conoco treatment schedule, not the Concho treatment schedule?

A. Based off of Concho Oil and Gas treatment designs.

CHAIRWOMAN BAILEY: Do you have many more

questions?

MS. LEACH: No, I don't.

Q. So then you can drill a well through the Burch Keely into the Grayburg Deep and you can perf a 5001 feet; is that correct?

A. That's correct.

Q. And you can use whatever fracking technique you want to; is that correct?

A. Probably correct.

Q. And then if you did that and your fractures weren't up to some extent, as you have shown us in your exhibit, then you would have fractures that would be drained from above 5,000 feet, wouldn't you?

A. That's certainly the dilemma of the entire case. You have a competitive situation which really benefits neither party.

Q. Is anyone complaining about your proposed fracking in that area?

A. Not yet, because based on previous testimony we have not built that area.

Q. Do you expect someone to complain?

A. Yes. I imagine that this probably won't be the last time that these parties are here in front of the Commission.

Q. But there's nothing immediately to stop you from fracking just below 5,000 feet?

A. No.

Q. And there's nothing that Concho isn't going to try to stop you from fracking just below 5,000 feet, is there?

A. No.

MS. LEACH: No further questions.

CHAIRWOMAN BAILEY: Let's take a ten-minute break.

(Note: The hearing stood in recess at 4:15 to 4:24.)

CHAIRWOMAN BAILEY: The counsel has indicated he would like findings and conclusions from both parties within two weeks if that would be at all possible.

MR. CAMPBELL: Does that change your issuance of the preliminary decision tomorrow?

CHAIRWOMAN BAILEY: No. It helps me draft the order. All right. We were about to have questions from the Commission.

MR. DAWSON: I have no questions.

MR. BALCH: I have several questions. Does the model allow for heterogeneity in another than the vertical direction.

THE WITNESS: No, it doesn't.

MR. BALCH: Same question. This is purely a forward model. You don't have any data to go back and compare the two to see if the fracture model is correct?

THE WITNESS: Further calibration points, say like the natural treatment, no. We wouldn't have that data.

MR. BALCH: Are you aware of any other Yeso data that might give you confidence in your model?

THE WITNESS: I have confidence in the model and I would certainly be willing to take a look at any treatment data from either direction.

MR. BALCH: There was some question about the data that went into the stress field, and I have some questions about the stress field as well. You will have an error bar associated with any of the calculations that you make in the stress field. Do you do multiple models or one model based on the calculations? Or do you do models that incorporated the error bars and the stress field calculations to see if there was significant variance?

THE WITNESS: You could do those exercises. I would say that we opted not to do a

sensitivity analysis because the overall stress contrasts seemed in line with previous model in the Yeso.

MR. BALCH: The last question is at what point in your proppant, amount pounds out there, do you start to lose conductivity from the reservoir?

THE WITNESS: You start to have a partial monolier of proppant at a concentration of about .2 pounds per square foot, which based on our graphic, there was a portion of the reservoir which was contacted by those low concentrations.

However, as we found in various reservoirs, and I'm just going to pull the Barnett shale as probably one of the biggest examples, when you have a brittle rock and you have broken it up and moved sections of the rock face away from each other, it's possible for the walls of the fracture face to close but not completely, and those asperities that you cause and leave behind are also conductive flow paths which can contribute to additional production.

CHAIRWOMAN BAILEY: Any redirect?

MR. CAMPBELL: No, ma'am.

CHAIRWOMAN BAILEY: The witness may be excused. Do you have any other witnesses?

MR. CAMPBELL: No, ma'am.

CHAIRWOMAN BAILEY: Are you ready to do closing?

MS. LEACH: I have to recall a couple people for small rebuttal. I would like to recall David Evans.

DAVID EVANS

DIRECT EXAMINATION

BY MS. LEACH

Q. Mr. Evans, do you recognize COG Exhibit 22?

A. I do.

Q. What is that?

A. This is prepared at my request. It's prepared of the Burch Keely royalty ownership versus the Grayburg Deep as we know it.

Q. What is the yellow show?

A. The yellow is the common ownership between the two units.

Q. And then in white the names are not common?

A. Not common.

Q. Are the majority of the names in white?

A. In the Burch Keely unit.

Q. So there are more names in white, more

names in the Burch Keely unit --

A. Yes.

Q. -- than the Grayburg Deep unit?

A. Significantly.

MS. LEACH: With that, I offer Exhibit 22 into evidence.

CHAIRWOMAN BAILEY: Any objection?

MR. CAMPBELL: Just one or two voir dire questions if I could.

VOIR DIRE EXAMINATION

BY MR. CAMPBELL

Q. Mr. Evans, is it your suggestion that the overrides would have to participate in any joint development in which the unit, the two current units are merged into one unit?

A. Yes, they would.

Q. Would it be your opinion as well that the overrides would have to be consulted and approve a joint development plan that does not contemplate the merger of the two units?

A. Part of the joint development agreement would include a commutization agreement. Then the overriding royalty owners would be required to sign.

Q. Then we have a difference of opinion. So your view is that it's just too tough to do a joint

development agreement because you have all these overrides out there that have to be consulted? Is that your testimony?

A. That's not my testimony.

Q. So your testimony is not that the presence of overrides would preclude a joint development between Concho and ConocoPhillips, correct?

A. If you come to an agreement and the parties agree to agree, we can make things happen.

Q. Thank you.

MS. LEACH: Would you admit my exhibit?

CHAIRWOMAN BAILEY: We will admit Exhibit 22.

(Note: Exhibit 22 admitted.)

CHAIRWOMAN BAILEY: You may be excused.

MS. LEACH: I call Ken Craig back very quickly.

KEN CRAIG

DIRECT EXAMINATION

BY MS. LEACH

Q. Mr. Craig, would you tell us what Exhibits 23 and 24 are?

A. No. 23 is an in-house program that we use called PERC which allows us to track our daily activity on our well work.

Q. This is a record from a COG file?
A. Yes.
Q. What does it tell you about the well that's API 30-015-36263?
A. That would be the Burch Keely Unit 411?
Q. Right.
A. The activity appears that we went in to prepare the equipment failure and that as they were going down to clean out the well they tagged up at 4511 and were unable to get below that depth. Later on in their comments after they had rerun the equipment, the comment is it was determined there was a cast iron bridge plug set at 4515.
Q. So then this well was plugged off at 4515; is that correct?
A. That's correct.
Q. And that would be above the area that we're calling the sliver; is that correct?
A. I believe that's right.
Q. And Exhibit 24, can you tell us what that is?
A. This is a sundry notice for Burch Keely Unit 411.
Q. And what does it tell us about Burch Keely Unit 411?

A. In Line 13 is the completion operation detail and it will be on a day-by-day basis, sometimes not depending on the activity. It shows that the well, after rigging up -- after drilling the well, coming in and rigging up, drilling out, it shows the perforations and the stimulation and then, of course, the date that we ran the down-hole equipment in the hole.

Q. So basically there was perforation, there was stimulation, but then there was a bridge plug put in. So was there ever production from the sliver area from this well?

A. No, there was not.

Q. So because there wasn't production from the sliver area, would it be a blue dot on the map that Mr. Broughton testified about?

A. No, I would not put it as a blue dot.

Q. Thank you. No further questions.

CROSS-EXAMINATION

BY MR. CAMPBELL

Q. When was the plug set, sir?

A. The plug was set October -- I'm sorry, I have an E-mail that lets us know there was a cast iron bridge set at 4511.

Q. My question is when was that set?

A. I believe October are 15th.
Q. Do you know why that is on the sundry notice?
A. I do not. That's something we need to fix.
Q. Should have been there?
A. Should have been there.
Q. Now, did Concho file the sundry notice or did Marbob?
A. I don't file these so I don't know whose office filed that.
Q. Well, you agree with me that the absence of the notice on the sundry order which should have been there stating a plug was placed, might have changed our perception of the sundry notice?
A. Yes, sir.
Q. And where on your Exhibit 23 do we see the plug was set?
A. You will not see it on Exhibit 23. This was work that was done in February of 2011.
Q. So if the plug is not shown to be set on either 23 or 24 -- am I correct with that?
A. Yes. Well, there's reference to the plug on 23.
Q. My question is where is the reference to

the plug on 23?

A. It was on the report date, February 16th, 2011. It would be the last ten words of that paragraph.

Q. Why don't you read me where we are notified that a plug was set.

A. The plug was not set during this operation. They went in to repair an equipment failure and when they tried to get down they hit that plug.

Q. So we are assuming the plug was set sometime before February 16th, right?

A. Yes.

Q. They just don't know when, right?

A. I know when.

Q. That's my question. When was the plug set?

A. October 15th.

Q. It's not reflected on Exhibit 24?

A. That's correct.

Q. What is your data source for the plug being set on October 15th?

A. It would be the field reports that come in.

Q. Well, as I understood the thrust of the

two exhibits with your testimony was that a plug had been set in this well?

A. Yes.

Q. Well, that a plug had been set in this well is reflected in either Exhibit 23 or 24 other than the fact that by February 16th going downhole someone hit the plug. My question to you then was when was the plug set and you said October 15th.

A. Yes.

Q. My question to you is where is the document that says the plug was set October 15th?

A. I don't have that document.

Q. Is there a document?

A. I have an E-mail.

Q. But you didn't bring the E-mail with you?

A. No, sir.

Q. Who is the E-mail from and to?

A. It's from the completions representative we have to numerous people. I didn't get it personally. I asked for it today.

Q. Somebody told you there's an E-mail that establishes the plug being set October 15th?

A. Yes.

Q. And they also told you that there's an E-mail that proves that?

A. Yes.
Q. And you have seen the E-mail?
A. Yes.
Q. But you don't have it here with you?
A. I didn't print it out. I don't have the means to do that.
Q. Do you know the process that follows with respect to an ADP?
A. Somewhat.
Q. Do you know -- I mean, Concho has filed hundreds in the last few months, haven't they?
A. Yes.
Q. All you show on the ADP is the depth of the well, correct?
A. I believe that's correct.
Q. If the depth of the well is within the pool boundary, what protest would Conoco have to oppose the issuance of a permit to drill?
MS. LEACH: Seems to be beyond the scope of the rebuttal questions that were very limited in their scope.
CHAIRWOMAN BAILEY: I have to agree.
MR. CAMPBELL: You don't have to answer me.
THE WITNESS: Okay.

CHAIRWOMAN BAILEY: Do you have any other questions?

MR. CAMPBELL: No, ma'am. Thank you, sir.

CHAIRWOMAN BAILEY: Are there any questions from the Commission?

MS. LEACH: I move for admission of 23 and 24, please.

CHAIRWOMAN BAILEY: Any objection?

MR. CAMPBELL: We would object on the lack of completeness relative to the testimony regarding the presence of a plug on October 15th. Neither of the documents establish that fact. They document one which apparently does but has not been tendered so we object to the admission of these two on the basis of incompleteness.

MS. LEACH: I just want these admitted for the basis of what they contain in that certainly by February there was a plug set at 4515 mark and he is exactly right, we don't have a document that covers exactly when the plug was in place.

CHAIRWOMAN BAILEY: So on the basis that it only reflects what it reflects, they will be accepted.

(Note: Exhibits 23 and 24 admitted.)

MR. BALCH: I have one question. Between

October and February was that well re-entered?

THE WITNESS: No.

MR. BALCH: No further questions.

MR. DAWSON: No questions.

CHAIRWOMAN BAILEY: You may be excused. Any other witnesses?

MS. LEACH: No, I am happy to report.

CHAIRWOMAN BAILEY: Would you care to do a closing?

MS. LEACH: Would you like a closing now? I promised you a two or three-minute closing.

CLOSING STATEMENTS

We are interested in having the sliver added at the bottom of the Burch Keely unit and the Grayburg-Jackson pool. We believe we have met the requirements. Everyone today has testified about this is all in the same pool. There is no dispute that it's a common source of supply. But the unit under the Statutory Unitization Act, there's a description of waste that goes beyond the definition of the Oil and Gas Act which specifically says that if the unit will help increase production, if including it will increase production, then basically that is a good reason to put lands in the unit because that prevents waste.

It's a broader definition than exists in the Oil and Gas Act which looks much more at dissipating the reservoir of energy. Since we are going to do findings and conclusions, I'm sure I can write more about that but I will reiterate that in making the statutory requirements for the units and pools, we met those burdens and what we have is diversion of focus of the fracturing case and I'm sure I said enough about that already today. Thank you.

CHAIRWOMAN BAILEY: Mr. Campbell?

MR. CAMPBELL: Ma'am chairman, there is no debate here that the 5,000 foot line is an artificial line designating only ownership and no geologic boundary barrier. We are faced with a rather unusual situation here.

The object of the Oil and Gas Act as statutorily charged is to prevent waste and protect correlative rights. We have demonstrated here that the most efficient, least wasteful, most protected method of correlative rights is to jointly develop this acreage. Mr. Broughton on the stand said yes, the best way to develop the Blinebry is to jointly develop it.

There has been no movement towards joint

development. We cannot force them to jointly develop it with us. This is not going to be a statutory unitization. Arguably, the Commission can force them to negotiate with us. We are exploring the prospect of some sort of vertical forced pooling to resolve this controversy. I don't know whether that will work, but I ask the Commission to consider in my opening pushing Concho to negotiate joint development here.

Their own expert, their engineering geologist, a highly qualified individual, said the best way to develop the resource with the least waste and the most protection of correlative rights is joint development. So the question is what should the Commission do if they won't force them.

We submit to you that the best way to do that and what the evidence compels is to deny these applications. Because to deny these applications will force them to negotiate a joint development of this resource to the benefit of everybody. It's all well and good that they want another sliver to get their rights and interests. It apparently doesn't matter to them that that will cause us to drill twin wells when we shouldn't have to do that. It is uneconomic for us to do it. It would be uneconomic

for them to do it if they were in our shoes, so how can you -- how can you push the parties towards negotiating what is the most efficient development of this resource.

We submit to you it is to deny these applications and make them recognize that the economics in the prospect of granted resources is enough to make them sit down. These agreements are negotiated all the time. It is the best way to do things here. It should not matter that Conoco has not yet begun development in the Grayburg Deep. If you grant the application and they want to capture reserves to 5,000 with their fracking mechanics they are going to intrude across the 5,000 line. And as a management responsibility, ConocoPhillips will have to respond, and a drilling war, expensive and wasteful, will ensue.

On that basis, we urge you to deny this application which will force Concho to negotiate in good faith with us. If you don't, the only thing we can do is to drill twin wells. This suggestion that we have the opportunity to protect our correlative rights by protesting every ADP is just nonsense. If they bottom-hole their well at 5499 inside the extended pool boundary, what basis do we have to

oppose it? What possible basis would the Commission have or the Division have to deny it?

No frack information is contained in ADP. We have no remedy here to protect ourselves in protesting ADP. It just doesn't work. So we urge you here. This is a difficult case. It's an important case because we do not want to have to go to war. The most efficient way to proceed here is jointly. These are responsible companies and the way to make Concho look at the issue differently rather than just their own issue to protect the correlative rights and prevent waste is to give some leverage relative to the refusal to negotiate. You do that by denying this application. Thank you all for your time and attention. Conoco appreciates it very much.

MS. LEACH: Thank you indeed.

CHAIRWOMAN BAILEY: And thank you. Please submit findings and a proposed order within two weeks so counsel will have an easier time drafting the order. We will meet tomorrow morning at 9:00 o'clock to begin deliberations on this case and the remaining case on the docket for today. So this hearing is continued until tomorrow morning at 9:00 o'clock.

(Note: The hearing was concluded at 4:50.)

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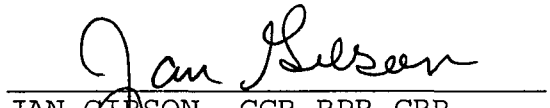
REPORTER'S CERTIFICATE

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.



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