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:

CASE NO. 13,848

APPLICATION OF COG OPERATING, LLC, FOR THE APPROVAL OF THE THIRD AMENDMENT OF THE GRAYBURG-JACKSON WEST COOPERATIVE UNIT AGREEMENT EXTENDING THE VERTICAL LIMITS OF THE UNITIZED FORMATION TO INCLUDE THE BLINEBRY, TUBB AND DRINKARD INTERVALS OF THE YESO FORMATION AND TO AMEND ORDER NUMBER R-3127-B TO CORRECT CERTAIN FINDINGS AND TO INCLUDE COMMINGLED PRODUCTION AND FOR EXTENSION OF THE GRAYBURG JACKSON-SEVEN RIVERS-QUEEN-GRAYBURG SAN ANDRES-GLORIETA-YESO (PADDOCK) POOL TO INCLUDE THE BLINEBRY, TUBB AND DRINKARD INTERVALS OF THE YESO FORMATION, EDDY COUNTY, NEW MEXICO

REPORTER'S TRANSCRIPT OF PROCEEDINGS
EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

January 4th, 2007
Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, January 4th, 2007, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

January 4th, 2007
Examiner Hearing
CASE NO. 13,848

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* * *

WHEREUPON, the following proceedings were had at 9:44 a.m.:

EXAMINER CATANACH: Call the hearing back to order. At this time I'll call Case 13,848, the Application of COG Operating, LLC, for the approval of the third amendment of the Grayburg-Jackson West Cooperative unit agreement extending the vertical limits of the unitized formation to include the Blinebry, Tubb and Drinkard intervals of the Yeso formation and to amend Order Number R-3127-B to correct certain findings and to include commingled production and for extension of the Grayburg Jackson-Seven Rivers-Queen-Grayburg San Andres-Glorieta-Yeso (Paddock) Pool to include the Blinebry, Tubb and Drinkard intervals of the Yeso formation, Eddy County, New Mexico.

Call for appearances.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing this morning on behalf of the Applicant, and I have three witnesses to be sworn.

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe, representing Devon Energy Production Company, L.P. I have no witnesses, they're simply an interested party.

EXAMINER CATANACH: Any additional appearances?

MR. KELLAHIN: For the record, Mr. Examiner, I'd

like to introduce to your Mr. Tim Leach. Mr. Leach is an engineer. He's also the chief executive officer for Concho and chairman of their board. Mr. Leach.

EXAMINER CATANACH: Good morning, sir.

MR. KELLAHIN: In addition in attendance is Assistant Land Commissioner John Bemis. He's in attendance as well.

EXAMINER CATANACH: Thank you.

MR. KELLAHIN: We have three witnesses, then, to be sworn.

EXAMINER CATANACH: Will the witnesses please stand to be sworn?

(Thereupon, the witnesses were sworn.)

MR. KELLAHIN: Mr. Examiner, I have submitted to you and to Mr. Brooks and to the court reporter a complete collated set of our exhibits. We have three witnesses to present.

We're going to present Mr. Brent Robertson as our landman to talk about the land issues.

Mr. Rickey Cox is a petroleum geologist. He is going to talk about the geologic setting involved in this unit.

And then finally, Mrs. Gayle Burleson is the petroleum engineer that's done the engineering work, and she'll talk to you about the aspects in this case that

involve the engineering work that she's done.

By way of introduction, Mr. Catanach, this Application is the last of a series of voluntary actions that have been taken by Concho concerning the Grayburg-Jackson West Cooperative Unit.

Concho is requesting the vertical extension of the unit before you today, authorization for commingling, and in order to remove any doubt about the prior order -- there's an R order that was issued in June of last year, it's R Order 3127-B -- to remove any doubt about that order, we seek to correct certain findings in that order because it appears to us that that order was predicated upon erroneous facts that might cause doubts about its validity, and so we'll present that to you and ask you to make the appropriate corrections.

Although Concho acquired this unit in February of last year and was aware of some Paddock production and was aware that Mack Energy as the contract operator for the unit was coming forward before the Division and Mr. Brooks back in the fall of -- the spring of last year, we were not aware of the extent of the violations of the Division Rules, Regulations and Orders until August of last year.

When they were discovered by Concho, Concho's employees took active effort to voluntarily report and correct all those noncompliant issues. None of Concho's

employees were involved in the prior proceedings or the hearings before Examiner Brooks.

While the Application today is not a compliance hearing, but rather a unit expansion request with some additional components to it, you can't understand the unit without knowing something about the voluntary compliance proceedings that we request the Division engage with us in. On behalf of Concho, Mr. Scott Hall has been talking in detail with Gail MacQuesten, the compliance attorney for the Division, to make sure that all the units, records and reportings and filings with this agency have in fact been corrected and that the wells are now compliant.

As part of that process, Concho discovered in August of last year that there was reporting of production as if it was unit production, which in fact it was unit production and production from lower zones outside the unit that had not been approved. It was simply reported as unit production. That production is associated with members of the Yeso formations. One would have been the Paddock, the other would have been the Blinebry.

The other action was, certain of those wells were deepened or drilled without the necessary sundry notice approvals or the APDs being approved. The information that we'll show you is that there was incorrect payments to the Commissioner of Public Lands. There is a 40-acre fee tract

within the unit area that Mr. Robinson [*sic*] will describe for you and explain to you some of the mechanisms that trigger that imbalance in payments. But Concho and Mack Energy have reached a settlement with the Commissioner of Public Lands, have paid the deficiencies in royalty payments. There are no severance tax payments that are not paid. All the accounts have been properly adjusted. We believe at this point, regardless of the violations of the Rules, in fact there's been no harm and there is no foul.

As part of the correction process, Mr. Catanach, Concho has taken action to correct all the C-103s, the C-104s, C-105s, with approximately 70 wells. All that was done back in September. In addition, there were plugged and abandoned wells that required change of forms. That was taken care of.

In part of the inventory research there was information that there were nine Blinebry wells that had not been properly permitted or authorized, and they were immediately shut in. There may have been some miscommunication recently and they were turned on for a short period of time, but in fact they have now been turned off again. So that's one of the issues before you, is that if you approve the expansion of the unit and pick up these other Yeso zones, by doing so, then, we would have the authority to then commence producing the Blinebry wells

again.

And then Concho electronically filed the C-115s on the production information, made the proper footnotes in there to alert the Division and to anyone exploring the records that there was a question about the allocations, and we believe we've put everyone on notice as to how -- the extent of the violations and our efforts to have those corrected.

So before you this morning, we're presenting a case to you that's unopposed, has the unanimous agreement of all the interest owners, we believe the concurrence of the Commissioner of Public Lands, to go forward and make what we consider to be the final corrections. And those corrections are, Mr. Catanach:

We seek to expand the unit which currently stops at the base of the San Andres, and we want it expanded through to the top of the Abo. And in doing so we would pick up, then, the Glorieta, the Paddock, the Blinebry, the Tubb and the Drinkard.

In the past proceedings, Mr. Brooks may remember that there was nomenclature confusion among us and the Division about how to handle the Yeso. In some areas the Yeso is simply associated with the Paddock, and when you look at the geologic spreadsheet, you'll know the Yeso has multiple components. What we're trying to accomplish here

is not only the expansion to pick up the Glorieta and all the Yeso members to the top of the Abo, we want to seek the corresponding contraction of the East Empire-Yeso Pool, so in doing so the whole interval from the top to the bottom of the unit now is one common source of supply.

And by doing that, we expose you to another request. That is to remove this unit from the need to file for downhole commingling.

The reservoir engineer will present to you this morning her information concerning commingling. You'll be told and you'll become aware that it is not practical to go back and try to reconstruct a separation of production associated with these different intervals, and that in the future, based upon what she will represent to you, we believe that there is no need to have the unit area file for downhole commingling applications. We believe that it is a process that's not necessary in this case.

You'll find that the commingling triggers of concern to you as a regulator are: Within the reservoirs am I making any combinations that's going to cause waste? Am I going to create cross-flows or other problems in a reservoir condition that commingling must be carefully examined. And then finally, in that examination, if I allow it to occur, have I impacted the correlative rights of any interest owners?

The answers to both of those questions for you today is no. And if the answer is no, we ask you to remove the burden on us and the agency of filing those applications.

And then finally we ask that you take the action to correct what I call the B order, and the findings made in that order, which indicated that based upon the presentation of evidence in that case, there was no Paddock production at the time the order was issued. That, in fact, was not correct.

Based upon that incorrect finding, then, the predicate for the order was absence of production in the Paddock, and therefore the unit was expanded to include the Paddock. That might be a flaw, or considered a flaw, in the predicate that allowed the approval. To clarify that and make sure that the unit is in full compliance, we want to revisit that issue and tell you what was in existence at the time the order was issued, what we then know now to be wrong, and what the facts are now so that you can make the appropriate corrections.

And having done that, at the very end of all this, we hope and believe that we're entitled to a clearance order indicating that this unit and its parties involved are in full compliance.

Thank you, Mr. Examiner.

EXAMINER CATANACH: Thank you.

BRENT ROBERTSON,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Robinson, for the record, sir, would you please state your name and occupation?

A. Brent Robertson, senior landman. I'm employed by COG Operating, LLC, and I reside in Midland, Texas.

Q. In what capacity are you employed?

A. Senior landman, overseeing Eddy County and parts of Lea County and Chaves County, New Mexico.

Q. Is part of your responsibility for your company becoming aware of the interest owners and the interests within what we've called this Grayburg-Jackson West Cooperative Unit?

A. Yes, sir.

Q. If it's all right with you, Mr. Robinson, I'm going to call it the unit.

A. It's fine with me.

Q. Fewer words for me is much easier. In addition, let's describe what you mean when you talk about COG Operating, Inc. What is that?

A. COG Operating, L.L.C., and COG Oil and Gas, L.P.,

are wholly owned subsidiaries of Concho Resources, Inc. I would like to refer to those three entities as Concho today.

Q. Let's do that, that helps me too. We'll just call it Concho.

A. Great.

Q. Mr. Robinson, when did you first become involved in the unit?

A. We became operator of the unit effective March the 1st, 2006.

Q. As part of your involvement in the unit, have you made yourself familiar with the ownership?

A. Yes, sir.

Q. Are you familiar with the various title documents and filings that have been made with the Commissioner of Public Lands?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Robinson as an expert petroleum landman.

EXAMINER CATANACH: Mr. Robertson is so qualified.

Q. (By Mr. Kellahin) Mr. Robinson, would you take a moment and find what we've marked as Concho Exhibit Number 1? Unfold that for us.

Mr. Robinson, give us a chance to become familiar

with the display. Walk us through what you're trying to identify for us, starting first of all with the outline of what we've called the unit.

A. Okay, this map depicts the unit area in Eddy County, New Mexico's, Township 17 South, Range 29 east. Depicted on the map in yellow is the horizontal boundaries of the unit, with the outline of the unit depicted in gray.

There are two other units depicted on this map that are not operated by Concho, being the Dodd Federal Unit and the Burch-Keely Unit. The Dodd Federal Unit outline is depicted in a fuchsia color. The Burch-Kelly outline Unit is depicted in a maroon color.

Q. When you look back at the yellow area, which is the outline of the Grayburg-Jackson Unit that we're talking about today, as part of the Application before Examiner Catanach, are we requesting any adjustments to the outer boundaries of this unit?

A. No, sir.

Q. What we're concerned about is the vertical extension of the unit?

A. Yes, sir.

Q. And what are you proposing to do?

A. We propose to expand the vertical limits of the unit to include the depths from below the base of the Paddock formation to the top of the Abo formation, which

effectively would unitize the entirety of the Yeso formation.

Q. If that is done, then, will you have consolidated within the unit a single common source of supply, starting with the Seven Rivers, going down to the top of the Abo?

A. Yes, sir.

Q. Let's see how that currently fits within the nomenclature for pool definitions that the Division is using now, incorporating the changes made pursuant to the B order proceedings.

A. Okay.

Q. Show us what's happened.

A. The original unitized -- Well, the pools that are involved in this area are the Grayburg Jackson-Seven Rivers-Queen-Grayburg San Andres Pool, and the Empire East Yeso Pool, which those outline -- the horizontal extent of those pools are also depicted on the Exhibit 1 with the Grayburg Jackson-Seven Rivers-Queen-Grayburg San Andres Pool outline depicted in green and the East Empire-Yeso Pool outline depicted in blue.

The B order effectively contracted the East Empire-Yeso Pool across the unit area, to delete the formations from the base of the Seven Rivers-Queen-Grayburg San Andres Pool to -- I'm sorry, the top of the Grayburg Jackson-Seven Rivers-Queen-Grayburg San Andres Pool to the

base of the Paddock.

So below the base of the Paddock to the top of the Abo, across the unit area is effectively still within the East Empire-Yeso Pool.

Q. So when we look at the map and see the East Empire is split into two portions, with a unit in between, the two portions of the Empire being in blue, that split is only indicative of the relationship of the deletion of the Paddock?

A. That's correct.

Q. Let's go back and talk about the operations of the unit, Mr. Robinson. Who is the current operator of the unit?

A. The current operator is Concho.

Q. And when did that become effective?

A. That was effective March the 1st of 2006.

Q. And who was the prior operator?

A. The prior operator was Mack Energy Corporation.

Q. Summarize for us again, now that we have some understanding of the different entities involved, summarize for us the history of Concho.

A. Okay, COG Oil and Gas, L.P., and its sole general partner, COG Operating, L.L.C., are wholly owned subsidiaries of Concho Resources, Inc., which we're going to refer to as Concho in the context of this hearing.

Concho acquired 100 percent of the working interest in the unit, along with other properties from Chase Oil Corporation and other certain affiliates, on February 27th, 2006. The unit represented about 120 wells of almost -- over 800 wells that were acquired in this particular acquisition. As mentioned, Concho became record operator of the unit effective March 1, 2006, as successor to Mack Energy Corporation.

Since February the 27th, Mack Energy Corporation has served as Concho's contract operator of the unit. However, Mack Energy Corporation is not an affiliate of Concho.

Q. To your knowledge, Mr. Robinson, what did Concho know about the unit at the time it acquired the unit back in February of '06?

A. We knew that Mack Energy Corporation had applied to expand the unit, and the Application was pending at the time we acquired the unit. We also understood that there was Grayburg, San Andres and Paddock production attributed to the unit.

Q. Did you know that there was any noncompliant questions with regard to the unit or these wells?

A. Not at the time.

Q. When we look at the ownership of the unit, what is the current status of the royalty and the working

interest owner within the unit area?

A. Within the unit area, currently the working and royalty interest is identical.

Q. Is there a fee tract within the exterior boundaries of the unit?

A. Yes, there's one 40-acre fee tract within the boundaries of the unit.

Q. We'll come back to that in a minute and show the impact of what that has done.

If you'll turn now, Mr. Robinson, let's look at Exhibit Number 2. I'd like to use this display, Mr. Robinson, as a locator map, Exhibit Number 2.

A. Okay.

Q. Give us a general understanding of what you've had placed on this display.

A. Okay, Exhibit Number 2 is a map depicting the unit area. Again, it's outlined in a gray color. The map also depicts the locations of the unit wells and is coded on the map as to which interval the well is producing from, either being a Yeso, Blinebry or -- well, I guess it's either Yeso or Blinebry within the unit. There's one Drinkard well depicted outside the boundaries of the unit.

Q. If you'll turn now, sir, let's look at Exhibit Number 3.

A. Okay.

Q. Would you identify for us what Exhibit Number 3 is?

A. Exhibit Number 3 is a tabular depiction of the tracts within the unit. There's 10 tracts in the unit. It also identifies the current lessor-lessee and legal description of those leases that comprise the unit, along with other various additional information.

Q. When we look within the unit boundary, you mentioned that there was a fee tract imposed within the unit area that's not committed to the unit?

A. There's a fee tract within the unit that is -- it is not committed to the unit as to depths below the base of the Paddock. It's committed as to the unitized interval.

Q. And where is that tract located?

A. That tract is the northwest quarter of the northwest quarter of Section 22, Township 17 South, Range 29 East.

Q. And then again, when we focus on that fee tract, then, it is within the unit and participating in the unit equities from the top of the unit down through the base of the Paddock?

A. That's correct.

Q. And below the base of the Paddock for this extension interval that you're seeking approval for, it stands outside of the unit agreement?

A. At current time, that's correct.

Q. Let's turn to a list of the wells in the unit so that Mr. Catanach and Mr. Brooks can see the tabulation of those wells. Identify for the record what that exhibit number is.

A. This would be Exhibit Number 4, which is a tabular depiction of the unit wells and their current status.

Q. Let's try to put this in some perspective. When you count up the total number of wells within the unit, what's the total number?

A. The total number is 120 unit wells.

Q. How many of those wells are active producer?

A. Eighty-one active producers.

Q. How many active disposal wells do you have?

A. We have 10 disposal wells, or injectors.

Q. The Exhibit Number 4 is color-coded. Is there a significance to the color code?

A. Yes, the color code depicted on Exhibit 4 relates back to the color code depicted on Exhibit Number 2 for those wells -- for the unit wells, so that you can match up the colors and identify the current status of the wells, based on Exhibit Number 4.

Q. When you count up the number of wells that are in this rust-color, the light red, how many of those wells do

you have?

A. 47, I believe, would be the answer.

Q. So there are 47 wells that are perforated in the Paddock interval, as well as in the Grayburg-San Andres formation?

A. That's correct.

Q. So that would be one group?

A. That's correct.

Q. Is there a group of wells that are completed only in the Paddock interval?

A. Yes, sir, there are 12 wells solely in the Paddock.

Q. And how are they identified?

A. Those would be the blue color on the -- on Exhibit Number 4. No, I'm sorry, the blue -- Actually, the blue on Exhibit Number 4 would be the Yeso-Blinebry wells, and there are five of those.

Q. Okay, so when you look at the well inventory, you're going to find 12 wells that are perforated and completed only in the Paddock interval?

A. That's correct.

Q. And you'll have five wells that are completed in the Paddock and the Blinebry, in addition to the Grayburg and the San Andres?

A. That's correct.

Q. And then you'll have four of these wells that are completed only in the Blinebry and Paddock?

A. That's correct.

Q. And are all those the combinations, then?

A. Those would be the combinations.

Q. Set that aside for a moment. Let me direct your attention to another subject. Let's talk about the status of activity with the Commissioner of Public Lands. What is the current status of approvals of the unit with the State Land Office?

A. The unit agreement was originally approved by the Oil Conservation Division on October 4th, 1966, by Order Number R-3127, which was subsequently amended on March the 4th, 1968, by Order Number R-3127-A, to include an additional 300 acres within the unit.

Unitized formation under the unit agreement, as originally described was that portion of the Grayburg-San Andres formation encountered between the depths of 2200 feet and 3600 feet underlying the unit area. This is the initial unitized formation.

The unit as approved was formed for the purposes of conducting primary and secondary recovery operations in the unit area. The original unit agreement was approved by the Commissioner of Public Lands on September 28th, 1966, and the amended unit agreement, which expanded the unit to

include additional lands, was approved by the Commissioner on March 8th, 1968.

On September 27th, 2006, the Commissioner of Public Lands issued final approval of the second amendment of the unit agreement, expanding the initial unitized formation within the unit area to be and include the expanded unitized interval. And this interval would be the interval from the top of the Seven Rivers formation to the base of the Grayburg-San Andres formation. That's not right. It was to the base of the Grayburg-San Andres formation, Yeso-Paddock included as well, so it was from the top of the Seven Rivers to the base of the Yeso-Paddock.

Q. And that would be the second expansion?

A. That's the second expansion or second amendment.

Q. Has an application been filed on behalf of Concho to have a third amendment approved which would then authorize the expansion to pick up the other zones down through the top of the Abo?

A. Yes.

Q. Let me direct your attention to what is marked as Exhibit Number 5. Is this the Application for preliminary approval that was submitted to the Land Office?

A. Yes, it is.

Q. This morning, did Concho receive a letter from

the Commissioner of Public Lands indicating preliminary approval for this last expansion?

A. Yes, we did.

Q. That has been marked as Exhibit Number 5A, correct?

A. Yes.

Q. Is it your understanding that this, in fact, is preliminary approval?

A. Yes, it is preliminary approval, issued by the Commissioner of Public Lands.

Q. Is it also your understanding that before the Commissioner will give you final approval for the expansion, you need an order from the Division approving the expansion?

A. That's correct.

Q. That's one of your conditions, and that's one of the reasons you're here this morning?

A. Yes, sir.

Q. Let's turn to the status of the Oil Conservation Division Order. Describe for Mr. Catanach what you believe to be the relevant pools associated with the unit.

A. The relevant pools associated with the unit are the Grayburg Jackson-Seven Rivers-Queen-Grayburg San Andres Pool and the East Empire-Yeso Pool.

Q. And then what are the specific R orders

associated with the unit?

A. The specific R orders are R-3127, dated October 4th, 1966, original approval for the unit agreement; Order R-3127-A, dated March the 4th, 1968, which added 300 acres to the unit; Order R-3069, dated June 1, 1966, authorizing waterflood operations in Section 28; and on June 13th, 2006, the Division entered Order Number R-3127-B in Case Number 13,609, which approved the extension of the vertical limits of the initial unitized formation and the Grayburg Jackson Pool to include all formations from the top of the Seven Rivers formation to the base of the Glorieta-Yeso-Paddock formation, being the depth from 1116 feet to 4636 feet below the Kelly bushing, as shown on the Schlumberger log of the Diamondback State Number 1 well, located 2040 feet from the north line and 2140 feet from the east line of Section 28, Township 17 South, Range 29 East, Eddy County, New Mexico.

As mentioned earlier, we refer to this interval as the expanded unitized interval. The horizontal boundaries of the unit remain unchanged.

Q. Do you have a copy of what we call the B order marked as an exhibit for introduction in the hearing?

A. Yes.

Q. And what is that exhibit number?

A. That would be Exhibit Number 6.

Q. The order was entered on August 13th of last year. After the entry of the order, what did Concho discover?

A. As previously mentioned, we discovered that prior to the entry of the order, the unit contained wells that produced from the Paddock and from the Blinebry intervals of the Yeso formation, and that resulting production had been commingled with Grayburg-San Andres production and reported as unit production without Division approval.

Q. How did Concho find this out?

A. During our -- Concho's evaluation of a Blinebry-Yeso development plan for the unit in late summer of 2006, we discovered that the Commission's Order R-2137-B contained erroneous findings. Specifically, Finding 10.B states, The Yeso-Paddock interval has not been tested or developed within the unit area, however Mack expects that interval will be productive.

And Finding 12 states, in part, There has been no development of that interval in the unit area. The interval referred to is the Yeso-Paddock interval.

Q. Are those findings, in fact, correct?

A. Those are correct.

Q. Are -- I believe they're incorrect.

A. Oh, the findings of the Order are incorrect, that's --

Q. You have correctly read them --

A. Right.

Q. -- but they're incorrect findings?

A. That's correct, they are incorrect findings.

Q. There, in fact, are a number of wells that are drilled into the Paddock and the Blinebry prior to the entry of this order?

A. Yes.

Q. What has your research indicated was the vintage of these noncompliant wells?

A. It appears that from 1984 through May of 1997, wells were drilled or deepened within the unit that were perforated and completed in the Yeso-Paddock formation only, or in combination with the Grayburg-San Andres and the Yeso-Blinebry formations. The regulatory filings made for these wells reported these wells to have been perforated and completed only in the Grayburg-San Andres formation. Further, all production from these wells has been reported as unit production without qualification until recently.

It does not appear that the unit operators during the time period in question made application for or received regulatory approval to complete the wells in a formation other than the Grayburg-San Andres formation or to commingle production from separate common sources of

supply.

Q. Does Exhibit 4 contain a list of all those wells that would be noncompliant?

A. Yes.

Q. In addition to that, what other noncompliant issues have you discovered, or has Concho discovered?

A. We have discovered that production was commingled from unitized and non-unitized formations downhole and at the surface. Production from these wellbores was incorrectly reported as unit production as production came from the initial unitized formation and lower formations, including the expanded unitized interval. Various reports indicating that the completion, perforated and producing intervals as being solely within the initial unitized formation were filed with the Division, which were incorrect. The deepening of certain wells was done without Division approval. And the reporting and payment of royalty attributable to the unit and due to the State of New Mexico was incorrect as a result of these circumstances.

Q. Has Concho disclosed to the Commissioner of Public Lands and to the Oil Conservation Division all these issues of noncompliance?

A. Yes, Concho has voluntarily disclosed to the Commission all instances of noncompliance known to it

related to the unit, and amended reports were prepared and delivered to the Commission on September 14th of 2006.

Q. What other filings were made to correct the noncompliant issues?

A. Amended reports from three of the four wells which have been plugged and abandoned were also submitted. Previous filings for the fourth plugged and abandoned well, Well Number 87, appear to be correct. Therefore, no amended filings were necessary for that well.

The nine Yeso-Blinebry wells that are within the unit area were voluntarily shut in by Concho on September 6th, 2006. However, we learned on or about December 23rd, 2006, that such wells were inadvertently returned to production during the first week of November by our contract operator. They were immediately shut in again. C-103 forms for those wells were among the records delivered to the Commission on September 14th, 2006, and COG has also electronically filed its C-115 production reports for June through October of 2006.

Q. What action has Concho taken with the Commissioner of Public Lands to identify, quantify and compensate the Commissioner of Public Lands office for payment of royalties that may have been deficient?

A. Concho and Mack Energy also voluntarily notified the New Mexico State Land Office that the attribution of

non-unit production from the Yeso formation to unit production resulted in an underpayment of royalties to the State Land Office.

Q. Take a moment, Mr. Robinson, and explain to me how this fee tract caused that occurrence to happen.

A. For the production attributable to the intervals which were not part of the unit at the time of the production, the State -- the fee tract was sharing in the royalties from that production. Therefore, the State Land Office was underpaid on royalty basis as those moneys paid to the fee tract should have been paid to the State Land Office for production from the Paddock and Blinebry.

Q. Have Concho and Mack Energy reached a settlement with the land office and corrected that underpayment?

A. Mack Energy and Concho worked with the -- Well, Mack Energy Corporation has worked with the New Mexico State Land Office to establish a methodology -- to establish the value of the underpayment, which has been determined to be $615,444.30, including interest. This amount has been paid by Mack Energy to the State Land Office, and Concho, Mack Energy and the New Mexico State Land Office have entered into a settlement agreement to acknowledge the compromise.

Q. To the best of your knowledge, are all royalty issues resolved with the Commissioner of Public Lands?

A. Yes.

Q. At any time during this entire process was there any underpayment of severance taxes?

A. No.

Q. Has Concho specifically asked the Division's compliance attorney and the Division if there was any further corrective action that they could think of that Concho needed to take?

A. Yes, we have specifically asked the Division if there's further corrective actions required in order to bring unit wells into full compliance with the Rules and Regulations of the Commission and the laws of the State of New Mexico. The Division has advised us that no further actions are required of us.

However, notwithstanding the remedial steps taken by Concho and the Division's advice to us, we still feel it necessary to correct Findings 10.B and 12 of the B order as part of our effort to extend the expanded unitized formation to the top of the Abo.

Q. In addition to correcting those findings you described and expanding the vertical limits of the unit to pick up all these Yeso zones, is there anything else that you're requesting the Division Examiner to do in this process today?

A. Yes, we wish to correct the findings of the B

order as previously stated, expand the vertical limits of the unit as previously stated, and also obtain approval for past production attributable to unit wells and the various pools within and below the expanded unitized interval, that instead of being allocated and reported for each pool was commingled and reported solely as unit production.

Q. Are you also seeking authority to not have to file downhole commingling applications if this Application is approved?

A. Yes.

Q. To the best of your knowledge, are there any further amendments required to the unit in order to make the necessary adjustments that you're talking about?

A. No.

Q. Finally, then, Mr. Robinson, as part of this process, you're asking that a C order be issued such that we would have a re-affirmation from the Division about the effectiveness of the B order and that it is now corrected by our action in this Application and the evidence presented today, so there's no doubt about any deficiencies or the validity of that B order?

A. That's correct.

Q. At this point do you believe that if the Division takes the action that you recommend, that all the correlative rights of the interest owners, mineral owners

involved in this unitized area will be properly protected?

A. Yes.

Q. Let's turn to the topic of notification. I have what is marked as Concho Exhibit Number 7. When we look at Exhibit Number 7, do you understand this to be Mr. Hall's affidavit of publication of notice to all the parties by certified mail?

A. Yes.

Q. Describe for us what type of notice list Mr. Hall used to send notification to potentially affected parties.

A. Concho determined to give notice to every operator of any well located within one-half mile of the exterior boundaries of the unit area, regardless of what pool any of those operators were operating in.

Q. In addition, did you give notice to all the interest owners within the unit?

A. Yes.

Q. What's your knowledge of Devon's operations in this immediate vicinity?

A. Devon operates a well, I believe in Section 20 of Township 17 South, Range 29 East, which is a -- I believe it's a deep gas well. And we've noticed Devon of the hearing out of an abundance of caution. And they may operate another well down to the south part of the unit, but the closest one they've got is the one over in Section

20.

Q. Apart from notice of Mr. Bruce of Devon's interest in the case, has anyone else contacted you or notified you or expressed any objection to the Division approving your Application today?

A. No.

Q. Do you have the consent of the fee owner to proceed in this matter?

A. Yes, the owner of the fee 40-acre tract has approved and executed the third amendment as proposed by Concho.

Q. And as of today, you now have the approval of the Commissioner of Public Lands for preliminary approval?

A. Yes.

Q. Let me direct your attention now, Mr. Robinson, to what has been marked as Concho Exhibit 7A. Do you have that before you?

A. Yes.

Q. What is this, sir?

A. Exhibit 7A is the proposed third amendment to the Grayburg-Jackson West Cooperative Unit Agreement, which has been executed. It's a photocopy of the executed third amendment, executed on behalf of Concho and Mossman-Midwest Company, which is the fee owner of the 40-acre tract included in the unit.

MR. KELLAHIN: That concludes my examination of Mr. Robinson at this time, Mr. Catanach. We would move the introduction of Concho's Exhibits 1 through 7, including 7A and 5A.

EXAMINER CATANACH: Exhibits 1 through 7, including 5A and 7A, will be admitted at this time.

EXAMINATION

BY MR. BROOKS:

Q. Of course, I was the Hearing Examiner in the proceeding that led to the B order, and I really was not aware when I prepared for this morning that this issue was going to come up with this case, involve that same proceeding.

If I understand what you're saying correctly, the records available at the time that this hearing occurred would have reported those wells that were actually producing from the Paddock as being producing from the Seven Rivers-Grayburg; is that correct?

A. Yes, sir.

Q. So that based on the Division's records as they existed at the time the B order was entered, the statement that there was no production from the Paddock would have been correct; isn't that true?

A. That -- the statement that there was no Paddock production across the unit area would have been incorrect.

Q. Well, but going back to my premise, based on the Division records as they existed at that time, it would have been correct?

A. That's correct, yes, sir.

Q. Okay. And I also realize from what you're telling me that there was -- I did actually make one mistake in that order, because I was not aware and did not focus on the fact that the vertical limits of the East Empire-Yeso Pool were actually extended to a deeper level than the base of the Paddock. And as I understand your testimony this morning, the vertical limits of the East Empire-Yeso Pool go all the way to the top of the Abo?

A. That's our understanding, yes, sir.

Q. Okay, I did not refer to -- I did not study the order establishing that pool, and I didn't really focus from the testimony on the fact that there was that discrepancy. But that means that the East Empire-Yeso Pool continues in existence as to portions of the horizontal limits of the Grayburg-Jackson Unit --

A. Yes, sir.

Q. -- even after the implementation of the B order?

A. Yes, sir.

Q. Okay, I think I understand that. And one of the things you're asking for in this Application is retroactive approval for the downhole commingling of the Grayburg-

Jackson -- of the Grayburg-Seven Rivers production and the Yeso-Paddock production in the existing wells; is that correct?

A. Yes, sir.

MR. BROOKS: Okay. I think I've confirmed my understanding of the testimony. I'll let -- I'll defer to you, Mr. Catanach.

EXAMINER CATANACH: Okay, as far as the downhole commingling issue is involved, you're seeking approval from now to have approval to downhole commingle?

MR. KELLAHIN: We have two problems, Mr. Catanach. We have the past production from zones which were in two different pools, that under the Rules require commingling approval. The testimony from our engineer will be that it's impossible to reconstruct that data set in such a way that you could appropriately make any allocation as to where that production came from, notwithstanding the fact that there are no reservoir engineering concerns of pressure, cross-flow or whatnot.

So we have the past history of production that's attributed to the wrong pools, and no way to re-allocate it. If you want to call that downhole commingling, I guess that's what it is.

For future production, it's our argument that while the Rule may require and you may decide that we need

to continue to file commingling forms for each individual well, it is our belief that the regulatory reasons for commingling don't exist in the unitized area, for two reasons.

One, the commingling anticipates a concern over reservoir waste, cross-flows, pressures, compatibility and value. Commingling has occurred in this area, and we'll show you commingling orders shortly. The point is, they're never denied, there is no such reservoir-engineering concern.

And the last part of the puzzle is, if you can commingle efficiently to prevent waste, in doing so can you allocate in such a way to protect correlative rights? That matters where you have a difference in ownership. With the approval of the expansion, we believe all ownership in all zones is now common, and we no longer have a future equity problem to address, and the need to file a form is a waste of your time and ours.

EXAMINER CATANACH: Well, that's correct, Mr. Kellahin, if we do expand the vertical limits of this pool to include all these formations, in fact, downhole commingling approval is not required in those type of situations --

MR. KELLAHIN: That's right.

EXAMINER CATANACH: -- because it's all one

common source of supply.

MR. KELLAHIN: And that's where we're trying to go.

EXAMINER CATANACH: Okay. So if we approve the unit expansion to include all those intervals, that kind of takes care of itself as far as the downhole commingling is concerned. We don't really have to address that.

MR. KELLAHIN: Well, only in such a way as you make a finding that we have talked about, and it's not applicable. The problem goes away because of the action taken.

EXAMINER CATANACH: Okay, what I want to explore also is, the downhole commingling that has gone on up until this point, you need retroactive approval for that as part of your compliance.

MR. KELLAHIN: I think we do. I'm concerned about that, because we are here to tell you that, in fact, the reality is that production has been attributed to the wrong pool, that belonged to the Paddock and the Blinebry. The parties involved in that have been compensated. The only disadvantaged party was the Land Office, and they've been paid in an amount that satisfies their concern.

And we've shut in the Blinebry wells to avoid future exasperation of the problem until you approve production out of the Blinebry as part of unit production,

and we'd like to turn that production back on as soon as we could.

MR. BROOKS: But none of the subject wells was located on the fee tract?

THE WITNESS: No.

MR. KELLAHIN: No, that's true.

MR. BROOKS: So there were not any royalties that were paid to the State that should have been paid to the fee owner?

THE WITNESS: No, sir.

EXAMINER CATANACH: So all of the issues with regards to the payment in those commingled wells has all been taken care of, you just need kind of a regulatory approval, a retroactive approval, to commingle those wells?

MR. KELLAHIN: The reality is, I'm looking for somebody that examines this process. They're going to look at the R orders.

EXAMINER CATANACH: Uh-huh.

MR. KELLAHIN: And if they're going to look for compliance issues and how this fits together, they're going to read the sequence of our orders. They're going to get to the B order and see that there's a glitch in what's going on. If they look at the filings they're going to say, That doesn't make a lot of sense.

And what we're wanting with the C order is a way

that a title examiner or a regulatory lawyer goes to your R orders, finds the C orders and said, this is all taken care of.

There's no direct link between this process and any clearance letter the Division may issue for us on the noncompliance issues. If somebody's looking for that, they may not find it unless you tell them in this order everything is solved.

EXAMINER CATANACH: Okay, so that would satisfy you if there was a finding in this order that said all downhole commingling that has occurred prior to this date is hereby approved retroactively? That would satisfy what you're looking for?

MR. KELLAHIN: Yes, sir.

EXAMINER CATANACH: Okay, and as far as you know, there are no compliance issues that we need to address here today?

MR. KELLAHIN: Yeah, the compliance issues will be handling between Mr. Hall for Concho and Gail MacQuesten, your compliance attorney.

EXAMINER CATANACH: And it's your understanding we don't need to address any of that?

MR. KELLAHIN: Only insofar as you link together changes in the B order.

EXAMINER CATANACH: Okay.

MR. KELLAHIN: Findings in the B order are outside of what they're doing with the compliance process.

EXAMINER CATANACH: Okay.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Robertson, let's get into a little bit of the unit ownership. The working interest is owned 100 percent by Concho?

A. Yes, sir.

Q. And the fee tract is owned by -- well, you're still the operator of the fee tract, right?

A. Yes, sir.

Q. Okay. And that's owned by who? What's --

A. That's Mossman-Midwest Company.

Q. So they're not a working interest owner, they're just a royalty owner?

A. That's correct.

Q. Okay. So who other royalty interest owners are there?

A. Only Mossman-Midwest Company and the State of New Mexico.

Q. It's all state land --

A. Yes, sir.

Q. -- with the exception of the 40- --

A. -- with the exception of the 40-acre tract, yes,

sir.

Q. Well, thank God there's no federal land in there.

Okay, and you're satisfied that all of the issues with the State Land Office have been settled?

A. Yes, sir.

Q. Okay. Now this unit was originally established, I guess, as a waterflood secondary recovery-type unit?

A. Originally, yes, sir, it was established for primary and secondary recovery operations. I don't know that there's been a large amount of secondary operations conducted on the unit. That would be something our engineer and geology experts would have to address. But yes, it was established for primary and secondary recovery.

MR. KELLAHIN: Mr. Catanach, if I may approach the bench I have copies of the prior orders for you.

EXAMINER CATANACH: Okay.

MR. KELLAHIN: First one was entered by Mr. Elvis Utz.

EXAMINER CATANACH: Wow. Okay. Tenneco Oil Company.

Q. (By Examiner Catanach) Okay, so when -- Mack came in for the second amendment; is that correct?

A. Yes, sir.

Q. They're the ones that came in to get 3127-B issued, right?

A. Correct.

Q. And they were the owner of the unit at that time?

A. They were the owner of the unit when they filed the Application. The case was continued from, I believe, December until April. We closed on the property in late February. So --

Q. Okay.

A. -- there's an overlap.

Q. So it's your understanding that the East Empire-Yeso Pool comprises the Paddock, the Blinebry, the Tubb and the Drinkard, right?

A. That's our understanding, yes, sir.

Q. Okay. At the time when Mack came in, was it their intent to just include the Paddock at that time, or was it just an oversight?

A. I'm not really -- I don't know the answer to that question, but their Application clearly shows the interval as they tied it back to a particular interval and referred to a well log, the Diamondback well, and I believe that the -- the base of the interval they are asking for does not include the entirety of the Yeso Pool, and I don't believe it includes the Blinebry member of the Yeso either.

Q. Okay, so they just asked for the Paddock, as far as you know?

A. That's my understanding, yes, sir.

Q. Okay. Is there Tubb-Drinkard production at this time?

A. Not to my knowledge across the unit area. I believe there was some -- a Drinkard test just to the west of the unit, and it probably is depicted on the production map that we submitted as Exhibit Number 2.

Q. And as far as you know, there isn't any Tubb production?

A. No, sir.

Q. The purpose of including those is because -- Is there potential for production?

A. I don't know that I'm actually qualified to address that question, but --

Q. I'll talk to one of the --

A. Okay.

Q. -- other people about that.

Devon hasn't expressed any objection to the Application, have they?

A. No, sir, they merely wanted to have someone here to monitor the hearing; that's my understanding.

EXAMINER CATANACH: As far as the correcting of R-3127-B, we simply need to make those findings state that there is -- that there was production from the Paddock at that time?

MR. KELLAHIN: Yeah, and that despite that

information, you're still adding the approval of the Paddock to the unitization process.

EXAMINER CATANACH: Now that application was approved, right? I mean, I --

MR. KELLAHIN: Yes, sir.

EXAMINER CATANACH: -- I don't --

MR. KELLAHIN: Well, there was part of it denied. Part of the -- If you look at the back of that order, the B order, there was a -- I think there was a waterflood component to it.

MR. BROOKS: There was a request, I believe, for preliminary approval for secondary recovery operations, and the way the evidence was presented at that time, it did not appear that they qualified for -- since they had not -- since it was not shown that there was production from that interval.

EXAMINER CATANACH: Okay, so the waterflood aspect in the Paddock was denied?

MR. BROOKS: Yes.

MR. KELLAHIN: Yes, the applicant did not come forward with the proper evidence, and Mr. Brooks is correct on that.

EXAMINER CATANACH: Okay, I think that's all I have for now.

MR. KELLAHIN: He's not going anywhere.

EXAMINER CATANACH: We can move on.

MR. KELLAHIN: Mr. Examiner, at this time we call Ricky Cox.

RICKY COX,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, sir, would you please state your name and occupation?

A. My name is Ricky Cox, I'm a petroleum geologist.

Q. And where do you reside, sir?

A. I live in Midland, Texas.

Q. By whom are you employed?

A. Concho.

Q. Have you previously testified before the Division and qualified as an expert petroleum geologist?

A. Yes, sir, I have.

Q. Pursuant to your employment with Concho, are you aware of the geologic information associated with what we've called the unit area?

A. Yes, I am.

Q. As part of your study, have you prepared a geologic evaluation of the unit formations?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Cox as an expert petroleum geologist.

EXAMINER CATANACH: Mr. Cox is so qualified.

Q. (By Mr. Kellahin) Are you the principal geologist for Concho that's responsible for the geology within the unit?

A. Yes, sir, I am.

Q. And when did you first become involved?

A. I started work for Concho in June, and that's when I became involved.

Q. I think it will be helpful at this time, Mr. Cox, to take the type log for the unit, which I think is going to be Exhibit 8. I have that, and you have a laser pointer? Sir?

A. Yes.

Q. And let me move this so the Examiner can see the display, and let's walk through the type log so that he can become familiar with the different geological formations you're dealing with.

A. Okay, by way of just a kind of simple description of the unitized interval, the current unitized interval, the Grayburg-Jackson unit, is indicated by the purple bar on the right-hand side of the type log, which is right there. The top of that unitized interval is the Seven Rivers formation. It includes also the Queen, the

Grayburg, the San Andres, the Glorieta and the Paddock. That would be the base of the current unitized interval.

What we are looking at today is extending the vertical limits of the interval to that shown by the green bar on the left side of the type log, which continues from the base of the Paddock to the top of the Abo, including the Blinebry, the Tubb and the Drinkard members of the Yeso formation.

Q. Can you go back to Exhibit Number 2 and show us where the type log well is, Mr. Cox?

A. Yes. The type log is a unit well, it's the Unit Well 140. It's located in Section 21, right in the center of your map, and from the -- I call it -- well, the footage call is 1700 south, 1980 west, so you can find that. The unit well numbers are listed above the wells. So it's just to the southwest of the section number, there in the center of the section.

Q. This well was drilled down through the base of the Abo, was it?

A. It was, it was drilled down into the top of the Wolfcamp. TD --

Q. Did it go on deeper? Was this a deep gas well at one time?

A. It TD'd at 7500 feet. I believe it was originally intended as an Abo test, because of the Empire-

Abo production to the west, so I think it was probably exploring for Abo production further east of the Empire unit.

Q. Is this a good quality modern log?

A. Yes, it is, it's very good.

Q. We're dealing with a dolomite here when we look at all these different formations, either in the Grayburg-Jackson or down in the Yeso -- Empire-Yeso, right?

A. We are. They are all dolomites, with a few sandstones in between. The Glorieta, the Tubb are sandstones, and a couple of sandstone units in the San Andres-Grayburg.

Q. I can't see that far. What is the top formation that you're depicting on the type log?

A. The very top that's listed is the Yates formation, the top of the unitized interval would be the Seven Rivers below the Yates.

Q. How do you find on the log the point of the marker that tells you you have a signature that lets you identify a point geologically from which you can then relocate this same position on any other log unit?

A. For which specific formation?

Q. Well, for any that you choose. What is your control point?

A. Well, I generally -- typically use the gamma-ray.

The gamma-ray curve is shown on your exhibit in black. It's on the left side of the log. That's the primary identifier, is the gamma-ray curve, and then also I look at the porosity curves which are on your exhibits. Mine is the blue and the red curves.

Q. Is that an easily identifiable marker point for you as a geologist to find?

A. It is.

Q. And can you find that point consistently as you move from log to log across the unit area?

A. Yes, for all the formations.

Q. In your opinion, then, is this a useful type log for discussion about the geology for the unit area?

A. It is.

Q. On the right side there is a -- it looks blue to me -- there's a line that runs vertically down through and stops just about the Glorieta?

A. It stops at the base of the Paddock.

Q. Stops at the base of the Paddock. That line that -- the extent of that line is the status of the approval if you include the B order from the Division, right?

A. That is correct.

Q. Within that interval, are the characteristics of the dolomite similar as you move among the various formations?

A. It is very similar.

Q. Within the context of those formations, do you see any geologic reason you should not treat them as one common source of supply?

A. No, I don't.

Q. Look on the left side. There's a green marker line extending from the top down through -- to the top of the Abo?

A. That is correct.

Q. The portion that extends below the blue line on the right side, that interval from there, from the pointer down, that is what, sir?

A. That is an interval that includes the Blinebry, the Tubb and the Drinkard members of the Yeso formation.

Q. Again, these are all dolomites?

A. Except for the Tubb. The Tubb is principally sandstone.

Q. Do you see any reason among that collective package of formations not to commingle those formations with those above it?

A. No, I don't.

Q. What kind of things would you look for as a geologist to tell you it would not be a good idea?

A. If there were large unexpected porosity zones, if there was a lot of heterogeneity from well to well, if

there was a strong pressure difference within the formation, those would all not be good zones to produce together.

Q. In the established area, this is all mature production, is it not?

A. It is.

Q. The oil wells are being produced by plunger lift --

A. Yes, they're all --

Q. -- they're being pumped?

A. Yes, they're all pumped.

Q. Is there any water associated with any of these zones?

A. All of these zones are associated with relatively high water cuts.

Q. And therefore the need for these injection wells that are in the unit?

A. Yes.

Q. The injection wells are taking produced water from the unit and putting it back into where?

A. It's my understanding all of the produced waters reinject into the San Andres.

Q. Are you seeing any problem with doing that?

A. None to date.

Q. It's been historically done for years and years,

decades?

A. To my knowledge.

Q. Let's take us to Exhibit Number 9. If you'll take a moment, Mr. Cox, and identify Exhibit Number 9, we'll use it as a reference map and talk about your two cross-sections.

A. All right. Exhibit 9 is a structure map on the top of the Glorieta. The Glorieta is located on the type log at a depth of 3830 feet, approximately. It's labeled clearly. It is about 100 feet above the top of the Paddock, and we typically map the Glorieta to reflect Paddock structure.

On your structure map you'll see the two cross-sections identified. There's a west-to-east cross-section. It begins outside the unit, crosses through the unit, continues to the east one location. A north-south cross-section that goes only through the unit itself.

The wells on the map are color-coded similarly to the production map earlier entered as an exhibit. The red wells are those that are producing, have perforations in the Paddock member of the Yeso. The blue-colored wells have perforations that are productive in the Blinebry member of the Yeso.

There are also within the unit itself nine wells that have a purple triangle around them. Those are wells

that are identified as noncompliant Blinebry test within the unit.

Q. Can you impose the unit in a regional sense so that we have a regional geologic setting for what's going on here and have you describe that for us?

A. Sure. The unit sits within -- sits on the northwest shelf, which is the northern extent of the Delaware Basin in southeast New Mexico. For the intervals that we're talking about today, being the Yeso formation and the shallower units of the unitized interval, all of those intervals were deposited shallow marine water. They typically are shallowing upward cycles. They all show -- they're all dolomite. Trap styles are almost always very low-relief anticlines/noses, with thin porosity zones that drape over the nose and pinch out updip, in this case updip to the north, basically.

And moving south of the unit, we'll see as we go through the various exhibits, contours, the structural contours, will tighten, indicating steep dip that indicates the southern edge of the northwest shelf, dipping into the Delaware Basin.

Q. Do you have a general sense of the permeability in this area of these reservoirs?

A. I do from log analysis. Permeability in all of these zones, particularly the Blinebry, is very, very low

permeability.

Q. Let's go back to Exhibit 9 now and have you discuss with us what you see about the Glorieta structure.

A. On Exhibit 9, through the center of the unit and extending east and west -- that would be Sections 20, 21 and 22 on the exhibit -- there is a low-relief structural nose as contoured on top of the Glorieta. To the north you lose the nose and you just end up with a very slow, very flat regional dip, downdip to the east. To the south, the southern third of the mapped area, contours are tightening up, indicating steeper dip as you fall off of the front edge of the Yeso shelf margin.

Q. Let's go to your cross-sections now. Let's start with Exhibit 10, which will be your east-west cross-section.

A. Yes.

Q. Identify for the record what we're looking at. Give us a moment to unfold the displays, though, Mr. Cox.

Let's go from the west on the far left and move to the east, starting with the well that's outside the unit.

A. All right. Exhibit 10 is a west-to-east cross-section. It only includes formations of the Yeso -- intended to include those formations. There's a small amount of San Andres shown at the top. The Glorieta, of

course, is our structural mapping horizon from the Exhibit 9.

The base of the cross-section is either the TD of the well or roughly the base of the Abo formation.

On the far left side of the cross-section there's a yellow bar, indicating the interval of the Yeso formation. There are several members of the Yeso: the Paddock, the Blinebry, the Tubb, the Drinkard. The Abo is picked in two wells in this cross-section. The other wells did not drill deep enough to find the Abo.

Also indicated in the cross-section, in the left track of each log are short horizontal red hachures. That indicates perforations within that well. You'll note well number 3 from the left has no perforations indicated on it. It produces from a shallower horizon.

Q. Let's start at the top of the Paddock, then, and have you characterize for us the consistency of the geologic characterization of the Paddock as we move from west to east.

A. The Paddock -- the best reservoir character of the Paddock is seen in the porosity curves. Those are the blue and the red curves on the right track of the three -- the first, the second and the fourth log.

From the very top of the Paddock, if you follow those two porosity curves, after approximately 100 feet

there's a strong deviation to the left, indicating a porosity zone. It is relatively consistent in absolute value of the porosity units, and it is about 300 feet thick in each well on the cross-section.

Near the base of the identified Paddock member and about 300 feet from the top of the Blinebry, those same porosity curves make a jump to the right, indicating a loss of the porosity. That's where the -- the base of the porosity zone.

And you'll see, then, there's a very tight section about 300 feet thick at the base of the Paddock. It's very consistent. The second well on the cross-section from the left shows the same character: tight zone with no -- very little porosity at the top of the Paddock, a sharp jump to the left indicating the porosity zone, continues very consistently for about 350 feet and then makes an abrupt jump to the right.

That porosity zone is everywhere within the G-J Unit. Its thickness varies somewhat as you go from north to south, because you're moving from the Paddock shelf down very near or over the shelf edge, so the zone thins some from north to south. East to west as shown on this cross-section, that zone is very consistent in thickness. And that is the principal reservoir within the Paddock member.

Q. There's no doubt in your mind as a geologist that

this forms a viable prospect for inclusion in the unit and ought to be accessed?

A. No doubt. It's productive outside the unit on both sides of the unit and has been tested within the unit. It's commercial.

Q. In terms of an exploration strategy, does it make sense to drill new wellbores from the surface all the way down to the top of the Abo and access all these intervals?

A. Yes, it does.

Q. Is there opportunities in formations below the top -- the base of the Paddock, that ought to be accessed in your opinion?

A. Yes, there are.

Q. What information can you show us on this east-west cross-section that gives you confidence in the prospective viability of these other zones, the Blinebry and I guess the Drinkard, particularly?

A. Well, looking at the first log on the left of the cross-section, within the interval identified as the Blinebry carbonate, you'll also see that there are perforations marked in that well for the Blinebry. The Blinebry is perforated and productive in that well.

And comparing the log character from the first well -- that's the Mesquite State Number 14 -- to wells within the unit, the next two wells, and also outside the

unit, the last well on the cross-section, the log character, the reservoir properties, are all very, very similar, indicating that the Blinebry should also be productive within the unit.

Q. You've indicated, I believe, that there's an absence of potential in the Tubb, is it? It's a sandstone?

A. That is correct. I'm not aware of any Tubb production in the area, or attempted Tubb production, and I don't see reservoir quality in the Tubb in this area.

Q. But you also want to go down with this drilling strategy to access the Drinkard?

A. I do. There is a well in the area that has tested the Drinkard, on the cross-section, the first well, the Mesquite State 14.

Also on this exhibit you'll see perforations for the Paddock shown on the log. The Paddock was perforated, acidized and swab-tested by itself. It did test oil, but in rates too low to be commercial. It was not fracture-stimulated or attempted to be fracture-stimulated. It's a dolomite, it's in the same environment of deposition as the Blinebry and the Paddock, sitting on the northwest shelf. It is a shelf rock, it's not a basinal rock. It is similar thickness to the Paddock and the Blinebry, and I think that there's a very good chance that there will be areas within the unit where the Drinkard is thick enough and has enough

reservoir porosity that it would be commercially productive with modern stimulation techniques.

Q. As part of a unit process, would you recommend that the unit be allowed and authorized by an extension to access by drilling into the Blinebry?

A. Into the Drinkard, yes, sir.

Q. Into the Drinkard. Through the Blinebry, into the Drinkard?

A. Yes, I would.

Q. Let's look at it from the north-south direction. Turning now to Exhibit Number --

A. -- 11?

Q. -- 11. Let's take Exhibit Number 11, Mr. Cox, and go through the same sequence as you did in the east-west direction.

A. All right, this log -- the logs in this cross-section are annotated identically to the previous cross-section. Perforations are identified with the same horizontal red hachures. The Yeso interval is identified on the left with the red bar.

There is an extra interval identified on this cross-section that's not in the east-west, and that would be the Blinebry sands are identified and correlated, particularly between the last two wells from the right on this cross-section.

If we begin on the left, which is the north end of this cross-section, and just look at the pick for the top of the Glorieta, top of the Paddock even, and follow those from left to right, you'll see that there is structural -- increasing structural elevation from the first log on the cross-section to the second, and then it begins to dip again in the last two wells. That's the structural nose that's reflected on the Exhibit Number 9, the Glorieta structure map, and that is one of the elements that is very common in production from the Yeso formation on the northwest shelf.

A pick below the Paddock -- the Paddock porosities only we talked about on the east-west section, you can see it here again, particularly in the second well from the left, which is the -- again the Unit 140 well. The deviation of the porosity curves to the left for about 300 feet, then they deviate back to the right, showing the base of that porosity zone. You'll note that's also where the perforations are, as they should be.

As you move further to the south and downdip, the Paddock porosity is not as good or as thick. The curves available in the Unit Well Number 87, the third well from the left, they do not have the neutron porosity, the red curve. They only have density porosity, the blue curve. You can still see porosity -- the porosity zone present.

It's not as good. You're moving further downdip. Away from the shelf margin, closer to the shelf edge, the porosity decreases in quality.

And then the very last well on the cross-section, the Leonard Oil well, porosity zone is even thinner in the Paddock, but you end up with a very thick Blinebry sand interval. The Blinebry sands tend to fill in the elevation -- some of the elevation difference as to Blinebry carbonate, thins and falls off the shelf margin.

To the north, on the left end of the cross-section, the Blinebry is a very thick carbonate. As you move to the south, to the right, that carbonate thickens -- thins dramatically. That's showing you the shelf edge for the Blinebry, and it also is showing you the -- most likely the productive limits of the Blinebry, because you're getting too far into the Basin.

But you're picking up Blinebry sands, which are also productive in the area. And if you look on your Exhibit 9, Glorieta structure map, you'll see three blue Blinebry producing wells in Section 29, down in the southwest corner of the map. Those three wells, and the fourth that you can almost see in the adjacent section west, are all productive in the Blinebry sands. They're very good wells. For Blinebry, they're very good wells.

The four -- the six wells you see in Section 20,

the midwest portion of your structure map, those are all Blinebry carbonate-producing wells. The Blinebry carbonate-producing wells are all in the center where the Blinebry carbonate is the thickest, which follows the geologic model.

So from our point of view, the middle and the upper third of the G-J Unit has Blinebry carbonate potential, and the southern third of the unit has Blinebry sand potential.

Q. Do you as a geologist see any reason not to combine all these zones into a single common source of supply within the unit?

A. No, I don't.

Q. Let's look at your structure maps. Let's go to Exhibit -- 12, is it?

A. Yes.

Q. We're now looking at your structure map on the Blinebry structure?

A. That's correct.

Q. Give us your major conclusions about the Blinebry structure.

A. The Blinebry structure is very similar to the Glorieta structure. All of the shelf margins for the Drinkard, the Blinebry and the Paddock are what we call stacked: They're in the same geographic position. So the

nosing reflected on this map is in the same geographic position as the nose from the Glorieta structure map, that being in the center of the G-J unit, trending east-west.

Again, that's reflecting the thick Blinebry carbonate on the shelf edge, and as you move to the north, the structure is slightly less exaggerated, as it should be up on the shelf itself, and to the south you'll see the structural contour is very tight, which indicates falling off the shelf edge, down into the Basin. Again, that is the interval in the southern third of the map where the Blinebry sands are expected to be a potential on the shelf edge. Those sands will pinch out as you get onto the shelf margin, in the middle and the northern third of the structure map.

Q. Let's turn to Exhibit 13 now. We've moving down with -- staying in the Blinebry, and we're going to look at your isopach of that interval. To set up Exhibit 13, go to the type log and identify for Mr. Catanach the interval that's being isopached. You can do it on one of the cross-sections, if you like. I just want to give him a reference to where you're mapping.

A. On the Exhibit 10, on the board before you, the second well from the left is again the G-J Unit Well 140, which is also the type log, Exhibit Number 8. The top of the Blinebry in that well is approximately 4400 feet. The

base of the Blinebry and the top of the Tubb is approximately 5400 feet. That is the interval of the isopach before us now as Exhibit Number 13.

Q. For purposes of mapping the dolomite, you're not cutting off any of that volume thickness, are you?

A. No, this is a gross isopach, the entire thickness.

Q. And how is it mapped for us?

A. The isopach supports the structure map that we just talked about. The center of the unit, trending east west, is the thickest part of the Blinebry. That would again be the shelf margin of the Blinebry. To the north there's slight thinning as you get up on the Blinebry shelf. And as you move in the southern third of the entire map, the isopach contours get very close together as the Blinebry carbonate thins dramatically coming off of the shelf edge.

So again, it strongly supports that the center and northern third of the unit would be where you expect Blinebry carbonate production, and the southern third is where you would expect the Blinebry sands to be productive.

Q. Let's go down into the Drinkard and look at the Drinkard structure, Exhibit 14, please. Your marker point for the Drinkard structure is where, sir?

A. Again, off the same type log, Unit Well 140, the

top of the Drinkard is at 5500 feet.

Q. What are your conclusions about the Drinkard structure in the unit?

A. The deeper we go in the stratigraphic column here, the fewer well control points we have.

On your map, Exhibit 14, you'll still see the noncompliant Blinebry wells in their purple triangles. They're there just for location purposes, to keep you oriented. Only the wells -- the wells with the subsea values are the only wells that drill deep enough to see the Drinkard.

Limited well control, but there is sufficient well control to again suggest an east-west-trending nose across the middle of the unit itself. And to the south again the contours tighten up, a steeper dip, indicating most likely the shelf edge moving into the basin. And to the north the rate of dip smooths out greatly, which would be what you'd expect on the shelf.

There again, we still expect the northern two-thirds of the unit to have Drinkard shelf potential. The southern third we probably won't find any Drinkard shelf production. Too far off the shelf edge.

Q. In summary then, Mr. Cox, is it geologically appropriate to combine all these zones and formations into a common development scheme?

A. Yes, sir, I believe so.

Q. And in fact treat them as if they were one common source of supply?

A. Yes.

Q. Will the extension into these lower zones of the Yeso provide an incentive for Concho to drill new wellbores that will produce oil and gas that might not otherwise be recovered?

A. I believe so.

MR. KELLAHIN: That concludes my examination of Mr. Cox, Mr. Catanach. We'd move the introduction of his Exhibits 8 through 14.

EXAMINER CATANACH: Exhibits 8 through 14 will be admitted.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Cox, in the Grayburg-Jackson Pool, the predominant producing formations are what? Grayburg-San Andres?

A. Yes.

Q. Those are the two, basically, that are being produced?

A. Correct.

Q. And those have been for a long period of time up here?

A. Decades, sir, yes.

Q. The Paddock is fairly new as far as production goes. Within the Paddock is it just one -- basically one zone, or is it multiple zones that are productive?

A. It's one major porosity zone, but it's not one continuous zone. There are breaks in that major porosity zone dividing it up into multiple intervals, but it's one gross porosity zone.

Q. So there is separation between producing intervals in the Paddock, right?

A. Small, less than 50 feet separation between zones. Specifically on the cross-section in front of you, the north-south cross-section, well number 2 again, it's the type log also, you see the perforations in the left column of the well, and you can see there are 10-, 15-foot gaps between perforations through the gross-porosity interval. That is as separate as the porosity gets within the Paddock. It's a very good gross porosity zone with thin intervals of tight rock in between.

Q. So the zones are isolated from one another?

A. Not -- Well, I can't tell you, I don't know that. I don't know that they are.

Q. Okay. How about the Blinebry? Is it -- Now let me go back. The Paddock -- All of these zones from the Paddock up, those are mostly oil zones, right?

A. Excuse me?

Q. Oil zones?

A. Yeah, they're all oil. There is a strong gas component, but they're all oil wells.

Q. Solution gas drive? Is that more or less --

A. Yes.

Q. Okay, so the Blinebry is also oil?

A. Yes, sir.

Q. Same type of reservoir?

A. Dolomite, yes, sir.

Q. Okay, and is that one major zone or is that several different producing horizons or --

A. The Blinebry is distinctly different from the Paddock, and it's reservoir-quality.

The Paddock has one gross porosity zone, and the Blinebry does not. It has many thin, discrete porosity zones. They are scattered from top to bottom of the Blinebry, remember. They're not clustered in the top or the middle or the base, they're scattered throughout the entire interval, generally less than 20 feet thick and separated by many tens of feet.

Q. How many would you say there are in this -- the producing intervals in that Blinebry?

A. Well, I think --

Q. Just kind of an estimate, a guess.

A. It varies so much. As many as 20 producing zones, could be as many -- thin producing zones, 10, 12 feet at a time.

Q. Okay. And they're not -- Are they fairly continuous over the unit?

A. No, they're not. Over the geographic area? No, sir, no. Even in the areas where we have 40-acre spacing, it's not a mappable event.

Q. Okay. And the Tubb, I think you stated there's not much potential in the Tubb?

A. I don't believe there is.

Q. Okay, and the Drinkard. There's no Drinkard production in the unit right now, right?

A. That's correct.

Q. But there is some potential -- I believe you said in the northern part of the unit?

A. The center, the northern third, I believe so, just based on its isopach thickness. It's similar to the Blinebry maybe five years ago. There were very few tests of the Blinebry, and when it was tested it was perforated, acidized, and it was almost always a very poor result, being low volumes, even dry -- swabbed a dry well. It wasn't until the zone could be stimulated with new fracture technology that it became commercial.

That's approximately the same point you're at

with the Drinkard now. It may be that it doesn't work in the Drinkard, but there are Drinkard tests where they -- as we showed on the first cross-section, where the zone was perforated, acidized, had oil and gas, just noncommercial, and it wasn't fracture-stimulated. So it could be we're in the same position now with the Drinkard that we were in the Blinebry years ago.

Q. Have you seen any zones in this lower portion that are just gas zones?

A. No, sir.

Q. They're all oil zones, as far as you know?

A. That's correct.

Q. Are any of these zones fluid-sensitive in any form or fashion?

A. We've not seen that.

Q. So commingling of these zones is not going to be -- it's not going to prove to be harmful to any of these producing intervals?

A. No.

Q. These are not good candidates for secondary recovery operations?

A. I think the Blinebry and Drinkard are particularly poor candidates.

Q. So you don't anticipate any of that occurring in the unit?

A. I don't at this time.

Q. Were the upper formations ever -- I mean, were they waterflooded at one time, or --

A. Upper formations being San Andres?

Q. The Grayburg-San Andres, yeah, that you're aware of?

A. Yes, loosely.

MR. KELLAHIN: Are you looking at me?

THE WITNESS: No, I'm looking at Gayle shaking her head.

Q. (By Examiner Catanach) Okay. So these zones don't produce -- they're not prolific producers. For instance, the Blinebry, do you have some production numbers from those zones or --

A. It will be presented next.

Q. Okay.

A. I don't have that.

Q. Is the San Andres -- You said that was being used as a disposal zone. Is that pretty much depleted in the unit, the San Andres?

A. You've left my area of expertise.

EXAMINER CATANACH: Okay. I think that's all I have.

MR. KELLAHIN: Mr. Examiner, at this time we would call Mrs. Gayle Burleson.

GAYLE BURLESON,

the witness herein, after having been first duly sworn upon her oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Ms. Burleson, would you please state your name and occupation?

A. Gayle Burleson, Petroleum Engineer.

Q. And where do you reside?

A. In Midland, Texas.

Q. By whom are you employed?

A. COG Operating, L.L.C., also known as Concho.

Q. On prior occasions have you testified before the Division here in New Mexico?

A. No, I have not.

Q. Summarize for us your education.

A. I have a BS in chemical engineering from Texas Tech University in Lubbock in 1988.

Q. Subsequent to graduation, where have you been employed as an engineer?

A. I have worked for 18 years in Midland, Texas, for various different oil and gas companies in all aspects of reservoir, production, operations engineering.

Q. Are you familiar with the petroleum engineering aspects of this Application?

A. Yes, I am.

Q. What has been your involvement on behalf of your company with the unit?

A. I became involved in some preliminary due diligence back in January of 2006, and then became the principal petroleum engineer for the unit when we took over operator in March of 2006.

MR. KELLAHIN: Mr. Examiner, we tender Mrs. Burleson as an expert petroleum engineer.

EXAMINER CATANACH: She is so qualified.

Q. (By Mr. Kellahin) Let me start at the point where you became involved on behalf of your company as its principal engineer. Were you aware that the unit wells were completed in the Blinebry and the Drinkard intervals of the Yeso formations?

A. Not when I first became involved in January. I did not find out about the Blinebry production until August.

Q. Prior to August, did you have any knowledge that there were any noncompliant wells in the unit?

A. No.

Q. You had known that there was Paddock production?

A. Yes, we knew there was Paddock production, did not know that it was noncompliant.

Q. What were you doing that caused you to care to

study the unit in August of last year?

A. We had been drilling Blinebry wells around the unit to the west and to the east, and we -- my job is to develop and evaluate reserves within our entire unit area, or entire acreage, which actually goes across five township ranges. But for this area, we started looking at a Blinebry development plan in August of 2006.

Q. And in doing so, what did you find?

A. We found that the order which was given had erroneous findings, the 10.B and the 12, that there was Paddock production in the unit and that the order that was given was to only expand the unit to the base of the Paddock, and we were wanting to develop Blinebry, which the new order does not include that.

Q. In looking at the Paddock, did you satisfy yourself as a petroleum engineer that it was a viable prospect to drill into and produce from the Paddock?

A. Yes.

Q. What did you find regarding the Blinebry?

A. We feel that it is also viable to drill and complete and produce into the Blinebry inside the unit, because of offset results that we've had.

Q. Your Application requests approval to go down through the Tubb to the top of the Abo and thereby include the Drinkard?

A. Right.

Q. Why do you want to do that?

A. Mainly for two reasons: One, to be consistent with the State in contracting the Empire East-Yeso Pool into the Grayburg-Jackson in this unit so that it is not split like it is right now.

And two, for economic reasons. We feel that the Drinkard has not been fully tested or evaluated. We see the potential as Ricky has testified, and we would like to have the ability to also drill these wells to the Drinkard.

Q. In terms of an exploration strategy, is it more appropriate to have a single wellbore to access all these zones, or a stand-alone wellbore that tries to produce hydrocarbons out of the Drinkard?

A. It's much more economically favorable to drill one wellbore. Without knowing -- having any potential in the Drinkard at this point, the economics just aren't favorable to do that, and we wouldn't drill a single wellbore just to test the Drinkard.

Q. If you have authority to drill down through to the top of the Abo, then, would you exercise that in such a way that in accessing all these intervals you would spend the incremental dollars to go ahead and drill and access the Drinkard?

A. Yes, we feel like we would do that so that we can

fully test and evaluate it.

Q. If the pool -- if the unit is extended like you propose, as a petroleum engineer does that give you the option, then, to test and produce any of these zones in any combination?

A. Yes.

Q. Is that a benefit for you?

A. Yes, we feel it's an economic benefit. I have an exhibit we can go through on the drill-well economics. Also as a reservoir engineer, I do not see any reservoir damage or non-benefits of doing this.

Q. Summarize then again for us the advantage of using a single wellbore and accessing all these zones if the unit is expanded.

A. If we drill a single wellbore, we would start at the base of the Drinkard, which is also the top of the Abo, start there at the Drinkard and obviously come up. If it looks like it's definitely viable, we would test the Drinkard, we would test the Blinebry, produce it. We can then add the Paddock, the Grayburg, the San Andres, the Queen-Seven Rivers at some point in the life of the well.

Being able to do this with one single wellbore versus maybe two or three separate wellbores, you save capital investment costs initially. Over time, you also save operating costs of only having one wellbore, you only

have the one pumping unit, electricity for that well, the overhead for the one well, versus two or three. You also can produce all of this production into one common surface facility, which we already have in existence, and so therefore you don't have to build a separate tank battery for each well.

Q. What is the status of current wellbores and your confidence in being able to take those wellbores and deepen them down through to the base of the Drinkard?

A. The current wellbores that we have in existence are really not viable to deepen to the top of the Abo. All of these wells have 5-1/2 casing or smaller, 4-1/2 casing, and to drill those out you would end up with a very slimhole completion.

You would probably end up cementing in tubing. And as we've stated, the Blinebry -- the way it's commercially viable is to fracture-stimulate it, and that is not going to be an option to fracture-stimulate it the way it needs to be, down 2-7/8 tubing.

So we would have to drill new wellbores.

Q. Let's take those conclusions and demonstrate your confidence in those conclusions with your next exhibit. If you'll turn to Exhibit 15, is this an exhibit that you've prepared?

A. Yes, it is.

Q. Are the engineering calculations matters that you have either calculated or methods that you have performed?

A. Yes, it is.

Q. Give us a general sense of what we're looking at before we talk about the details. What is this?

A. Okay, this is a montage of looking at drilling a single wellbore in either the Blinebry, the Paddock or the Grayburg-San Andres, versus the bottom curve and economics are drilling one well where you add all of the zones together. Instead of drilling two to three separate wells, you would drill one well together.

Q. Let's talk about the standards that you applied. Are you using standard conventional engineering practices in using this analysis?

A. Yes, this was prepared just with normal cash-flow economics. We have assumed a decline curve for each of the reservoirs that is based on either performance within the unit or directly offsetting the units. Each of these -- They're slightly different, based on their performance and characteristics that we've seen.

Q. What have you done for pricing?

A. Pricing, we used just spot pricing on the close of December the 27th for west Texas intermediate crude at $60.35 per barrel, and for natural gas at $5.53 per MCF.

Q. Have you made assumptions about capital costs and

drilling expenses?

A. We have. For the Blinebry drill well that would be a normal investment cost of drilling the well to, say, a depth of 5500 foot. Each of the investment costs are adjusted. A Paddock well would be a little bit shallower, so it would be a million. The Grayburg-San Andres well would also be shallower, a little bit less investment costs. This is if you're drilling and completing just a single wellbore for each of these reservoirs, so you would end up drilling three wells.

The bottom one that says a Blinebry drill well plus Paddock plus Grayburg-San Andres is a one well -- drill well, plus the cost of doing the ad pay workovers.

Q. On the decline curves, how have you established a decline curve for each of the examples on the montage?

A. For each of these it's basically a normalized type curve that we have pulled from wells that we operate in the area. We have Blinebry production. The Paddock production also comes from either within the unit or right offsetting the unit, statistical, normal, what we would expect from a Paddock well, such as the Grayburg-San Andres.

Q. Are the signatures we're seeing in the decline curve -- I'm looking at the early performance --

A. Right.

Q. -- is this characteristic, like in the first six months of production of a well, it will have this sharp decline and then it flattens out?

A. Yes. Most of the wells, as you can tell, their initial potential is around 40 to 50 barrels a day. That's an average. But they do have a very sharp decline. It is solution gas drive, very tight reservoirs. So they have a hyperbolic look to them. They have a very high decline initially, and at some point, then, they'll level off into a flatter exponential decline.

Q. Generally characterize for us the kinds of volumes you would produce from an existing Blinebry-Grayburg Jackson-Paddock combination. What kind of rates are you getting?

A. Well, we haven't done that yet, all at one time. We have --

Q. I was trying to answer Mr. Catanach's question a while ago --

A. I know.

Q. -- about these volumes that you're experiencing.

A. Right. What we have started -- and it's been just very recent -- offsetting the unit to the west, is drilling just a Blinebry well. As you can see here, it may come in on average 40 to 50 barrels a day. And then a few months later add the Paddock. The Paddock also adds about

40 to 50 barrels of oil a day. And then subsequently add the Grayburg-San Andres.

We have not yet drilled a well where we've added all the zones together initially at one time, mainly because then it would have required more surface equipment, a bigger pumping unit, and we've wanted to test the zones separately.

Q. Let's go back to your exhibit then.

A. Okay.

Q. What are your conclusions?

A. As you can see in each of the boxes for each of the top three separate drill wells, we get an undiscounted payout. That's just when you pay out your investment. The Blinebry well is over five years, the Paddock well is right at four years, and the Grayburg-San Andres well is almost three years.

If you look at the bottom box, if we can do all of these together -- and the assumption was that we added the Paddock four months after drilling the Blinebry, and then added the Grayburg-San Andres 12 months after that, that this well actually pays out in just over two years.

Q. Let me change topics. Let's talk about this commingling concept. At this point in time there has been historical past production that has been commingled between the Grayburg-Jackson Pool and the Yeso-Paddock. True?

A. Yes, within the unit.

Q. Is there any way to go back and reconstruct how to re-allocate that back to the pool in which it came from?

A. No, we do not think that that is practical at this point.

Q. And why not?

A. When we reviewed the well histories, some of the wells, the Paddock and the Grayburg-San Andres were all added together at the same time. We also do not have sufficient well test data. But the main reason is that these zones were not tested separately, to give an allocation formula.

Q. Well, let's talk about the need to do that at all. If Examiner Catanach approves your Application and extends your approvals to produce any of these formations down through the top of the Abo, do you as an engineer have any concerns about the ability to do this successfully without causing waste?

A. No, I don't have any concerns.

Q. What kind of things would bother you?

A. Obviously we would be concerned about any cross-flow issues, if one reservoir or zone was actually overpressured or abnormally pressured, if the fluids did not appear to be compatible or we had abnormal scaling tendencies, and we have not seen this in any of the wells

that we operate.

Q. Are the combinations of any of these formations such that you would reduce the value of the end product after combining the fluids?

A. No.

Q. Is there any water problem associated here that would cause you to prematurely water out an otherwise producing hydrocarbon interval?

A. No. As Ricky had stated, all of the reservoirs produce water, but there's not anything that would cause -- They're all solution gas drive, their water is going to deplete along with their oil, so there's not anything that would cause an abnormal watering out of the zone.

Q. Has the Division approved the commingling of Grayburg-Jackson formation zones with other pools in its production?

A. Yes. We -- Concho -- and I have this in Exhibit 16.

Q. Well, let's turn to that. Let's turn to --

A. Okay.

Q. -- Exhibit 16 and show what you've --

A. We actually --

Q. -- put together.

A. -- operate five wells where the Commission has approved downhole commingling of the Grayburg Jackson-Seven

Rivers-Queen-Grayburg San Andres with the Empire-Yeso East.

Q. And all of those have been approved?

A. Yes, and all of those are in operation. We also know that Clayton Williams Energy operates 14 wells that also has downhole commingling approval between these two specific pools.

Q. So it's been done by others in this area?

A. Right. We also --

Q. That's why there's been no incompatibility problems?

A. No.

Q. None of these have been rejected?

A. No.

Q. To the best of your knowledge, none of them is set for hearing?

A. Right.

Q. All approved --

A. They're all administratively approved, from what I could tell.

Q. In summary, then, do you see any adverse effects from eliminating the need to obtain regulatory approval for the commingling of these two pools within the unit?

A. No, no adverse effects.

Q. How about any adverse effects on correlative rights?

A. No. We will have the same ownership if the unitized interval is expanded so that we can include this 40-acre fee tract.

Q. Do you see any need to file commingling applications pursuant to the Rules and have the Division approve these on a case-by-case wellbore basis?

A. No, not if the unitized interval is expanded. And like I said before, all of the downhole commingling that does exist between these two pools has been approved. We don't see any reason why if we applied for one, that it wouldn't be approved.

Q. Let's talk about the production potential from each of these zones. Let's start with how you've analyzed this. I assume you've done some type of reservoir performance indications to give you a handle on what you expect out of these zones?

A. We have. And for each of these zones, the Blinebry, the Paddock, the Grayburg-San Andres, those are typified in my Exhibit 15 on those type curves.

Q. So if we go back to Exhibit 15 and look at the type curves --

A. Right. For a Blinebry well we would expect potential reserves of 40,000 barrels of oil and 198 million cubic feet of gas, and that's on average.

Q. And for the Paddock?

A. The Paddock also ends up being 40,000 barrels of oil. It has a shorter life and a different characteristic to its type curve, but it does come out to 40,000 barrels, and 159 million cubic feet of gas.

Q. And then you agree with Mr. Cox that at this point we see no potential in the Tubb?

A. Right. At this point, not having any production performance in the area, it's very difficult to put a number to that potential.

Q. And then finally down to the Drinkard?

A. Well, the Tubb and the Drinkard.

Q. The Tubb and the Drinkard.

A. Yeah.

Q. So you don't have data yet on the Drinkard?

A. We do not have reservoir potential at this time.

Q. If the Examiner approves your Application, do you believe that by doing so he will allow you to recover hydrocarbons that might not otherwise be recovered?

A. Yes, by being able to produce all of the Yeso zones with the Grayburg-San Andres/Grayburg-Jackson zones, we feel like we could drill fewer wells at a lower capital cost and actually produce more reserves. By being able to commingle these wells -- these zones together in one well, you actually extend the life of the well because you have lower operating costs. And otherwise, we might not drill

separate wells for each of these zones because of economics.

As you can see in Exhibit 15 on the Blinebry-drill well, even at today's favorable pricing it's marginally economic, 13-percent rate of return. Being able to commingle these wells makes it much more economically advantageous.

MR. KELLAHIN: That concludes my examination of Mrs. Burleson, Mr. Catanach.

We move the introduction of her Exhibits 15 and 16.

EXAMINER CATANACH: Exhibits 15 and 16 will be admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Ms. Burleson, how did you determine the reserves, for instance, the Blinebry reserves of 39- -- almost 40,000 barrels of oil?

A. We have drilled approximately 56 wells in the area -- not within the unit, but in the area -- over the last few years. Basically, that's off of a statistical normalized type curve. That's what we see as the average.

Q. How about the Paddock?

A. Same.

Q. And the Grayburg-San Andres, I guess you had a

lot of data from wells within the unit?

A. We did.

Q. Okay. Is there sufficient pressure in any of these zones for the wells to flow?

A. No, they all have to be pumped.

Q. So that's not a problem with regards to the pressure in the zones --

A. Right.

Q. -- for any cross-flow --

A. No.

Q. -- there's no potential for that?

A. No.

Q. Are the fluids similar, similar to like gravity oil and -- ?

A. They are. The Blinebry has a slightly higher gravity oil, but they are very similar. They're -- and all the production is surface commingled.

Q. And none of this is sour production?

A. It is sour.

Q. Oh, it is sour?

A. Uh-huh.

Q. All of it is sour?

A. Yes, as far as I know.

Q. What's the potential for drilling wells? Do you guys have an idea of how many wells will be drilled?

A. We do. Currently what we have, we have a development plan of trying to expand our wellbores in the unit. If we go back to Exhibit 2, I think it is, you can see over to the west in Section 20 and 29, the Paddock is basically developed on 10-acre spacing. We have a plan in our reserve report to develop the Paddock on 10-acre spacing in the G-J unit, and at this time we have the Blinebry right now developed on 40 acres in the G-J unit, until we know any difference, that -- if we need to infill drill down to 20s or 10s.

The reserve -- I didn't get to that, but we do have a reserve potential for the Paddock and the Blinebry in the unit area.

Q. Can you give me those numbers?

A. Yeah, for the Paddock we estimate a potential of 5.7 million barrels of oil and 22.7 BCF gas. And for the Blinebry we estimate a potential of 2 million barrels of oil and 8.5 billion cubic feet of gas.

There is also remaining potential of the current producing wells, but we couldn't split that out as Paddock or Grayburg-San Andres, because of complications.

Q. And that's based on 10-acre spacing in the Paddock?

A. Yes, sir.

Q. Do you know how many wells that comes out to?

A. Not off the top of my head. I have it.

EXAMINER CATANACH: Okay. I guess that's all I have. Did you have anything?

MR. BROOKS: I don't think so.

EXAMINER CATANACH: I guess as far as the downhole commingling and the retroactive, do you think we need a list of the wells that would have to be retroactively approved?

MR. KELLAHIN: I'm happy to provide the list, and then we could decide.

EXAMINER CATANACH: Okay, let's do that, just so I have it. And --

MR. KELLAHIN: Is there anything else that you would like us to prepare?

EXAMINER CATANACH: Draft order.

MR. KELLAHIN: Really?

EXAMINER CATANACH: Yeah, but it doesn't have to be real elaborate. I just want to make sure I have what -- exactly what you guys are asking for set straight, you know, so -- I'm satisfied I can come up with a lot of findings, but I just want to make sure that it's what your asking for.

MR. BROOKS: I understand that you're not at this time asking for any secondary recovery approval --

MR. KELLAHIN: That's true, we are not.

MR. BROOKS: -- previous order.

EXAMINER CATANACH: Okay, anything else?

MR. KELLAHIN: Not from me.

EXAMINER CATANACH: Okay, there being nothing further, this case, 13,848, will be taken under advisement.

(Thereupon, these proceedings were concluded at 11:58 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 13848, heard by me on January 4 2007.

David K. Catanach, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL January 5th, 2007.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2010