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

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

ORIGINAL

APPLICATION OF APACHE CORPORATION AND COG OPERATING, LLC TO AMEND ORDER NUMBER R-13382-E ESTABLISHING TEMPORARY SPECIAL POOL RULES.

CASE NO. 14613

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

September 18, 2014

Santa Fe, New Mexico

BEFORE: RICHARD EZEANYIM, CHIEF EXAMINER

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

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EXHIBITS OFFERED AND ADMITTED

(11:35 a.m.)

EXAMINER EZEANYIM: We are going to go to Case Number 14613, see if we can get it done before lunch.

Call Case Number 14613. Case Number 14613 is reopened, so take note of that. 14613 is reopened, and this is the application of Apache Corporation and COG Operating, LLC to amend Order Number R-13382-E for temporary Special Pool Rules, Eddy County, New Mexico.

At this point I call for appearances.

MR. DEBRINE: Earl DeBrine, with the Modrall Sperling firm in Albuquerque, for the Apache Corporation. I also have Jordan Kessler here.

EXAMINER EZEANYIM: Any witnesses?

MR. DEBRINE: Yes, Mr. Examiner. We'll be presenting four witnesses.

EXAMINER EZEANYIM: Any other appearances?

MS. MUNDS-DRY: Ocean Munds-Dry for COG Operating, LLC, and I have three witnesses, Mr. Examiner.

EXAMINER EZEANYIM: Any other appearances?

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe representing ConocoPhillips Company and Burnett Company, Inc. I do not have any witnesses.

EXAMINER EZEANYIM: Any other appearances?

Okay. I understand this is not a contested case, but I think there is a lot of interest, so I don't have to address any statements or whatnot.

Everybody who is going to testify, please stand up, state your name and be sworn.

MR. HENKHAUS: Mark Henkhaus, Apache Corporation.

MR. MILLS: Clint Mills, Apache Corporation.

MR. GONZALEZ: Alexander Gonzalez, Apache Corporation.

MR. ONISZCZUK: Alejandro Oniszczuk, Apache Corporation.

MR. BROUGHTON: Harvin Broughton, COG Operating, LLC.

MR. EVANS: David Evans, COG Operating, LLC.

MR. CRAIG: Ken Craig, COG Operating, LLC.

EXAMINER EZEANYIM: While standing, you have to raise your hand to be sworn, please.

(Mr. Henkhaus, Mr. Mills, Mr. Gonzalez, Mr. Oniszczuk, Mr. Broughton, Mr. Craig, Mr. Evans sworn.)

EXAMINER EZEANYIM: Okay. Call your first witness.

MR. DEBRINE: Yes. Call Mr. Henkhaus.

MARK HENKHAUS,

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

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. My name is Mark Henkhaus.

Q. Who do you work for, Mr. Henkhaus?

A. Apache Corporation.

Q. Could you just give the Examiner a brief summary of your educational background and experience?

A. I graduated from Texas A & M University in 1982 with a bachelor of science in petroleum engineering. I worked for the Texas Railroad Commission for not quite 30 years, the last 20 as the district director in Midland. I worked for EXCO Resources in Dallas for four years as a regulatory manager, and I've been with Apache Corporation in Midland as a regulatory manager for the Permian region for the last two years.

Q. What were your responsibilities as a district director for the Railroad Commission?

A. I was responsible for everything that the Commission did in the Permian Basin, Districts 8 and 8A, as far as relating the oil and gas industry.

Q. As part of that work, did you require knowledge and experience with regard to the establishment of the administration of depth bracket allowables in Texas?

A. Yes, I did.

Q. Have you previously testified before the New Mexico Oil Conservation Division or a state agency that has similar responsibilities in any other states?

A. I have testified extensively in Texas and a handful of cases in Louisiana.

MR. DEBRINE: We tender Mr. Henkhaus as an expert in petroleum engineering and regulatory land matters.

EXAMINER EZEANYIM: He so qualified. He went to A & M. What do you expect me to say? You know what I'm going to say (laughter).

THE WITNESS: The Examiner is correct (laughter).

EXAMINER EZEANYIM: Okay. Go ahead.

Q. (BY MR. DEBRINE) Are you familiar with the application that's been filed by Apache and COG in this case for the lands that are the subject of the application and the pools that are the subject of the application?

A. Yes, I am.

Q. Are you familiar with the terms of the order

that was originally entered by the Division in Case 146647 [sic], Order Number R-13382-E?

A. That occurred before my employment with Apache, but I have reviewed it extensively. Yes, sir.

Q. Have there been -- the pools are described in the terms of that order; are they not?

A. They are.

Q. Have there been any changes in the boundaries of the pools that were the subject of the original case since that order was entered, to your knowledge?

A. To my knowledge, there have not been. We have an exhibit that will show the boundaries of the pools.

Q. Could you turn to Exhibit 1?

A. Yes, sir.

EXAMINER EZEANYIM: Which one is yours?

MR. DEBRINE: The white notebook, Mr. Examiner. I guess we have two white ones, but you've got the right one.

EXAMINER EZEANYIM: Okay. Go ahead.

Q. (BY MR. DEBRINE) Could you describe Exhibit 1?

A. Exhibit 1 is a simplified land map showing the section, township and ranges and the pool outlines that are affected in this order. And I would like to also acknowledge Concho's assistance in preparing this.

Q. As the Applicant, did you provide notice to all

operators in the pool and also operators of the Yeso wells within one mile of the pool boundaries?

A. We did.

Q. Is there an exhibit that reflects the notice that was provided as required by the Division rules?

A. I believe there is.

Q. Could you turn to Exhibit 4, please?

EXAMINER EZEANYIM: 4?

MR. DEBRINE: Yes.

Q. (BY MR. DEBRINE) Is that the Affidavit of Notice with regard to the operators in the pools and the operators of wells within one-mile boundary -- one mile of the pool boundaries?

A. It is.

Q. Does it also contain the Affidavit of Publication for the publication notice in the newspaper as well?

A. It does.

Q. Were all those unable to locate?

A. Yes, sir.

Q. Can you just describe what it is you're asking the Division to do by Apache's and COG's application?

A. We are asking, essentially, for two things. One is to make the field rules, as established in the 2011 order, permanent, and also we're asking for an

increased allowable to suit our horizontal development plans going forward.

Q. Are you also asking that the order entered by the Division be made retroactive because the Special Rules expired on September 1st?

A. Actually, we are, yes, sir.

Q. Is Apache experiencing any production in these pools?

A. We have.

Q. Are you also asking the Division to cancel any of the production that Apache or any of the operators may have as a result of the existing allowables?

A. We are.

Q. Could you just provide the Examiner with some background concerning the history of prorationing and the establishment of depth bracket allowables?

A. Yes, sir. Very briefly, I put together some information regarding the establishment of oil proration allowables, and this is really more relevant to oil, not gas.

But oil proration started in the 1930s in east Texas, and oil proration was really instituted not as a conservation measure but as a price control, a market-demand arrangement scheme.

Over the years, starting in the 1940s -- I

think 1941 is the first record I could locate of the depth bracket allowable structure. Texas, Louisiana and New Mexico instituted very similar programs where deeper wells would be granted a deeper -- or a higher allowable, which really enables an operator to justify the economics better. In this day and age, where we essentially have 100 percent demand, I think the whole allowable structures rule is kind of an anachronism, to be honest with you. The depth bracket allowables still exist, and they do affect us. And we are asking for an increased allowable because of that and the effect it has on our program.

Q. Did you prepare an exhibit that summarizes the history of prorationing of depth bracket allowables in the producing states?

A. Yes, sir, I did.

Q. Could you identify that exhibit?

A. That's Exhibit Number 5.

Q. Did Apache also undertake a study with regard to the engineering and geology in order to justify the increase in the allowable it's asking in its application?

A. We have done so.

Q. If you could, just describe for the Examiner the problems that Apache has encountered with regard to

its horizontal development and why it is against the existing allowable and asking it to be increased.

A. Okay. I would like to refer to Exhibit 3, if I may.

Q. Okay. What is Exhibit 3?

A. Exhibit 3 is a simplified diagram of Apache's current horizontal development program in the Cedar Lake Field. And what this diagram shows is how we are using what we call super pads or multi-pad drilling to enable us to fully develop the two or three landing zones in the Yeso to maximize our recovery and to minimize our surface impact.

Q. And how is the development of these pools through these pads resulted in problems complying with the existing allowable?

A. The problem is that when we bring multiple wells online at the same time or near the same time, the nature of the production from these wells is we immediately receive a large volume of oil. Which three wells drilled, for instance, in a four 100 -- four 40-acre units, 160 tract, would easily be over the 1,200 barrel limit established for this field as a current allowable. The current allowable per the last order is 300 barrels per 40-acre unit. So we have exceeded that in several cases.

Q. Based on the knowledge of the reservoir that you obtained since the Division order was ordered in September 2011, do the results of the Apache study support the Division's findings that were in that original order?

A. I believe they do, yes.

Q. Let's just go through and take a look at that order and some of the key findings with regard to the characteristics of the reservoir.

A. Okay.

Q. And if I could turn your attention to page 16 --

A. Okay.

Q. -- where the Division's findings are, if you could just go over and bring us back as to what the Division found in that case and why those still hold true today.

A. Okay. I'll be glad to.

Conclusion Number 70 found that the correlative interval for this field as defined in the order is still current. This is a Yeso development. It's got several landing zones. It's got two, a Blinebry and a Paddock landing zone, that we've identified, and the correlative interval is not being changed at this time.

Conclusion 71 defines it as the Yeso and includes the Paddock, Blinebry, Tubb and Drinkard members of the Yeso. And what we have learned through our development is that the Blinebry and the Paddock are probably targets of interest at this point.

Conclusion Number 72 recognizes that the Yeso has extremely low porosity and extremely low permeability and is essentially heterogeneous. It's very thick. It's a massive structure, and that makes it very amenable to horizontal development with multiple landing zones.

Conclusion Number 73 acknowledges that this is a solution gas drive and that there is no gas cap, and we don't expect a gas cap to develop because of the permeability and porosity. And I believe the testimony you will see later will prove that out.

And then I would go to Number 76, Conclusion Number 76, where it's acknowledged that in these low-perm solution gas reservoirs, we're not damaging EURs or ultimate recovery by increasing the allowable or increasing the production rate of these wells. It appears, in fact, to possibly be the opposite. We may actually increase the EURs by producing as hard as we can. You'll have some testimony from our reservoir engineer on that.

And conclusion Number 77, since the solution gas drive does not -- is not adversely affected by these high rates, the gas-oil ratio does not seem to be adversely affected or remains relatively constant, and I believe that that conclusion also will stand and justifies the fact that these high pro [sic] rates are okay and do not harm the reservoir.

Q. Apache's study that it's presenting today is concentrated on wells that it has drilled on a patch, as described earlier, in the Cedar Lake area, the Cedar Lake pool; is that correct?

A. Yes, sir, that's correct.

Q. Does Apache anticipate the same development through these various pools?

A. There are several areas in this area that we can probably only develop with horizontals.

Q. And why is that?

A. The surface-use restrictions in this area -- because this is BLM land; it's federal. This is a sagebrush lizard habitat area; it is a lesser prairie chicken area. The surface use restrictions are very, very difficult to work around. And this field, for instance, south of here and areas with different surface features is being developed vertically. Here there is no way to develop this vertically because of these

restrictions.

Q. So it's your expectation that you're going to encounter the same problems as Apache develops its acreage within the other pools in exceeding the 300-barrel-a-day allowable?

A. Yes, sir. I think that that's very clear.

Q. Did you prepare an exhibit that shows Apache's acreage position within the pools?

A. I did.

Q. If you could identify that.

A. That is Exhibit Number 2, and this shows -- it's just a simple outline of Apache's acreage position, not necessarily 100 percent, but our interest in the lands that are illustrated on Exhibit 1.

MR. DEBRINE: Mr. Examiner, we'd move the admission of Exhibits 1 through 5.

EXAMINER EZEANYIM: Any objection?

MR. BRUCE: No objection.

EXAMINER EZEANYIM: Exhibits 1 through 5 are admitted.

(Apache Corporation Exhibit Numbers 1 through 5 were offered and admitted into evidence.)

CROSS-EXAMINATION

BY EXAMINER EZEANYIM:

Q. What is the land position, Exhibit 2? Number 2?

A. Exhibit 2, yes, sir.

Q. That's Apache's land position in the Yeso shelf, right?

A. That is in the townships around the area we're talking about. Yes, sir.

MR. DEBRINE: And that concludes my direct exam, Mr. Examiner.

EXAMINER EZEANYIM: Ms. Munds-Dry?

MS. MUNDS-DRY: No. I have no questions.

MR. BRUCE: No questions.

MR. DEBRINE: I do have one other question.

EXAMINER EZEANYIM: Go ahead.

CONTINUED DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Mr. Henkhaus, in your opinion, would the granting of Apache's application promote conservation and prevent waste?

A. I think it would, absolutely.

MR. DEBRINE: No further questions.

EXAMINER EZEANYIM: Thank you very much.

RECROSS EXAMINATION

BY EXAMINER EZEANYIM:

Q. Let's go back to that exhibit -- what is that,

the one where you have your planned drilling activity? Where is that?

MR. DEBRINE: That's Number 3, Mr. Examiner.

Q. (BY EXAMINER EZEANYIM) Using your -- Apache's position in the Yeso shelf, you have planned these wells to be drilled, right?

A. Yes, sir. Some of these have been drilled. Some of them are planned, and some of them have been approved, but we just haven't drilled yet.

Q. Which ones have been drilled?

A. The color code you can see here. The pads marked in the green represent pads we have drilled from. The proposed are in red, and the in-progress is in blue, which would be pad one to the south.

Q. Now, on this -- I'm taking that -- they are producing now, right?

A. Some of these wells are. We have 16 horizontal producers.

Q. Are they producing below their bubble point?

A. I don't know that I'm the person to ask that. I think our reservoir engineer will provide testimony in that regard.

Q. Because that would be very crucial to what we're doing. And if you look at what you just said

about analyzing the order we wrote, I want to know what the state of production is, whether it's above bubble point or below bubble point and why you are asking for this.

A. The testimony you'll see from both Apache and Concho will, I believe, show you that the GORs have remained relatively constant, have not been adversely affected, which would indicate to me that the bubble point is not an issue.

Q. Very good.

Go to the red outline there. You think you're going to be drilling three wells on the 160?

A. We will drill at least three wells on a 160.

Q. And you possibly are drilling four?

A. There could be. We're still in the science phase as far as determining what is the best spacing, for instance, from well to well. We don't know that we know that answer yet, so there is still work to be done in that regard.

Q. Of course, the rule is that you can drill 100 if you want to.

A. Exactly. But I would assume that would not be the case.

Q. Sometimes I exaggerate to make my point.

A. I understand.

Q. Okay. Very good. That's interesting.

We need to get these hydrocarbons out as long as we protect correlative rights, right?

A. Absolutely.

Q. If we protect correlative rights, why do we want to leave it underground? Sometimes we do because the Act says your correlative rights if we don't produce waste. So we might even violate some correlative rights in producing -- if I understand it right. I don't know. That's my understanding. I'm not an attorney.

Okay. Let me ask you some more questions before you step down.

You want the rules made permanent?

A. Yes, sir.

Q. What would you say if you are asked to abolish depth bracket allowables in the Yeso shelf?

A. If I was to ask if we should abolish allowables?

Q. Yes, in the Yeso shelf.

A. I believe that that would be -- in my mind, that would be a prudent move, because, number one, it would allow us to develop the wells without regard to an artificially conceived allowable. It also, I think, would eliminate hearings such as this that really are a formality. I mean, it's a burden to not only the

operators but to the Division as well.

Q. We recognize that.

Okay. Now, tell me -- because we are trying to get -- tell me, how are you going to -- in certain circumstances, how are you going to protect correlative rights if I -- if we abolish depth bracket allowables?

A. Well, the allowable abolition would not affect spacing and lease line protection. The 330 standoff would still remain.

Q. Okay. I want to get you on the record. And, again, you know, on the correlative rights issue, I don't think -- this is in the Yeso. Do we have a glut in the market?

A. A glut of oil?

Q. Yeah.

A. I think locally we do, but nationally we do not.

Q. Can you explain that to me?

A. We have a take-away capacity issue in the Permian Basin. I think that's very apparent. There are not just pipeline issues. We're sending crude oil out of the Basin by the train carload.

Q. Why am I still paying $3.19 a gallon now at the pumps if we have a glut? Why am I still paying that?

A. I'm not an economist.

Q. Where is this glut? In Texas?

A. The glut is in the Bakken. It's in the Permian, and it's in the Eagle Ford, I think I'd be safe to say.

Q. Okay. Very good. I'm trying to get information for us to make a decision, because what we have -- if we have a glut, then we can do something a little bit to make sure we don't have an overflow of these oils, maybe drive down the price. Last time I checked, the price of oil is about 93. I don't know what it is today. But I would write an order on Tuesday. I check BakerHughes. They gave me $93. So I don't know whether that glut is going to drive down the oil price, which we don't want to happen.

A. The nation still imports a significant portion of crude oil that we use, so, therefore, there is not a glut of crude oil on a nationwide market basis.

Q. Okay.

A. There is a local take-away issue whether it's gas or oil. It's still the same issue of getting the product out of the region it's being produced to the refineries and to the ultimate end user.

Q. Okay. Very good. Yeah. I don't have to ask you. You understand, you know, the -- of reservoir in

the Yeso shelf. So we don't need to explore it. It's already contained in R-13382-E.

Let me ask you a question. You know, any way I can get that done, what -- how many -- in the event I can get that done, how much of this oil -- you are asking for 600. Could you produce more than 600 from a 40-acre unit?

A. We are asking for 600 per 40-acre unit, which would give us a 2,400 barrel per 160. And I think that number is probably a realistic number, what we expect and have to produce when it's brought on. I think that that's a reasonable number. If I thought I could ask for more just so we would not have to come back and have that problem -- it would be a great problem to have, but I probably would. But I'm comfortable with going from 300 to 600.

Q. Yeah. You know where I'm going. Okay. Very good. But I want to get you on the record. Okay. Very good.

I have some technical questions for your engineer who may answer that question. If you want to ask for 600, you want to demonstrate that, 600 is what you want and how you came up with that.

A. Yes, sir. I think -- I think you will see the testimony later from our reservoir engineer and

production people that the 600 per 40-acre unit is actually a pretty fair number based on the production we've seen.

Q. Okay. Very good. Those questions I can ask later, but you might get recalled, so don't go home yet.

EXAMINER EZEANYIM: Any questions?

MS. MUNDS-DRY: No, sir.

MR. DEBRINE: Just a brief redirect, Mr. Examiner.

REDIRECT EXAMINATION

BY MR. DEBRINE:

Q. The Examiner asked a question or referred to impairment of correlative rights. On Exhibit 4, you gave notice to all the operators and listed all the operators. Did any operator express any objection to Apache with regard to the relief it is requesting in its application?

A. No. We received no negative feedback at all from anybody who received notice. In fact, we received several letters of support.

MR. DEBRINE: No further questions.

EXAMINER EZEANYIM: Thank you very much. You may be excused.

THE WITNESS: Thank you, sir.

EXAMINER EZEANYIM: Call your next witness.

MR. DEBRINE: Call Alex Gonzalez.

EXAMINER EZEANYIM: Mr. Gonzalez, you have previously been sworn, and you are still under oath.

ALEXANDER GONZALEZ,

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

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. Alexander Gonzalez.

Q. And who do you work for, Mr. Gonzalez?

A. Apache Corporation.

Q. Could you give the Examiner a brief summary of your educational background and experience?

A. I graduated from Amherst College with a degree in geology in 2010, and I received my master's from the University of Utah in 2013 in geology. And I began --

Q. And when did you start working for Apache?

A. This January, January 2014.

Q. Did you have any experience in the industry prior to working with Apache?

A. No, sir.

Q. Did you have membership in any professional associations?

A. Yes, the AAPG, which is the American

Association of Petroleum Geologists.

Q. Are you familiar with the application that's been filed by Apache in this case?

A. Yes.

Q. Have you conducted a geologic study of the Yeso pools that are the subject of the application?

A. Yes.

MR. DEBRINE: Mr. Examiner, we'd tender Mr. Gonzalez as an expert witness in petroleum geology.

EXAMINER EZEANYIM: So qualified.

Q. (BY MR. DEBRINE) Have you prepared some exhibits as a part of your study?

A. Yes.

Q. If you could, Mr. Gonzalez, I'd just like you to just walk through the exhibits and explain to the Examiner what they represent and the conclusions you reached with regard to the work that you did and then how they're indicated in the exhibits. If you can turn to Exhibit 6, could you identify that for the Examiner?

A. Yes. This is an overview of the Permian Basin, and I just wanted to locate where we are. We're in the northwest shelf in Eddy County, highlighted by the red block.

Q. And could you turn to Exhibit 7?

A. (Witness complies.)

Q. Could you identify that exhibit for the Examiner?

A. Yes.

Q. And what does it depict?

A. It's a description of the geology in the Yeso.

Q. And I just went over the terms of the prior order, the original case with Mr Henkhaus, and this is a statement of those findings made by the Division in Order R-13382-E concerning geology; is that correct?

A. Yes, that's correct.

Q. And do you concur with the findings that were made by the Division in its original order in September of 2011?

A. Yes.

Q. If you could turn to the next slide, Exhibit 8, and explain what that is.

A. Sure.

Mr. Examiner, on Exhibit 8, it's a geologic overview of the Yeso. It is a carbonate that is Permian in age. The Yeso is subdivided into the Glorieta, the Paddock, the Blinebry and the Lower Blinebry. The Paddock, the Blinebry and the Upper Bline- -- the Lower Blinebry are primary targets for a lot of the wells. It's believed that the source of the oil in the Yeso has migrated from the Basin on the -- to the right.

The reservoir, again, is a dolomite, and there is an abundance of naturally occurring fractures. And additionally, the seal are in overlying evaporites, and it is a stratigraphic trap to the north.

Q. And what are the key characteristics of the reservoir?

A. Generally, there's very low porosity and permeability and an abundance of naturally occurring fractures, but thickness is consistent across the Yeso.

Q. Would you turn to the next exhibit, Exhibit 9? What is Exhibit 9? Could you explain to the Examiner what you're depicting here?

A. Yes.

Mr. Examiner, Exhibit 9 is an overview of our Cedar Lake Field with the structure of the Yeso on top of it, the highest point to the northwest, and it dips down to the east and to the south. Our horizontal program is primarily -- is all located on the north part of the Cedar Lake Field. And the vertical program is on the south part of the field.

And, again, as previously mentioned, the colors indicate the status of the pads, with the green having already been drilled. The blue, in pad one in Section 7, is where we're currently operating, and the red is where we'll be drilling the remainder of the

horizontal wells.

Q. And so this ties back to Exhibit 4 that Mr. Henkhaus talked about?

A. That's correct.

Q. Could you turn to the next exhibit, Exhibit 10?

A. Exhibit 10 is an example of the structure using our logs. The whole point of this is to show that -- showing down dip as you go towards the south part of the field, but you also see a relative thickness of the Yeso as you go across the field.

Q. Based on your geologic study, which includes information determined from an analysis of subsequent wells drilled by Apache and other operators since the Division entered its order in 2011, do you have an opinion as to whether the findings -- geologic findings by the Division in its original order are still true today?

A. Yes.

Q. And what is that opinion?

A. It's still valid.

Q. Do you have an opinion as to whether the entry of an order by the Division that allows all operators of the pools to increase the depth bracket allowable from 300 barrels a day to 600 barrels a day will prevent waste and protect correlative rights?

A. I agree.

Q. Do you have an opinion as to whether increasing the allowable to 600 barrels a day is in the interest of conservation?

A. I agree.

Q. Do you have an opinion as to whether increasing the allowable to 600 barrels a day will allow operators of the pools to efficiently and economically recover additional reserves that would otherwise go undeveloped and thereby prevent waste?

A. Yes.

Q. Mr. Gonzalez, were Exhibits 6 through 10 prepared by you or at your direction and supervision?

A. Yes, they were.

MR. DEBRINE: Mr. Examiner, we'd move the admission of Exhibits 6 through 10.

EXAMINER EZEANYIM: Any objection.

MS. MUNDS-DRY: No objection.

EXAMINER EZEANYIM: Exhibits 6 through 10 will be admitted.

(Apache Corporation Exhibit Numbers 6 through 10 were offered and admitted into evidence.)

MR. DEBRINE: Pass the witness.

EXAMINER EZEANYIM: Ms. Munds-Dry?

MS. MUNDS-DRY: I have no questions of Mr. Gonzalez.

MR. BRUCE: No questions.

EXAMINER EZEANYIM: It's very good to say that the Division did a good job. You know why is that? I got ten supports of this order that was written in 2010. And one of the writers of this order was standing [sic] on the 300 barrels per day. Now he's asking us to increase it to 600. It's one of the letters. I got ten of them. Then the Division said it's 300. Now the allowable is 300. Now you want 600. So you see how you create jobs for us? We shouldn't have had three days of that testimony if you had agreed to do 300. It shouldn't have gone to hearing. Okay. Very good. So we had a lot of support for your application, people who want 300. And this shelf is a very, very prolific shelf, and we love what it's doing.

CROSS-EXAMINATION

BY EXAMINER EZEANYIM:

Q. You are a geologist, right?

A. That's correct.

Q. Okay. Let me see if I have any questions for the geologist. I don't really have any because all of these have been around for a long time. I understand it to my fingertips [sic]. I have no questions for you.

You may step down.

EXAMINER EZEANYIM: Call your next witness.

MR. DEBRINE: Call Alejandro Oniszczuk.

ALEJANDRO ONISZCZUK,

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

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. My name is Alejandro Oniszczuk.

Q. And who do you work for, Mr. Oniszczuk?

A. I work for Apache Corporation.

Q. Could you give the Examiner a brief description of your educational background and experience in the oil gas industry?

A. Yes, sir. I have two engineering degrees from the Buenos Aires Institute of Technology, one in petroleum engineering and another one in industrial engineering. I have worked in Buenos Aires for OXY for four years, then for Apache for two-and-a-half years. And I have been working the Permian Basin for the last two years.

Q. Have you made an engineering study of the reservoir that's the subject of Apache's and COG's applications?

A. Yes.

Q. Are you familiar with the application that's been filed by COG and Apache in this case?

A. Yes, sir.

MR. DEBRINE: We tender Mr. Oniszczuk who is an expert in petroleum engineering.

EXAMINER EZEANYIM: You are a reservoir engineer, right? You are a reservoir engineer?

THE WITNESS: Sorry?

EXAMINER EZEANYIM: You are a reservoir engineer, right?

THE WITNESS: Yes. I am a reservoir engineer.

EXAMINER EZEANYIM: Accepted.

Q. (BY MR. DEBRINE) Are you familiar with the terms of the Division's order, R-13382-E?

A. Yes, sir.

Q. If you could turn to Exhibit 11 and that is a statement of the findings made by the Division in Order R-13382-E, Findings 73, 74, 76, 77, with regard to the characteristics of the reservoir. And my question is: Based on the study that you performed with regard to additional wells that have been drilled since the Division's order was entered, do you concur with the findings made by the Division in that order still hold

true today?

A. Yes, sir. All still hold true today.

Q. Did you prepare some exhibits to illustrate your testimony and opinions for the Division here today?

A. Yes, sir.

Q. What I'd like you to do is just turn to the first exhibit, Exhibit 12, and explain to the Examiner what that exhibit is and what you're depicting, the conclusions that can be drawn.

A. Mr. Examiner, on Number 12, it's a summary of the normalized production that we have been seeing in the horizontal well that we have in production at Cedar Lake. The different colors show different wells, and the green dots are the average of those productions. This shows all the oil production. We are going to go to GOR on the next ones, but this shows what kind of range we are expecting for these wells.

Q. And could you just state what that range is in terms of allowables [sic]?

A. We have wells starting from 200 to 600, 30 days' average, barrels of oil per day.

Q. If you could turn to Exhibit 13 and explain to the Examiner what your findings are and what is depicted by that exhibit.

A. Sure.

Mr. Examiner, Number 13, it's the addition of all the production that we are seeing from those horizontal development. You can see oil in green, gas in red, and in blue, you have water.

Down to the bottom part of the chart, you can see GOR and water-oil ratio behavior. We started this development in November last year, and we didn't see any kind of increase no matter how many wells we put in production. The range of the GOR goes from one to two. And when -- we are going to go to -- see the individual behavior and seeing that that behavior confirms every single one of them.

Q. If you can turn to Exhibit 14 and explain --

EXAMINER EZEANYIM: Excuse me. Because I'm color-blind, I need to -- maybe I can -- which one is red? Red depicts what?

THE WITNESS: Red is the gas production.

EXAMINER EZEANYIM: Okay. Green?

THE WITNESS: Green is the oil production. Blue is the water production.

EXAMINER EZEANYIM: Do you have high water content in this area? It appears you have a high water problem. Of course we do, you know, but we still get the oil. Right?

THE WITNESS: We start producing a lot of

the stimulation water that we use, and then we carry on with the water --

EXAMINER EZEANYIM: I can see the water content.

THE WITNESS: We have seen this similar behavior in a different part of the Yeso.

EXAMINER EZEANYIM: Yeah.

THE WITNESS: To the very bottom of the chart, you can see water-oil ratio in the light blue.

EXAMINER EZEANYIM: Oh, okay. That's water-oil ratio?

THE WITNESS: Sorry?

EXAMINER EZEANYIM: Water-oil ratio in the light blue?

THE WITNESS: Yes, sir, water-oil ratio.

And then at the very bottom, you can see GOR ranging from one to two through all the entire 300 days we have had these wells in production.

Q. (BY MR. DEBRINE) And the conclusion is -- the results of your study show that there has been no increase in GOR depending on the number of wells that are drilled or the rate that they've been produced?

A. Correct. Correct.

Q. Would you turn to Exhibit 14 and explain to the Examiner what that exhibit depicts and the conclusions

contained within it?

A. Yes, sir.

Mr. Examiner, Number 14, it's an individual picture of every single well that we have in production in this horizontal development. You can see the name of the well, the target, the 30 days barrel oil per day, an average, and then the average GOR and the last GOR that we have been able to measure, showing that we haven't been increasing the GOR significantly throughout the development. The yellow lines mean the different 160-acre pools that we have involved in these wells.

Q. And when you say yellow lines, there are two different colors of yellow on Exhibit 14. Which one are you referring to?

A. What do you mean?

Q. Oh, I'm sorry. I've got the wrong exhibit.

A. Okay.

Just to clarify, you are seeing a table with different columns, GOR volumes and 30-day parts of oil per day IP.

Q. Could you turn to the next exhibit?

CROSS-EXAMINATION

BY EXAMINER EZEANYIM:

Q. Before you go to that, the oil in the Paddock -- because I see the Upper and the Lower. Is

that the Upper Paddock and Lower Paddock?

A. You will see in the third column, Mr. Examiner, the target of this well. The "PDK" means Paddock. The "UPPER" means Upper Blinebry and the "LOWER" means Lower Blinebry.

Q. Okay. What is your confidence level in the Lower Blinebry?

A. Sorry?

Q. I have confidence in Blinebry. What do you think about the Lower Blinebry from your studies?

A. All of them will be profitable and will provide reserve for the company in development.

Q. You think so?

A. Yes.

Q. That's good.

EXAMINER EZEANYIM: Okay. Go ahead.

CONTINUED DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Would you turn to the next exhibit, Mr. Oniszczuk, and explain what that depicts?

A. Uh-huh. Number 15 is a scheme of what kind of horizontal development we are seeing right now. As it was mentioned before, due to surface limitations, we are drilling this pad development. In this case we are seeing Pad 23 located in Section 3 and how we are

putting three different wells in three different targets.

Q. If you turn to the next exhibit --

RECROSS EXAMINATION

BY EXAMINER EZEANYIM:

Q. Have you drilled those wells, or are these proposed?

A. Four of them are drilled.

Q. In your configuration on Exhibit Number 15, you have three wells going east. You have three wells going west.

A. Yeah.

Q. Have you --

A. Four of them have been drilled already.

Q. One of them?

A. Four. Four of them have been drilled already.

Q. Okay. Four.

So the remaining two you need to complete?

A. Yes, sir.

CONTINUED DIRECT EXAMINATION

BY MR. DEBRINE:

Q. And are those wells depicted on Exhibit 4, which is the one that Mr. Henkhaus discussed earlier, showing the pads in Cedar Lake?

A. Sorry. Could you repeat the question?

Q. If you could turn to Exhibit 4, are those four wells you discussed -- it's not Exhibit 4. Exhibit 3. It shows the development in Cedar Lake.

A. Yeah.

Q. Which four wells are they? Do you know which ones they are?

A. Yeah. The ones in Pad 23 in the lower part of Section 3, we have six wells there. Four of them have been drilled. Two are remaining.

Q. And that's indicated on Exhibit 3 by the colors up in the right-hand corner as the key --

A. Yes, sir.

Q. -- of which ones have been drilled, which are proposed and which are in progress?

A. Uh-huh.

Q. If you could turn to your next exhibit.

A. As it was mentioned before, we currently have three wells every 160 -- 160 acres. Going forward, we believe there is opportunity for increasing the density of wells. We have shown here in Exhibit 16 a quick volumetric calculation as why we believe that there is a possibility to increasing density. What we have here is showing both our horizontal and vertical development, what kind of volumetric we are seeing for the verticals, for the horizontals and for the complete pool of 160

acres.

By dividing what we think we can expect from an individual well and the complete size of the tank in 160 acres, we believe that in going forward, we might have an increasing density in the future.

Q. If you can turn to Exhibit 17 and explain what that depicts and the conclusions that are contained in there.

A. Yes, sir. Number 17 shows both the vertical development in the south part and what we are currently doing and what we might be doing in the future in the north part of the Cedar Lake development.

This will have an impact on the allowables because we are going to put in production more wells at the same time. So if we can confirm all of our assumptions and we are moving to a more dense -- increasing density of wells, we believe that with the result that we have gotten so far, we are going to be producing at the same time around 1,800 barrels of oil per day or probably more.

Q. Mr. Oniszczuk, do you have an opinion whether increasing the allowable to 600 barrels a day will allow Apache to efficiently and economically recover additional incremental reserves that would otherwise go undeveloped and thereby prevent waste?

A. Yes, I agree.
Q. And what is that opinion?
A. I agree that it's going to.
Q. Do you have an opinion as to whether the entry of an order by the Division that would increase this depth bracket allowable to 600 barrels a day will prevent waste and will not impair correlative rights?
A. Yes.
Q. And what is that?
A. My opinion is that it would prevent waste.
Q. Do you have an opinion as to whether increasing the allowable to 600 barrels a day will promote the conservation of natural resources?
A. Yes. Yes, it would.

MR. DEBRINE: Pass the witness, Mr. Examiner.

EXAMINER EZEANYIM: Thank you very much. Any questions?

MS. MUNDS-DRY: No questions.

EXAMINER EZEANYIM: Okay. That's good.

RECROSS EXAMINATION

BY EXAMINER EZEANYIM:

Q. I see that Apache has a very ambitious development in this Yeso shelf, increasing the allowable to 600 as long as we protect correlative rights, and

that's what we are going to do.

Okay. Now you are asking for 600. I know your attorneys say what you're going to do, but do you know what the production rate is at the initial -- at the IP for these wells? Take an example, one-mile horizontal. How are the IPs?

A. We are seeing average values of 400 barrels.

Q. For IP?

A. (Indicating.)

30 days -- 30 days average IP.

Q. What did you say?

A. 30 days average IP. We'll provide --

Q. What is the highest reserve?

A. We have seen values, 24-hour test, of 660 parts --

Q. Really?

And this is above bubble point?

A. Yeah. We haven't seen any indication of --

Q. Haven't seen what?

A. We didn't have any -- we didn't see any --

Q. Because you may not see bubble point.

A. Yeah.

Q. In your experience, how long does it take reservoir to go from -- the pressure to drop from the, you know -- to bubble point? How many months? Years?

A. I would say years at least.
Q. Years?
A. (Indicating.)
Q. How many years?
A. (Indicating.)
Q. That's good. If we can have years, that's good. When we produce above bubble point, we get more liquid.
A. Yeah. But --
Q. What?
A. I don't know how many.
Q. Okay. Yeah. But once you go to bubble point, you notice you get more -- coming to solution, right?
A. Yes, sir.
Q. So you know you've reached that bubble point whether or not you have that PVT analysis --
A. Yes, sir.
Q. -- which I know you have.
A. Uh-huh.
Q. So I'm assuming whether you -- if you are going to see above bubble point or below bubble point, you can see it produce up to 600 barrels per day, and that's why you are asking for that increase?
A. Correct.
Q. Exactly. That's fine.

EXAMINER EZEANYIM: Is this your last witness?

MR. DEBRINE: We have one more witness, Mr. Examiner, and then Concho has two witnesses.

MS. MUNDS-DRY: Three witnesses.

EXAMINER EZEANYIM: Anyway, I know Concho has a stake in this.

You may step down. Thank you.

Call your next witness.

MR. DEBRINE: Are we going to go through the whole case, or is it your pleasure to take a lunch break, or --

EXAMINER EZEANYIM: It's 12:30 now. Let me think about this. We have people who have to go home, so I don't know whether we should, because Scott has something he has to do and he has to go home, too, as I understand it. I don't know what we need to do now to accommodate people to catch their flights, so that's why I'm hurrying.

(Discussion off the record.)

EXAMINER EZEANYIM: Okay. Now, at this point we are going to stop with this witness, and we will come back and complete the case. It's about 12:25. We'll take a break and come back by 1:00, right?

(Break taken, 12:25 p.m. to 1:09 p.m.;

Mr. Bruce not present.)

EXAMINER EZEANYIM: We are back on the record in Case Number 14613. Mr. DeBrine is back. We'll continue with Case 14613.

We wanted to continue without you, Mr. DeBrine. We wanted to continue without you.

I wanted to ask you if you have any other witnesses.

MR. DEBRINE: One more witness, Mr. Examiner.

EXAMINER EZEANYIM: Okay.

MS. MUNDS-DRY: That's why I thought we should probably wait, Mr. Examiner.

EXAMINER EZEANYIM: Yeah. Okay. Call your next witness.

MR. DEBRINE: Clinton Mills.

CLINTON MILLS,

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

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. Clinton Mills.

Q. Who do you work for, Mr. Mills?

A. Apache Corporation.

Q. What is your position with Apache?
A. Production engineering manager.
Q. What are your responsibilities as production engineering manager?
A. It includes the area in New Mexico.
Q. Could you just give the Examiner a brief summary of your educational background and experience?
A. I have a degree in petroleum engineering from the University of Tulsa. I have 11 years in industry experience both in production, drilling, reservoir, as well as six years of operations.
Q. Have you previously testified before the New Mexico Oil Conservation Division?
A. Yes, I have.
Q. And were your credentials accepted as a matter of record in that case?
A. Yes, they were.
MR. DEBRINE: I'd tender Mr. Mills as an expert in petroleum engineering.
EXAMINER EZEANYIM: Any objection?
MS. MUNDS-DRY: No objection.
EXAMINER EZEANYIM: So accepted.
Q. (BY MR. DEBRINE) Are you familiar with the application that's been filed by COG and Apache in this case for the pools that are the subject of the

application?

A. Yes, I am.

Q. Did you testify during the original case that was brought by COG to increase the allowable in these pools?

A. Yes, I did.

Q. Are you familiar with the wells that are operated by Apache within the pools that are the subject on this application?

A. Yes, I am.

Q. Could you turn to Exhibit 2 and just briefly describe Apache's acreage within these pools?

A. I think it's Exhibit 3 that you're talking about.

Q. Yeah. The area of study, I guess, is Exhibit 3.

A. Yeah. The area of study is Exhibit 3, if you'll refer to it, Mr. Examiner.

EXAMINER EZEANYIM: What is it?

MR. DEBRINE: Exhibit 3, Mr. Examiner.

THE WITNESS: Mark already talked about why we're developing horizontally, because we are so surface restricted. If you notice, the pads aren't really in a straight line, and that's as a result of avoiding the habitat for the dunes sagebrush lizard and the lesser

prairie chicken.

Another thing I wanted to point out is in Sections 9 and 10, that's where all of our wells are that are online currently producing. Of those, there are six groups of wells that lay within the same 160.

CROSS-EXAMINATION

BY EXAMINER EZEANYIM:

Q. You said restrictions. They are from BLM, right?

A. Yes, sir.

Q. You have to sign the contract with them. Do you have that contract with BLM to do what you are doing here?

A. We have permits to drill where we are drilling and build pads where we are putting them. Yes, sir.

Q. None of this is fee -- is this fee or federal?

A. Federal.

Q. So you got permits?

A. Yes, sir. We don't have permits for everything on the map, but we have permits for everything we have done or are working on.

Q. Very good.

A. In Sections 9 and 10, there are six groups of wells that lay within the same 160, or you could call them six pads if that makes it easier. Of those six

groups, four of them have shown capabilities producing over the allowable. So we're over 50 percent on our groups and produce over the 1,200-barrels-per-day allowable that would be within the same 160.

Q. Are you talking about Pad 31 and Pad -- let me see.

A. Yes, sir. There is Pad 31 East, Pad 31 West, which they lay right together. Then there is Pad 30W and then 29 East and then 27 East and West.

Q. You are producing from them right now?

A. Yes, sir.

Q. How many wells do they contain? Three? Three wells?

A. Two or three, depending where they're at.

CONTINUED DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Have you prepared any additional exhibits to demonstrate to the Examiner why you believe the existing 300 barrel-per-day allowable is inadequate for Apache to properly develop its acreage?

A. Yes, I have.

Q. If you could turn to Exhibit 18, Mr. Mills, and explain that. What's depicted there?

A. Exhibit 18 is a production plot of the Crow Federal #13H. This well is unique because we completed

this well with 7-inch casing. All of the other wells were completed with 5-and-a-half-inch casing. When Alejandro testified earlier, he was speaking to average rates the wells would produce, and he testified to 660 barrels per day. On true peak rates, we've actually seen in excess of that. If you'll refer to the graph, you'll see true peak rates up into the 750 range. There was even one test that was over 800 barrels.

EXAMINER EZEANYIM: The BOPD is on the right?

THE WITNESS: Yes, sir.

The left side is the water, which would be the blue line.

The reason I wanted to talk about this well specifically is because it is unique, but it's the plan we have going forward. So my opinion and my testimony is I expect our new wells to produce more like the #13H than the average of what we're seeing currently.

Q. (BY MR. DEBRINE) When you say your plan going forward, are you referring to the 7-inch casing with regard to future drilling?

A. Yes, sir, I am.

The 7-inch casing does a lot of things for us, but, quite simply, we can run larger lift equipment, Mr. Examiner, so we can lift roughly 1,000 barrels of

total fluid more with 7-inch casing as opposed to 5-and-a-half.

RECROSS EXAMINATION

BY EXAMINER EZEANYIM:

Q. So you are recommending production with 5-and-a-half? Is that what you're saying?

A. Yes, sir.

Q. Okay. What happened on June 7th? What happened on June 7? Did you shut in the well?

A. That's actually another part of the testimony. We had -- we were unable to sell our oil because of BS&W, so we filled up our storage at the time. So we had to shut the lease down. When we do that with, of course, electric equipment a mile below the surface, it's difficult to get it running again.

Q. How long do you shut it down for?

A. That time, I think it was three days.

Q. Three days?

A. Yes, sir.

Q. Remember, this is a solution gas drive reservoir. Do you know what you're doing? Well, anyway --

A. We didn't have a choice, sir.

Q. -- you came back.

When you opened it up, you recovered?

A. Yes. Yeah. We opened it back up, and we sped it up as well. So basically built up a fluid level over those three days, and then we sped it back up.

Q. I'm not -- shutting those wells down.

A. Me either.

Q. Why do you have BS&W? Why is it high?

A. We had a faulty chemical pump that was not providing the right amount of demulsifier to the production separation facility, and as a result, we went on bad oil. We were actually trucking oil at the time. The outfit trucking the oil would not accept our product. Therefore, we fill up our tanks. We had to shut down until we could roll the oil in the tanks with chemical and heat until we could finally sell it, and then we came back online.

Q. And that was because you had BS&W?

A. Yes, sir.

CONTINUED DIRECT EXAMINATION

BY MR. DEBRINE:

Q. And, Mr. Mills, in the original case, 14613, you testified with regard to the various problems that Apache had been experiencing in trying to comply with the previous allowable as a result of having to shut in or curtail production of its wells in order to comply with the allowable. Do you believe that those same

problems that you described in your earlier testimony will result if Apache is forced to curtail production of these wells in order to comply with the 300-barrel-per-day allowable?

A. Yes, sir, I do, along with added problems, because now we're completing it horizontally with ESP lift as opposed to mechanical rod pumps.

Q. As a result of these problems, is there a danger that the well might be permanently damaged so that Apache would be deprived of its ability to produce its fair share of recoverable oil in that reservoir?

A. Yes, sir.

There's an added mechanical risk, Mr. Examiner, when working on a horizontal well. If we have any type of casing failures in a vertical well, we have a lot of weight to work with, meaning that we can run sledges through the bad spot, we can run string mills, anything like that.

In a horizontal scenario, once the steel is laying on its side, we don't have that weight to work with, which means to address any type of real problem out in the horizontal section, we would need torque and drag supplied by a drilling rig, which is not something we're going to spend the money to do unless -- unless it warrants it.

Q. Could you turn to Exhibit 19, Mr. Mills?
A. Yes, sir.
Q. And could you describe what's depicted in Exhibit 19 and what conclusions can be drawn from it?
A. Mr. Examiner, if you look at this exhibit, it represents the production for Pad 27 E, which is in Section 10. The reason I wanted to talk about this one specifically is because it's only two wells. You can see we're right at that allowable range. We've actually produced over it a few times. And this is a pad that's completed with 5-and-a-half casing, and there are only two wells. With increased well density of up to four wells, maybe more, plus 7-inch casing, if we were to do that in this area, we'd have to shut some of our wells down.
EXAMINER EZEANYIM: Right now it's a little over 5,000. No, no. Let me see. Well, you changed your answers again.
THE WITNESS: Yes, sir. I'm sorry for that. Barrels of water on the right this time and oil on the left.
EXAMINER EZEANYIM: Okay. That's even more interesting. Okay. Go ahead.
Q. (BY MR. DEBRINE) Mr. Mills, do you have an opinion whether the granting of Apache's and COG's

application in this case is in the interest of conservation and the prevention of waste?

A. Yes, I believe it is.

MR. DEBRINE: No further questions.

EXAMINER EZEANYIM: Thank you very much.

Ms. Munds-Dry?

MS. MUNDS-DRY: No questions.

EXAMINER EZEANYIM: Okay. Very good.

RECROSS EXAMINATION

BY EXAMINER EZEANYIM:

Q. Are you a reservoir engineer?

A. I haven't worked as a reservoir engineer in nine years, sir. I'm a production engineer, is what I am.

Q. Can you do -- I want you to do a calculation. You said --

EXAMINER EZEANYIM: Is this protested by anybody?

MR. DEBRINE: No.

Q. (BY EXAMINER EZEANYIM) Okay. Even if is, what I want from your testimony now, I want you to do a calculation. I'll give you -- do a calculation --

A. Okay.

Q. -- of how much oil is less -- oil recovered by the 330-foot setback requirement, both sides, 330. Each

side has about 660 feet. How much is it? You can even do volumetric. You can do anything. You can use the I.T. [sic], whatever you want to do, but I want to get that information.

A. You want to know what we're leaving behind?

Q. Yeah.

A. Okay.

Q. I'd like --

MR. DEBRINE: Mr. Examiner, if you would like, we could submit that as additional evidence after the hearing in the interest of time and moving on --

EXAMINER EZEANYIM: Yes. Yeah. Not now.

MR. DEBRINE: -- or maybe we can address that --

EXAMINER EZEANYIM: Yeah. Not now.. Just -- I'm telling you what to do. I'm asking questions, and I'm done with him.

MR. DEBRINE: Okay.

EXAMINER EZEANYIM: So if you can send me that information, that would be good.

MR. DEBRINE: Yeah. Because he was getting his calculator out, and I didn't know how long it was going to take.

EXAMINER EZEANYIM: No, no, no, no. No, no, no, no. I don't want you to do it now.

Q. (BY MR. EZEANYIM) Okay. Now, what are your -- you can't do it with reservoir parameters. You cannot do it. It's not arithmetic [sic]. I'm just telling you what I need to see.

A. Okay.

Q. Really, it's not pertinent to your application.

A. And you want to see unswept oil in the reservoir?

Q. Yes, on those -- the oil 63 -- you know, each well we have 330 there, 330 here, right?

A. Yup.

Q. Yeah. You could do that. It's a simple calculation, but I don't want you to do it now.

A. Okay.

Q. I'm sorry. And then you may need to do --

EXAMINER EZEANYIM: Is anybody contesting this?

THE WITNESS: No.

MR. DEBRINE: No.

EXAMINER EZEANYIM: Okay. Good. So we're in business.

Q. (BY EXAMINER EZEANYIM) Now, because of time, I think -- I understand this is more than you do because you work -- let me see if I have one more important question. Sit down. I have one more question I want to

ask, and this is something --

How long have you worked for Apache in this Yeso Formation? How long? How long?

A. Do you want --

Q. Two years?

A. No, no. No. I've been working the Yeso with Apache since Apache had the Yeso, which would go back to the acquisition of 2010.

Q. Okay. When your well goes from bubble point to bubble point, what do you notice?

A. (Indicating.)

Q. Do you see -- the well goes from above bubble point to below bubble point?

A. Uh-huh.

Q. So what unit is it? The unit is a lot of --

A. More gas production, less loose [sic] production. Is that --

Q. Okay. So the -- on this 19, is it below bubble point or above bubble point? This -- you know, the graph you gave me on 19 --

A. On 19?

Q. But that's prolific. If it is below bubble point --

A. It's below bubble point and --

Q. It's below bubble point?

A. Yes, sir.
Q. That's good.
A. And I belive we're encountering virgin reservoir.
Q. Okay. Very good.
Do that calculations and that should do it.
A. Okay.
Q. I have no more questions. You may step down.
MR. DEBRINE: Move the admission of Apache Exhibits 6 through 19, in case I didn't ask those to be admitted earlier.
EXAMINER EZEANYIM: Okay. No objections?
MS. MUNDS-DRY: No.
EXAMINER EZEANYIM: Apache Exhibits 6 through 19 will be admitted.
(Apache Corporation Exhibit Numbers 6 through 19 were offered and admitted into evidence.)
EXAMINER EZEANYIM: You may step down.
Okay. Now we go to Ms. Munds-Dry.
MS. MUNDS-DRY: Thank you, Mr. Examiner.

DAVID R. EVANS,

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

DIRECT EXAMINATION

BY MS. MUNDS-DRY:

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

A. David Ray Evans.

Q. And by whom are you employed, and what is your position?

A. COG Operating, LLC. I'm a land advisor on special projects.

Q. Have you previously testified before the Division?

A. I have.

Q. Were your credentials accepted and made a matter of record at that time?

A. They were.

Q. Are you familiar with the application that has been filed by Apache and COG in this case?

A. I am.

Q. And you're very familiar, aren't you?

A. Very familiar.

Q. And have you made a study of the lands that are the subject of this application?

A. I have.

MS. MUNDS-DRY: Mr. Examiner, we would tender Mr. Evans as an expert in petroleum land matters.

EXAMINER EZEANYIM: Yeah. He's so qualified.

Q. (BY MS. MUNDS-DRY) Mr. Evans, would you turn to the Concho exhibit notebook.

MS. MUNDS-DRY: Mr. Examiner, do you have that in front of you?

EXAMINER EZEANYIM: Yeah.

MS. MUNDS-DRY: Okay. Great. I just wanted to make sure.

Q. (BY MS. MUNDS-DRY) Could you please review Exhibit Number 1 for the Examiner?

A. This is the original exhibit we provided two years ago, Richard, for the 13 pools that we were asking for the increased allowables. To the left, you see three white pools. They currently have an allowable that we accept and two that are pending in October, the Dodd and the BKU.

Q. Is that the -- you have the two white -- let me make sure we have those correct there. If they're not shaded in gray, they're white, is that the BKU and the Dodd?

A. Right, the BKU and the Dodd.

Q. And those are the subject of separate and --

A. Separate.

Q. -- very special pool rules?

A. Correct.
Q. And we're bringing that application in October?
A. In October.
EXAMINER EZEANYIM: That's excellent.
Q. (BY MS. MUNDS-DRY) And then the GJ, which you have in a box in red, that's also --
A. That's a separate allowable.
Q. -- special --
A. Special allowable.
EXAMINER EZEANYIM: Grayburg-Jackson. That's what it is.
MS. MUNDS-DRY: Grayburg-Jackson.
EXAMINER EZEANYIM: Sometimes you have to say -- not everybody understands when you say GJ. So in that case, I will understand when I read it. You might say Grayburg-Jackson.
MR. DEBRINE: And BK is Burch Keely.
MS. MUNDS-DRY: Sorry, Mr. Examiner. That is short for the Burch Keely Unit --
EXAMINER EZEANYIM: I know. Yeah.
MS. MUNDS-DRY: -- for the record.
Q. (BY MS. MUNDS-DRY) Anything else you want to point out on Exhibit Number 1?
A. No.
Q. Let's turn, if you would, please, to Exhibit

Number 2 and explain to the Examiner what you have included here.

A. I've included the 20 supporting letters of support that we received from various operators around the various pools.

Q. And for the record, could you just read a portion of this letter to indicate what they say?

A. Here's one from Devon dated September 17th, 2014: "As an operator on one or more of the above-referenced pools, Devon Energy Production Company, L.P. is writing to express its support of COG's application. Each of these pools is located in the Yeso Formation. Devon believes that COG's request to allow operators to properly develop the pools and that the requested allowable will prevent waste and will protect correlative rights."

Q. And, Mr. Evans, you said you received how many letters?

A. 20.

Q. 20 letters.

And of these 20 letters from these operators, do you know approximately how many percentage-wise representative of the operators that are in all of these pools that are the subject of the application?

A. We sent out 21 letters and received 20 supports. One is pending from Chevron. We just have not received it yet. I would expect to receive that soon. So it's 95 percent at this time.

Q. And are you aware of any objections to Apache's and COG's application?

A. No objections.

Q. And were Exhibits 1 and 2 either prepared by you or compiled under your supervision or compiled from business records?

A. Yes.

MS. MUNDS-DRY: And with that, Mr. Ezeanyim, we would move the admission of Exhibits 1 and 2 into evidence.

(Mr. Bruce enters the room.)

EXAMINER EZEANYIM: Exhibits 1 and 2 are admitted.

(COG Operating, Inc. Exhibit Numbers 1 and 2 were offered and admitted into evidence.)

MS. MUNDS-DRY: And that concludes my questions.

MR. DEBRINE: I just have one quick question for Mr. Evans.

CROSS-EXAMINATION

BY MR. DEBRINE:

Q. In Exhibit 2, I notice there is a letter from Burnett Oil Company included as a supporting operator.

A. Burnett and Hudson both supported the second application.

Q. Were they the only operators that opposed the original application?

A. They were the two that opposed the remodifications.

Q. No further questions.

EXAMINER EZEANYIM: Thank you very much. When I read it yesterday -- telling me to give them 167 instead of 300. But now you don't want 300, but you want 600. See how you create work for me? If you guys agreed to 300, it wouldn't have taken three days to hear the case. That's good. I'm glad you pointed that out. Okay. Thanks.

MS. MUNDS-DRY: Call our next witness, please, Mr. Examiner.

EXAMINER EZEANYIM: Go ahead.

HARVIN BROUGHTON,

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

DIRECT EXAMINATION

BY MS. MUNDS-DRY:

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

A. Harvin Broughton.

Q. And, Mr. Broughton, by whom are you employed?

A. COG Operating, LLC in Midland, Texas.

Q. What do you do for COG?

A. I'm the lead geologist for our New Mexico Northwest Shelf Team.

Q. And how long have you been the lead geologist for the shelf team?

A. For close to two years now.

Q. And are you familiar with the application that's been filed by Apache and COG in this case?

A. Yes, I am.

Q. And have you made a geologic study of the -- of formation that underlies all of these pools?

A. I have.

MS. MUNDS-DRY: With that, Mr. Examiner, we would tender Mr. Broughton as an expert in petroleum geology.

EXAMINER EZEANYIM: He is so qualified.

MS. MUNDS-DRY: Thank you.

Q. (BY MS. MUNDS-DRY) Mr. Broughton, if you would

please turn to what's marked as Exhibit Number 3 and if you could review this display for the Examiner.

A. Okay. So this is a depiction of the Greater Permian Basin, and it's done just to locate everybody with respect to the northwest shelf, which is the area that we're talking about, indicated by the red arrow.

Q. Then let's turn to what's been marked as Concho Exhibit Number 4. What does that show us?

A. This shows the distribution of vertical Yeso-producing wells across the northwest shelf. This is all wells, all operators. The yellow indicates Concho acreage or leasehold in the area.

Q. And of all these red dots that you've shown here on this vertical well map, how many approximately of these vertical wells does Concho operate?

A. Concho -- I don't know the exact number, but it's roughly 2,000.

Q. Then let's turn to COG Exhibit Number 5. Please review this display for the Examiner.

A. Okay. This is essentially the same map, but it is displaying horizontal wells rather than verticals. The yellow acreage, of course, is Concho leasehold, and it's showing vertical wells for all operators. And this is in the Yeso.

Q. Did you mean to say horizontal wells?

A. Excuse me. I did mean to say horizontal wells. Sorry.

Q. And out of the horizontal wells that you have shown here on the map, how many approximately does Concho operate?

A. Concho currently operates about a 135 horizontal wells out of a total of roughly 260 horizontal wells that exist in the Yeso across the entire shelf. So we operate just a little over half.

Q. If you could please review for Mr. Ezeanyim what Concho's plans are for drilling in the shelf in the next two to three years.

A. Our long-term plan has us drilling, over the next three years -- and I'm talking about 2015, '16 and '17 -- 287 horizontal wells and 234 vertical wells.

Q. So slightly more horizontal wells?

A. Slightly more horizontal wells, yes, ma'am.

Q. But we will still be drilling --

A. Yes. There is still a place for vertical wells.

Q. And we can talk about that a little bit more, but let's turn, in the meantime, if we could, to what's marked as Exhibit Number 6.

A. Okay.

Q. What does that show us?

A. This is the stratigraphic column of the northwest shelf. I've put a little red bracket there to indicate the Paddock and Blinebry component of the Yeso. The Paddock and the Blinebry are the two formations -- two Yeso Formations that are productive in this particular area.

Q. And this matches what Mr. Gonzalez with Apache showed earlier?

A. Yes. This is going to be redundant to what my esteemed colleague with Apache has shown.

Q. Let's turn to COG Exhibit Number 7, if you could review this for the Examiner.

A. Okay. Like you saw with the previous testimony -- geological testimony, this is a little bit broader area. I stretched it to cover a little more of the shelf where Concho is also active. And it is a structural map depicting the area across the shelf, showing a slightly eastward and east-to-southeast dip across the entire shelf. The tightening contour lines along the southern edge of the map are indicative of the Yeso shelf edge. The yellow acreage, again, is Concho leasehold.

Q. And do you think that Concho or other operators actively in the shelf -- have we defined the productive extent of the Yeso?

A. We have not yet defined the productive extent of the Yeso. There is still -- still more to come, I think.

Q. And what is the drilling of our horizontal wells doing for us in terms of defining that productive extent?

A. It's actually, in my opinion, moving it somewhat to the north, so we're able to -- we're able to drill successful economic wells where vertical wells might not be quite as -- quite as good.

Q. So it might be expanding, the productive extent?

A. It is extending, yes, the -- the Yeso play.

Q. That's the positive side of the chicken and the lizard?

A. Yes, in the sand dunes.

Q. If we can turn to what's been marked as Exhibit Number 8, what is this map showing us?

A. Okay. This is a -- this is an index map for the cross section that you're going to see in the next slide. So the yellow, again, is Concho acreage. My cross section will be from A to A prime. The pink line actually traverses the wells that are included in the cross section, and the circles are actually indicative of the wells that are being used in the cross section.

Q. Then let's turn to that cross section marked as Exhibit Number 9.

MS. MUNDS-DRY: Mr. Examiner, I believe in your packet you have a large map. I hope you have a large map in there.

EXAMINER EZEANYIM: Yeah, I do.

MS. MUNDS-DRY: It's easier to see than an 8-and-a-half-by-11.

EXAMINER EZEANYIM: Yeah, I know.

THE WITNESS: Because it was so compressed, we decided we would make a larger-scale map that you could enjoy.

EXAMINER EZEANYIM: That is very good. Thank you.

THE WITNESS: You're welcome. And I'll just briefly run you through that.

So this is a structural cross section. The first thing you'll notice is that the structure moves down as you move east -- eastward. So this is from west on the left of the map -- I mean on the cross section to east on the right. The green-area shading there that you'll see across the top, that's the Paddock portion of the Yeso, and then below that in kind of a pinkish color is the Blinebry. And I've shown this in this format to show not only the continuity of the formation, but the

relative uniformity of thickness of the Paddock and the Blinebry. Together they're both roughly 1,500 feet thick across this entire area.

EXAMINER EZEANYIM: That's good.

Q. (BY MS. MUNDS-DRY) I assume you agree with Mr. Gonzalez about the permeability and porosity of this formation?

A. Yes, I do.

Q. And what is the character of that? What does it look like?

A. Well, the Yeso Formation has been characterized as a heterogeneous dolomite reservoir with natural fracturing. What that means is the porosity and permeability vary laterally in all directions and vertically.

Q. And if we can use this display or this cross section, could you explain to the Examiner what Concho's plans are for fully developing the Yeso?

A. Yes. Because the Blinebry is so thick, we have found that we need, really, two horizontal landing intervals in the Blinebry to fully develop it. And then the Paddock is roughly 4- to 500 feet thick, so we believe that we can adequately drain that with one horizontal -- one horizontal well.

EXAMINER EZEANYIM: Do you have an idea of

the permeability between the Paddock and Blinebry? I mean an estimate, unless you have core samples. Otherwise, you might not --

THE WITNESS: Right. We believe it's highly variable. We believe it's highly variable.

EXAMINER EZEANYIM: But I think it's brought out on the side of being conventional -- so split, right?

THE WITNESS: Yes. Yes.

EXAMINER EZEANYIM: I don't want you -- I don't want you to be unconventional. You want to be conventional.

THE WITNESS: Right.

EXAMINER EZEANYIM: Even though the -- the -- low. And the porosity cutoff is about 8 percent -- 8 or 10 percent.

THE WITNESS: We use a porosity cutoff of 3 percent.

EXAMINER EZEANYIM: 3 percent?

THE WITNESS: Yes, sir.

EXAMINER EZEANYIM: And the wells, I see, are doing well. With this low permeability and porosity, they are doing well.

THE WITNESS: Many of the wells are doing very well. Yes, sir.

EXAMINER EZEANYIM: Don't you love the Yeso?

THE WITNESS: I do love the Yeso. Yes, sir.

(Laughter.)

EXAMINER EZEANYIM: Okay. Go ahead.

Q. (BY MS. MUNDS-DRY) So, Mr. Broughton, let me make sure I understand. With Concho's development of the Yeso, we're looking to do multiple laterals?

A. Yes.

Q. Not necessarily one -- one horizontal with multilaterals, but multiple laterals to fully develop?

A. Right. Multiple laterals per 160 that would entirely drain the Yeso Formation, yes.

Q. And in your expert opinion, do you see any geologic impediments to increasing the allowable from 300 to 600?

A. No. I do not see any geologic impediments to that.

Q. And in your expert opinion, will the granting of this application be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes, I believe that.

MS. MUNDS-DRY: With that, Mr. Examiner --

Q. (BY MS. MUNDS-DRY) Mr. Broughton, let me ask you: Were your exhibits either prepared by you or compiled under your supervision?

A. Yes, they were.

MS. MUNDS-DRY: We would move the admission of Exhibits 3 through 9 into evidence, please.

EXAMINER EZEANYIM: Exhibits 3 through 9 will be admitted.

(COG Operating, Inc. Exhibit Numbers 3 through 9 were offered and admitted into evidence.)

MS. MUNDS-DRY: That concludes my direct examination of Mr. Broughton.

EXAMINER EZEANYIM: Okay. That's very good. I think I understand what's going on here.

CROSS-EXAMINATION

BY EXAMINER EZEANYIM:

Q. I don't really have a lot of questions. I wanted to find out what's happening with the Yeso shelf.

A. Okay.

Q. I forgot what exhibit number we're talking about.

You have a bunch of vertical wells, yet you are drilling a bunch of horizontal wells. How does that play out, because it's almost overdeveloped. How do you

avoid these vertical wells when you drill horizontal wells?

A. Well, we're primarily drilling horizontal wells at least on the Concho acreage moving to the north. There are places where there are so many verticals wells already in existence that you cannot drill a horizontal well, and that is true.

Q. That's my point.

A. Yes.

Q. Okay. Good.

Now, what is the necessity to drill these more than 200 vertical wells? Why can't we drill horizontal wells?

A. Are you talking about our future plans?

Q. Yeah.

A. These are in areas where there are already a lot of existing vertical wells, so you really could not -- you could not fit a horizontal well in there.

Q. So that's why you have to do that?

A. That's why you have to do that. Yes, sir.

Q. Is that an issue? Are you doing horizontal wells?

A. We put horizontal wells where we can, where it makes sense, and I think we're going towards that, as are many other operators.

Q. Yeah. That makes sense.
A. But there are still other areas where you really -- you can't do a horizontal well.
Q. Because I'm skeptical about vertical wells now. That's what gave me the headache on depth bracket allowables. They don't apply to horizontals.
A. Right. Well, I mean, as technology advances, we're finding, you know, the horizontal wells are probably the way to go.
Q. Yeah. Very good. I have nothing further. You may be excused.
A. Okay.
EXAMINER EZEANYIM: Call your next witness.
MS. MUNDS-DRY: Mr. Craig.

KEN CRAIG,

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

DIRECT EXAMINATION

BY MS. MUNDS-DRY:
Q. Would you please state your full name for the record?
A. Ken Craig.
Q. And by whom are you employed?
A. COG Operating, LLC.
Q. And what do you do for COG?

A. I'm the lead reservoir engineer for the shelf team.

Q. Have you previously testified before the Division?

A. Yes, I have.

Q. Were your credentials accepted and made a matter of record at that time?

A. They were.

Q. And are you familiar with the application that's been filed by Apache and COG?

A. Yes.

Q. And have you made an engineering study of the area that is -- the reservoir that is subject under these pools in the application?

A. Yes.

MS. MUNDS-DRY: With that, Mr. Examiner, we tender Mr. Craig as an expert in -- he's a reservoir engineer, so an expert reservoir engineer.

EXAMINER EZEANYIM: Yeah. So qualified.

Q. (BY MS. MUNDS-DRY) Mr. Craig, let's turn to what's been marked as Exhibit Number 10. Do you have that in front of you?

A. Yes.

Q. Explain that for the Examiner.

A. Exhibit 10 has two tables. The top table is a

count of how many wells we've drilled in the last few years, since the previous hearings in 2012. We've had 28 horizontals and 195 verticals. And you can see, over time, we've dropped the number of verticals that we have drilled in the area and with an emphasis on continuing the horizontal development.

The second table is a summary of what we looked at since the last hearing. We looked at 680 total 40-acre tracts. And during that time, eight of those tracts did exceed the 300-barrel-a-day allowable, and that was a function of an accelerated drilling program in a certain area, so we were able to bring multiple wells on at once. And during that time, although we may be over the 300 barrels a day for one month, we balanced out quickly in the next few months.

EXAMINER EZEANYIM: In accordance with the order?

THE WITNESS: Yes, sir.

EXAMINER EZEANYIM: Which is Order R-13382-E. Okay. Good.

THE WITNESS: So our estimation of using the 300 barrels a day at that time for vertical development was pretty close, because it was a good estimate.

Q. (BY MS. MUNDS-DRY) At the time -- and I just

want to emphasize that, if I heard you correctly. At the time that was a good estimate for the vertical wells?

A. Yes.

Q. Let's turn to what's been marked as Concho Exhibit Number 11. What does this show us?

A. This is an updated plot from the first hearing that we had. I've tried to show, since 2012, a comparison of GOR, initial GORs versus time, for wells that have been drilled since then. And we didn't see a change in the trend as a result of having the higher allowable going from up to the 300 barrels a day. If you put a trend line through that, it's relatively flat or slightly decreasing, so the conclusion would be that having the 300-barrel-a-day allowable did not hurt the reservoir.

Q. Let's turn to Concho Exhibit Number 12. Please review this exhibit for the Examiner.

A. This is a production plot just for Concho, Yeso production. The top red curve is gas production. Second from the top, the green curve, is oil production. The black curve is well count, and at the very bottom, the magenta colored curve, is GOR.

And you can see we have two different trends. From 2001 to 2004, there was a trend of

increasing GOR as development slowed, and the same is starting to occur now as we've slowed our development in the area. What we tried to look at there is that the slope of the two lines are very similar, or even the most recent data shows that it's a slightly less slope. And that is another indication that we're not harming the reservoir.

Q. Let's turn, then, to Exhibit Number 13. What is this showing us?

A. This is a summary of individual well performance. There are two pages. There's the activity for wells that we spud in 2013, and then there is a table for wells that have spud this year. And what we were trying to show here in the shaded green area are wells that did have a peak oil test greater than 300 barrels a day or a peak 30-day average greater than 300 barrels a day. And you can see from that, most of those were horizontal wells, so that's an indication that the volumes from the horizontals are going to be higher. And it's even more evident on the activity that we've had in 2014, which is the second page.

We've seen initial rates as high -- over 700 barrels a day and sustained 30-day averages over 500 barrels a day.

So if we did an accelerated horizontal

program in a 160, we would be likely to exceed the 300-barrels-a-day allowable that we have now.

Q. And after reviewing this data, in your expert opinion, would a 600 allowable, if we had an accelerated program, allow us to produce all the reserves without exceeding that allowable?

A. I believe it would.

Q. And Mr. Broughton was speaking earlier to Concho's plans for fully developing the Yeso. Building on his testimony of the landing zones, the three different landing zones, the fact we'd have to share that allowable with, say, three laterals, would a 600-barrel-a-day allowable allow us to fully develop the Yeso without restricting production?

A. Yes, it would.

Q. And based on the data that you've provided to us today, what can you conclude for us about increasing the allowable as we've asked for in our application?

A. By increasing the allowable, it would allow us to develop the 160s in a fashion that would be the most economic for us, but also without having fear of hitting the 300-barrel-a-day allowable that we do have now.

Q. And in your expert opinion, do you believe that raising the allowable to a 600-barrel allowable would harm the reservoir?

A. I do not believe it will harm the reservoir.
Q. In your opinion, will this application be in the best interest of conservation?
A. Yes.
Q. And will it prevent waste?
A. Yes.
Q. And will it protect correlative rights?
A. Yes.
Q. And, Mr. Craig, were Exhibits 10 through 13 either prepared by you or compiled under your direct supervision?
A. Yes, they were.
MS. MUNDS-DRY: Mr. Examiner, we'd move the admission of Exhibits 10 through 13 into evidence.
EXAMINER EZEANYIM: Exhibits 10 through 13 will be admitted.
(COG Operating, Inc. Exhibit Numbers 10 through 13 were offered and admitted into evidence.)
MS. MUNDS-DRY: That concludes my direct examination of Mr. Craig.
EXAMINER EZEANYIM: Thank you.
Do you have any questions?
MR. BRUCE: No.

CROSS-EXAMINATION

BY EXAMINER EZEANYIM:

Q. Asking for 1,000 barrels of oil per day because in this case, we don't know what you're going to do. If I look at your -- would you say your name again? I forgot. I'm sorry.

A. Ken Craig.

Q. Mr. Craig, if you look at Exhibit Number 12, I can see as the well count the places with the oil -- so what Concho is trying to do is increase that well count with a 1 to 64 [sic]. You might exceed 600, and then you will get it, and then you will ask for 700. And we are going to be doing it piecemeal. It's -- whatever you ask, we did it. But if you are sure, ask for a little more. It's up to the OCD to give it to you or not. I don't know if I can provide you -- I have seen -- which is very convincing. On an individual basis, some of them may do -- this is a 40-acre unit, right? 40 acres, right?

A. Yes.

Q. And you should be happy with 766. It's a short test, but you don't know what it's going to do. That's why I say I don't know what happened with the Yeso. That's why I'm in love with that shelf.

So you counterbalance your overproduction

with underproduction?

A. Yes, sir.

Q. Is that by design?

A. No. It's --

Q. Do you have to -- do you have to curtail production to do that?

A. No, sir.

Q. Because if you curtail production, you lose the well.

A. No. There is no curtailment.

Q. Can you describe to me -- of course, you know, I've worked with the Yeso. I know what it is. In terms of the Yeso shelf -- I've been asking this question for anybody. Since you're a reservoir engineer, you've been working on this shelf for some time and you know when you drill that well, have you seen any of them -- without the reservoir pressure is -- are you talking about bubble point pressure? Where you just drill a well, the bubble point pressure is the bubble point pressure. Have you seen that in the Yeso shelf?

A. We estimate that the initial reservoir pressure was at or near bubble point, so we very seldom see any production greater during the bubble point.

Q. I'm talking about pressures now. Once you drill that well -- of course, I don't know how you

measure the pressure when you drill them. I'm interested in knowing reservoir pressure compiled with the bubble point pressure.

A. I think the wells that we're drilling are below bubble point.

Q. Below bubble point.

What is your estimate? I hope you understand.

A. Yeah.

Q. What is your estimate of the bubble point pressure in this shelf? Just an average. You don't have to give me an accurate.

A. What we've seen in the past is between 2000 and 2,200.

Q. Between 2,200.

What is the bubble point?

A. About the same.

Q. They are the same, right?

A. (Indicating.)

Q. So maybe you drill a well. Point bubble point is below bubble point?

A. I think we're at or below bubble point in these wells that we're drilling now.

Q. I mean, it's not unusual.

A. No.

Q. I just wanted to get that information, so when I begin to look at data, I can see what I can do with it.

A. Okay.

Q. Initially, before you start producing gas, what do you think the dry mechanism that drives that oil to the wellbore? Have you seen any oil -- oil well contraction [sic] or water expansion?

A. No. We would consider all solution gas drive.

Q. Solution gas drive. Therefore, there are no gas caps?

A. No.

Q. I have no further questions. You may step down.

EXAMINER EZEANYIM: Do you have anything?

MS. MUNDS-DRY: Nothing further, Mr. Examiner.

EXAMINER EZEANYIM: Call your next witness.

MS. MUNDS-DRY: That concludes Concho's presentation.

EXAMINER EZEANYIM: Okay. Who goes next? Are we done?

MR. DEBRINE: I think we're done.

EXAMINER EZEANYIM: Oh, that's good. Okay. Excellent. At this point Case Number 14163 will be

taken under advisement.

And at this point, I will yield for Scott Dawson, because I think there are some other extenuating circumstances, to hear that one case before we conclude today's docket.

(Case Number 14613 concludes, 1:54 p.m.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____ heard by me on _____ ____

_____, Examiner
Oil Conservation Division

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

CERTIFICATE OF COURT REPORTER

I, MARY C. HANKINS, New Mexico Certified Court Reporter No. 20, and Registered Professional Reporter, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings that were reduced to printed form by me to the best of my ability.

I FURTHER CERTIFY that the Reporter's Record of the proceedings truly and accurately reflects the exhibits, if any, offered by the respective parties.

I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this case and that I have no interest in the final disposition of this case.

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