

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:

APPLICATION OF MARBOB ENERGY CORPORATION
FOR VERTICAL EXPANSION OF THE BURCH KEELY UNIT,
EDDY COUNTY, NEW MEXICO CASE NO. 14558

TRANSCRIPT OF PROCEEDINGS
Examiner Hearing
October 28, 2010
9:05 a.m.

1220 South St. Francis Drive
Santa Fe, New Mexico 87504

BEFORE: DAVID BROOKS, HEARING EXAMINER
WILL JONES, TECHNICAL EXAMINER

REPORTED BY: CONNIE JURADO, RPR, NM CCR #254
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1 MR. BROOKS: At this time we will
2 call Case Number 14558, Application of Marbob Energy
3 Corporation for vertical expansion of the Burch Keely
4 Unit, Eddy County, New Mexico. Call for appearances.

5 MR. HALL: Mr. Examiner, Scott Hall,
6 Montgomery & Andrews Law Firm, Santa Fe, appearing on
7 behalf of Marbob Energy Corporation and its successor
8 operator, COG Operating, LLC. I have three witnesses
9 this morning.

10 MR. BRUCE: Mr. Examiner, Jim Bruce
11 of Santa Fe representing ConocoPhillips Company. I
12 have no witnesses.

13 MR. BROOKS: Would the witnesses
14 please stand. Each identify yourselves, and then you
15 will be sworn together.

16 MR. CHUMBLEY: Dean Chumbley.

17 MR. CRAIG: Ken Craig.

18 MR. REYES: Ramon Reyes.

19 (Note: Witnesses sworn.)

20 DEAN CHUMBLEY

21 After having been first duly sworn under oath,
22 was questioned and testified as follows:

23 EXAMINATION

24 BY MR. HALL:

25 Q For the record, please state your name.

1 A Dean Chumbley.

2 Q Mr. Chumbley, where do you live and by
3 whom are you employed?

4 A Artesia, New Mexico. Employed by COG
5 Operating.

6 Q In what capacity are you employed?

7 A I work in the land department.

8 Q And have you previously testified before
9 the division and had your credentials established?

10 A No, sir.

11 Q Would you give the hearing examiner a
12 brief summary of your educational background and work
13 experience.

14 A Went to work in the industry in 1986. For
15 13 years, I have worked in the land department with
16 Marbob Energy, and recently at the first of this
17 month, I took the position with COG Operating.

18 Q And for the record, is COG succeeding
19 Marbob as operator of the property that is the
20 subject of this application?

21 A Yes.

22 Q You're familiar with the application that
23 was filed in this case?

24 A Yes, sir.

25 Q And you're familiar with the lands that

1 are the subject of the application?

2 A Yes, sir.

3 MR. HALL: Mr. Examiner, we offer Mr.
4 Chumbley as an expert petroleum landman.

5 MR. BROOKS: So qualified -- I'm
6 sorry.

7 MR. BRUCE: No objection.

8 MR. BROOKS: So qualified.

9 Q (By Mr. Hall) If you could, Mr. Chumbley,
10 if you would like to refer to Exhibit 1 and explain
11 to the hearing examiner what Marbob and COG are
12 asking in this application.

13 A Marbob and COG are wishing to expand the
14 limits of their Burch Keely Unit so that we can
15 capture a certain section that is below the unit
16 rights but within our ownership.

17 Q And to what depth do you seek to expand
18 the unit?

19 A To 5,000 foot.

20 Q Let's look at Exhibit 1. Is that a
21 graphic depiction of the Burch Keely Unit?

22 A Yes. This is a plat with the Burch Keely
23 outline identifying the roughly eight sections,
24 5,129 acres of lands that are all federal leases.

25 Q Right. Can you give us an idea currently

1 how many injectors and producers are on the unit?

2 A There are approximately 315 producers and
3 30 injectors.

4 Q And it's a waterflood unit; is that
5 correct?

6 A Yes, sir.

7 Q Look at Exhibit 2. Is that a copy of
8 Order Number R-7900 which authorized injection
9 operations for the unit?

10 A Yes, sir, it is.

11 Q What was the date of that order?

12 A The order was dated November 28, 1984. It
13 has the date of the hearing. I guess the division
14 considered it on the 25th of April, 1985.

15 Q All right. And part of that same Exhibit
16 Number 2, if you flip through there, there is an
17 Order Number R-7900-A. Do you see that?

18 A Yes, I do.

19 Q Is that the order of the division from
20 1993 which authorized the creation of a statutory
21 unit for Burch Keely Unit?

22 A Yes, sir, it is.

23 Q And Marbob was the applicant in that
24 particular case?

25 A Yes, sir.

1 Q When did Marbob actually become unit
2 operator?

3 A In 1992.

4 Q Okay. And pursuant to the terms of the
5 unit agreement, if you would look at Exhibit Number
6 4, COG is currently going through the process to have
7 itself designated as successor unit operator?

8 A That is my understanding, that that's in
9 process.

10 Q If we look at -- go back to Order
11 R-7900-A, will that tell us the original unitized
12 formation?

13 MR. BROOKS: Where is 7900-A?

14 MR. HALL: It is part of Exhibit
15 Number 2. It consists of three orders.

16 MR. BROOKS: It is attached to the
17 back of 7900?

18 MR. HALL: Correct.

19 MR. BROOKS: Okay. I see it.

20 A Yes, sir, it does.

21 Q (By Mr. Hall) If you look at page 6 of
22 that order, ordering paragraph 4, does that tell us
23 the depth of the unitized formation?

24 A Yes, sir. It identifies the unitized
25 formation as being comprised of the interval from the

1 top of the Seven Rivers formation to the base of the
2 San Andres formation or to a true vertical depth of
3 5,000 foot from the surface, whichever is lesser.

4 Q Now, the purpose of the application here
5 today is pick up that piece that goes all the way
6 down to 5,000 feet?

7 A Yes, sir.

8 Q And you're picking up the Paddock Blinebry
9 interval by doing that?

10 A Yes, sir.

11 Q If we look at Exhibit 3, can you identify
12 that for us, please?

13 A Exhibit 3 is an order from the division in
14 which Applicant Marbob Energy proposed abolishment of
15 the Grayburg-Paddock Pool and extension of the
16 vertical limits of the Grayburg-Jackson Pool.

17 Q All right. And that is now known as the
18 Grayburg-Jackson-Paddock Pool as its formal
19 nomenclature?

20 A I believe that's correct.

21 Q Okay. Let's look at Exhibit 4. Would you
22 identify that, please?

23 A Exhibit 4 is the unit operating agreement
24 of the Burch Keely Unit.

25 Q All right. Is that the unit agreement?

1 A Yes, sir.

2 Q And if you look at page 4 of that exhibit,
3 Section 4, it says, "Expansion." Does that authorize
4 the operator to seek vertical and horizontal
5 expansion of the unit as deemed appropriate?

6 A Yes, sir, it does.

7 Q Okay. Look at Exhibit 5. What is Exhibit
8 5? Could you identify that, please?

9 A Exhibit 5 is a BLM letter granting
10 approval of the expansion. It expands the unitized
11 formation to include the top 500 feet of the Paddock
12 formation.

13 Q And the date of that is?

14 A March 11, 1994.

15 Q And has Marbob and COG discussed its
16 proposal to extend the vertical limits down to 5,000
17 feet as requested in this application?

18 A Yes, sir, they have.

19 Q And what reaction did you get from BLM?

20 A BLM concurred that we should make our
21 efforts to expand the unit to 5,000 foot.

22 Q All right. If you look at Exhibit 6, is
23 that a copy of BLM's October 5, 2010 letter in
24 support?

25 A Yes, sir. This is a support letter from

1 BLM.

2 Q All right. Now, would vertical expansion
3 change the participation of any interest owner in the
4 Burch Keely Unit?

5 A No, sir.

6 Q All the royalty and overriding royalty are
7 the same at all depths?

8 A They are the same above and below.

9 Q So allocation of production would be
10 unchanged?

11 A Unchanged, yes, sir.

12 Q Let's look at Exhibit 7. Is Exhibit 7 a
13 compilation of materials comprising your notice
14 packet?

15 A Yes, sir, it is.

16 Q And the top page of Exhibit 7, what does
17 that show us?

18 A The top page is a plat that we use to
19 identify the offset operators.

20 Q In this case, was notice provided to all
21 of the interest owners in the present unit?

22 A Yes, sir.

23 Q And to all of the offset owners as shown
24 on the top page?

25 A Yes, sir.

1 Q And you did it with that 40-acre thickness
2 around the unit boundaries?

3 A Yes, sir.

4 Q And the hearing examiner can go through
5 the exhibit and see a list of all of those interest
6 owners to whom notice was sent and by whom received?

7 MR. HALL: In addition, Mr. Examiner,
8 for your information, there are two additional
9 interest owners who were sent and received notice not
10 on the list. They are Mr. Ray Miller and Dastrac,
11 D-A-S-T-R-A-C. They do not appear on the list, but
12 they did receive notice.

13 Q (By Mr. Hall) Did the owners of the deep
14 rights below the current base of the unit receive
15 notice of the application?

16 A The operators did receive notice.

17 Q All right. If you look at Exhibit Number
18 8, is that a copy of Ms. Munds-Dry's notice affidavit
19 for notification of the hearing that went out on this
20 case?

21 A Yes, sir.

22 Q Were Exhibits 1 through 7 prepared by you
23 or assembled at your direction?

24 A Yes, sir.

25 MR. HALL: And in the case of Exhibit

1 8, Mr. Examiner, the affiant is present in the
2 hearing room should you wish to cross-examine her.
3 We would move the admissions of Exhibit 1 through 8
4 at this time. That concludes our direct of this
5 witness.

6 MR. BROOKS: Any objections?

7 MR. BRUCE: No objections.

8 MR. BROOKS: Exhibits 1 through 8 are
9 admitted.

10 (Exhibits 1 through 8 admitted.)

11 MR. BROOKS: Do you wish to question
12 the witness?

13 MR. BRUCE: Yes, sir.

14 MR. BROOKS: You may proceed. I'm
15 sorry. I've forgotten for whom you appeared.

16 MR. BRUCE: ConocoPhillips.

17 MR. BROOKS: Okay. Go ahead.

18 EXAMINATION

19 BY MR. BRUCE:

20 Q Mr. Chumbley, and maybe this is a question
21 for the geologist, but what is the approximate
22 current depth of the unitized interval?

23 A The current depth that the unit is
24 producing from or the --

25 Q Well, I mean, what I am looking for, just

1 to make it clear, is what depths are you seeking to
2 add, from what depth down to 5,000 feet?

3 A As a footage depth, I don't have that, but
4 it is -- we are seeking to unitize to the depth of
5 5,000 foot subsurface.

6 Q Okay. But right now, what is this above?
7 4,000 or do you know?

8 A I don't know.

9 Q Would the geologist or engineer know?

10 A The geologist or engineer would know.

11 Q Okay. And Mr. Chumbley, the Grayburg Deep
12 Unit underlies a large portion of the Burch Keely
13 Unit, correct?

14 A Yes, sir.

15 Q And is working interest or is interest
16 ownership different in the Grayburg Deep Unit than it
17 is in the Burch Keely Unit?

18 A Yes, sir.

19 MR. BRUCE: I think that's all I
20 have, Mr. Examiner, of the witness.

21 MR. BROOKS: Okay. If I correctly
22 understood your testimony, the ownership in the
23 horizons that you intend to add to the unit by this
24 deepening is identical to the ownership of each of
25 the tracts in the existing unit; is that correct?

1 A Yeah. It is my understanding they would
2 be paid the same if they were brought into the unit.

3 MR. BROOKS: Okay. Well, but is the
4 tract ownership the same? Is the tract ownership
5 identical tract by tract?

6 A I would have to check. I'm not sure I'm
7 understanding the question. On the tract by tract --

8 MR. BROOKS: Okay. Well, the area
9 that will be added to the unit is not presently
10 unitized, right?

11 A That's right.

12 MR. BROOKS: So we have two separate
13 questions here that we have to distinguish between to
14 make sure we know what is actually being said. One
15 is the tract participation factors because I don't --
16 you know, I haven't studied this unit, but normally
17 there are tract participation factors for each tract.

18 A Right.

19 MR. BROOKS: So at one level, we can
20 say the tract participation factors are the same
21 where they are added to the unit versus the area that
22 is currently in the unit. And then the other thing
23 is who are the actual owners of each tract because I
24 would assume that the interest that the owners of
25 each tract will receive in unit deduction will be

1 their ownership in the particular tract times the
2 tract participation factor.

3 So I am now asking then are -- for
4 each of the tracts in the unit, is the ownership
5 identical for the depths that are being added to the
6 unit as compared to the depths that are already in
7 the unit?

8 A It is my understanding that the tract
9 factors in the unit agreement will be applied to the
10 above and below, and COG is now 100 percent working
11 interest owner in the depths to 5,000 foot.

12 MR. BROOKS: Okay. And the royalties
13 and overriding royalties, are those the same for each
14 tract above and below the depth of the present unit
15 base?

16 A I believe they are.

17 MR. BROOKS: Okay. That's what I was
18 trying to establish. But, of course, those tracts
19 are not unitized now --

20 A No.

21 MR. BROOKS: -- below the depth of
22 the unit base? So what they would actually
23 receive -- are there any wells that presently produce
24 from the zone that is being added to the unit?

25 A Not within the unit boundaries.

1 MR. BROOKS: Okay. But if there were
2 a well, then the present owners would -- since it is
3 not unitized, as the way things are now, they would
4 be deriving their production from their particular
5 tracts that run with it? Because it's not now
6 unitized?

7 A Yes, I believe -- if I'm understanding you
8 right, the wells producing at these depths that are
9 not unitized --

10 MR. BROOKS: Right.

11 A -- they would be on a lease -- being paid
12 on that lease basis.

13 MR. BROOKS: If this is authorized,
14 this unit expansion is authorized, then they will be
15 paid on a tract participation basis?

16 A Yes, sir.

17 MR. BROOKS: Now, does COG have the
18 authority under its oil and gas leases that cover
19 these tracts to place these tracts into the unit, or
20 is it going to be necessary for the Oil Conservation
21 Division to exercise its police power under the
22 statutory Unitization Act in order to bring these
23 royalty and overriding royalty interests into the
24 unit?

25 A I would assume that with the letter of

1 support from the BLM, with them being federal
2 leases --

3 MR. BROOKS: Now, are all of these
4 federal leases?

5 A Yes, sir.

6 MR. BROOKS: Or are there private
7 overrides?

8 A Private overrides?

9 MR. BROOKS: Yeah. Are there
10 overrides --

11 A Yes, sir. They are overriding royalty
12 owners.

13 MR. BROOKS: Okay. Well, now, that
14 gets me beyond my area of expertise because I am
15 aware that courts have held that in private leases
16 where the royalty can be unitized, that the scope of
17 the unitization authority applies also to any
18 overrides. I am not specifically aware of how that
19 works in federal leases, but perhaps Mr. Hall can
20 educate me.

21 MR. HALL: It would have been helpful
22 had I asked this question, Mr. Brooks, to make clear
23 that the unit operator owns 100 percent of all of the
24 federal leases.

25 MR. BROOKS: I understand the unit

1 operator owns 100 percent of the working interest.

2 MR. HALL: Committed to the unit.

3 The unit agreement itself, Exhibit 4, explains
4 authority to expand the unit, and also the exhibits
5 to the unit agreement outline ownership of the
6 overrides. I think that was the original purpose of
7 the statutory unitization approval in 1994.

8 MR. BROOKS: Well, I assumed it was
9 done for some reason --

10 MR. HALL: It was --

11 MR. BROOKS: -- but of course, it
12 could have been --

13 MR. HALL: -- in fairness to the
14 royalty interest owners at that time.

15 MR. BROOKS: Yeah.

16 MR. HALL: So that remains unchanged
17 because ownership is identical through the lower
18 depths in the current unitized formation.

19 MR. BROOKS: It is all federal
20 leases?

21 MR. HALL: Yes.

22 MR. BROOKS: Then there is only one
23 royalty owner, the United States of America?

24 MR. HALL: Correct.

25 MR. BROOKS: But there are various

1 overriding royalty owners?

2 MR. HALL: Yes.

3 MR. BROOKS: Who differ from tract to
4 tract?

5 MR. HALL: Correct.

6 MR. BROOKS: Now, can you tell me
7 that under the applicable law, federal law, gas
8 leases that COG, as the working interest owner, has
9 the authority to unitize those overriding royalty
10 interests or commit them to the unit, or does the OCD
11 have to do that?

12 MR. HALL: Certainly, the overrides
13 are carved out of the working interest, and the
14 unitized working interests are certainly subject to
15 the unit agreement as with the overrides.

16 MR. BROOKS: But the unitized -- the
17 overriding royalties were carved out of the working
18 interests before the unit agreement was entered into,
19 correct?

20 MR. HALL: Presumably so. I believe
21 that is correct.

22 MR. BROOKS: Okay. Now, I think
23 you're -- I think this probably -- that that
24 authority does exist, but I'm not clear on it. I am
25 working on this in other case that Mr. Bruce is

1 familiar with. So that's why I had some concern
2 about trying to figure it out in this case. But I
3 think I have gone as far with this line of
4 questioning as I can go at this point so I will pass
5 to Mr. Jones.

6 MR. JONES: That Grayburg Deep Unit,
7 what formations is it in? The one that is way below
8 this?

9 A It begins at 5,000 foot.

10 MR. JONES: So it begins exactly
11 where you are applying to --

12 A Yes, sir.

13 MR. JONES: -- to unitize down to on
14 the other? Is the surface exactly flat out there?

15 A No, sir.

16 MR. JONES: Oh, but we're still doing
17 it for 5,000 feet from the surface?

18 A Yes.

19 MR. JONES: And that will extend it
20 down 500 feet into the Paddock? Is that the
21 intention?

22 A You might have to ask somebody -- an
23 expert on that.

24 MR. JONES: I can -- the pool, the
25 Grayburg Jackson Pool has been vertically extended,

1 according to Exhibit 3, into 500 feet below the top
2 of the Paddock formation. Is that the current
3 vertical designation of that pool, or was there
4 another exhibit showing additional --

5 A I believe the geologic testimony will
6 answer a lot of your questions on that. They have
7 some logs and whatnot there.

8 MR. JONES: Okay. But this
9 application to lower the vertical limits are deep in
10 the unitized interval. Will that correspond exactly
11 with the pool that has been established?

12 A I believe that currently the wells that
13 are producing are within this pool amendment.

14 MR. JONES: Okay.

15 A Yes, sir.

16 MR. JONES: Okay. Thank you.

17 MR. BROOKS: But you said there are
18 no wells producing from the portion -- from the
19 depths that are being added to the unit within the
20 unit?

21 A No, sir, not below this to the 5,000.

22 MR. BROOKS: Okay. Thank you.

23 Anything further from counsel?

24 MR. HALL: No, sir.

25 MR. BROOKS: The witness may step

1 down. You may call your next witness.

2 MR. HALL: At this time, Mr.
3 Examiner, we call Mr. Raymond Reyes to the stand.

4 RAMON REYES

5 After having been first duly sworn under oath,
6 was questioned and testified as follows:

7 EXAMINATION

8 BY MR. HALL:

9 Q For the record, state your name.

10 A Ramon Reyes.

11 Q Mr. Reyes, where do you live, and by whom
12 are you employed?

13 A I live in Midland, Texas. I am employed
14 by COG Operating.

15 Q In what capacity?

16 A I am the New Mexico shelf lead geologist.

17 Q All right. You've previously testified
18 before the division and had your credentials as
19 expert petroleum geologist accepted as a matter of
20 record; is that right?

21 A Yes, I have.

22 Q You're familiar with the lands that are
23 the subject of this application?

24 A I am.

25 Q And the pools in the area?

1 A Yes, sir.

2 MR. HALL: At this point,
3 Mr. Examiner, we offer Mr. Reyes as an expert
4 petroleum engineer -- sorry about that -- petroleum
5 geologist.

6 MR. BROOKS: Any objection?

7 MR. BRUCE: No objection.

8 MR. BROOKS: So qualified.

9 Q (By Mr. Hall) Mr. Reyes, let's look at
10 Exhibit Number 9, please. Would you identify that
11 for us?

12 A Exhibit Number 9 is a type log that we
13 constructed, two logs. Normally, a type log has one,
14 but this one happens to have two. The log on the
15 left, the Great Western Burch Keely A 27 well is the
16 mentioned well in the pooling order when it was
17 established in 1994, I believe. This is an old well
18 that was drilled back in 1956, and you can't do a lot
19 of interpretation on that log itself.

20 So what I have done is I have added a well
21 just half a mile to the east that we also operate.
22 It is called the Polaris B Federal Number 20. It is
23 a modern log that I have used as a correlation so you
24 can understand the correlation of what I'm using,
25 what was used back in the day and what we're using

1 now. The current Grayburg Jackson Pool is outlined
2 in the green on the right showing that the rights,
3 current rights that we have that's covered in the
4 pool goes from the top of the Seven Rivers down to
5 500 feet below the top of the Paddock.

6 Q So what does the pink show us?

7 A The pink area is showing the stranded pay
8 that we're seeking to extend, to add to our existing
9 producing wells that we currently have there, and
10 below that would be the Grayburg Deep Unit Pool. It
11 is also highlighted on the right side -- on the left
12 side -- right side going down.

13 Q And so the bottom depth of that vertical
14 interval, you're seeking to add to the unit that is
15 shown at the 5,000 foot marker?

16 A That is correct.

17 Q Okay. Let's look -- anything further with
18 respect to Exhibit 9?

19 A Just to show you that the interval that
20 we're seeking or talking about would be the Yeso, but
21 we've broken it down because it is over -- it is
22 about 1500 feet thick. So the upper third of it, we
23 call it the Paddock, and the bottom two-thirds, we
24 call it Blinbry just to differentiate the two.

25 And I'm going to show in the next map a

1 color code to signify the different horizons that we
2 produced in the local area. You will note that the
3 Yeso interval is pretty -- fairly easy identifiable
4 by a silt stone that is called the Glorieta on the
5 top, and then again identified on the bottom by
6 another silt stone called the Tubb and, again, your
7 carbonate section in between.

8 Q And so we answered the examiner's earlier
9 question about the vertical limits of the pool. What
10 you have shown in green here, does that correspond
11 with the nomenclature proceeding that the division
12 went through in 1994, which is this Exhibit Number 3,
13 establishing the vertical limits of that Grayburg
14 Jackson Pool?

15 A Yes, sir.

16 Q Let's look at Exhibit 10.

17 A Okay. Exhibit 10 has a few bells and
18 whistles on it. It is actually two maps in one. It
19 is actually like a structure map that is hung on top
20 of the Paddock, and then the other is a production
21 map showing the color codes, the red and blue dots.

22 We will start with the structure map.
23 This is -- when we're looking from west to east, it
24 is a slow structural dip as you go eastward. So as
25 you go farther to the east, the thinner the section

1 that we're seeking to add, the 5,000 feet, will get
2 thinner.

3 As my cross-section will show in the next
4 exhibit, as you go farther west, it tends to be
5 thicker because, again, it is a 5,000 foot interval
6 cutoff that we're having to deal with rather than a
7 stratigraphic point being either the top of the
8 Paddock or the base of the Tubb, whichever -- however
9 you want to identify that. So we're just trying to
10 show that pink interval that kind of falls between
11 the deep unit and the unit that we currently have,
12 the in between sections that we're talking about.

13 The other thing that you will note is COG
14 is a very active operator in this part of the world.
15 We have production to the west in 17, 29, which is
16 the Empire Unit, and we have production to the east
17 in 17, 30 called the Loco Hills area. And the red
18 and blue dots indicate the horizon within the Yeso of
19 the production that we're producing from in these
20 wells.

21 You will note that there are no blue dots
22 in between the Burch Keely, and again, I will touch
23 on that in my next exhibit. On the right and to the
24 left of these fields, we have established production
25 not only in the Paddock section, but also in the

1 Blinebry section. So we believe that we are not
2 being good stewards by not capturing that stranded
3 pay and adding it to our future drill wells that
4 we're going to be doing.

5 Q So the blue shows Blinebry production?

6 A Correct.

7 Q And the unit is outlined in blue?

8 A Correct.

9 Q No current Blinebry production within the
10 unit?

11 A No, sir.

12 Q And you show a cross-section line on your
13 exhibit here?

14 A Yes, sir.

15 Q You have a cross-section?

16 A My next exhibit will touch on that. I
17 have constructed a cross-section that goes from west
18 to east, and it is identified and goes past the unit
19 outline to the west and past the unit outline to the
20 east. Do you want to go to that exhibit?

21 Q Let's look at Exhibit 11.

22 A Okay. This cross-section will kind of
23 answer some of the questions earlier asked to
24 Mr. Crumbley about the area that we're talking about.
25 Again, this is hung on top of the top of the Paddock,

1 which is the carbonate -- where the carbonate section
2 starts. And then we have rights from the top of the
3 Paddock to 500 feet below that section which is the
4 green dashed line going across. Okay?

5 So it's a pretty uniform section showing
6 what we're allowed to produce from. Right below
7 that, you will see the pink area. And as you will
8 note to the west, it is over 550 feet thick. And to
9 the east, we're looking at 260 feet thick, the area
10 that we're seeking to extend. Again, because of the
11 structural component, again, we're shallower to the
12 west, and we're going deeper to the east, and having
13 the 5,000 foot cutoff, again, not being tied to
14 anything stratigraphically, that's sort of what we're
15 leaving now behind.

16 What you're seeing here are the four wells
17 in this cross-section are within the unit themselves.
18 Now these wells were drilled a lot -- they are older
19 wells, and at the time, they were drilled as Morrow
20 completions or Morrow targets and deeper, Wolfcamp,
21 Strawn, whatever is out there. You will note that
22 there are no -- there was -- there is potential pay
23 in those horizons, but again, not having the rights
24 for those horizons, that is something we're going to
25 eventually offset and drill a new well.

1 The well to the west is called the G-J
2 Coop Unit Number 96 and the Polaris Number 20 to the
3 east, and I use those as my type logs, so there is no
4 confusion of what -- I am using different types of
5 logs. And, again, the one -- the second from the
6 right, the plain looking log that was talked about in
7 the -- for the pooling is included.

8 You can see that COG produces not only
9 from the Paddock, from the Blinebry, it takes it
10 almost all the way down to the Tubb on both sides,
11 and it is indicated by the red marks that are on the
12 log. So we essentially are producing from the whole
13 interval from left and right. So we're capturing all
14 that we can, so that's why it coincides with the red
15 and blue dots on each side of this unit.

16 And as you can see, especially on the west
17 side, we have the potential to add another 550 plus
18 feet to our existing plan to develop this unit. And
19 as we go farther west, we still are capable of adding
20 260 feet.

21 Q Does it make geologic sense to try to
22 develop these Blinebry reserves as a separate legal
23 entity outside of the unit?

24 A Yes, absolutely.

25 Q Does it make more sense to develop them in

1 conjunction with unit operations?

2 A Absolutely.

3 Q As the geologist, do you conclude that by
4 granting this application, additional reserves will
5 be produced and recovered that would otherwise go
6 unrecovered?

7 A Yes, sir, I do.

8 Q Were Exhibits 9, 10, and 11 prepared by
9 you?

10 A They were.

11 MR. HALL: At this point, we would
12 offer Exhibits 9, 10, and 11. That concludes our
13 direct of the witness.

14 MR. BRUCE: No objection.

15 MR. BROOKS: Exhibits 9, 10, and 11
16 are admitted.

17 (Exhibits 9, 10 and 11 admitted.)

18 MR. BROOKS: I guess immediately to
19 the question that Mr. Jones asks, and I didn't ask of
20 the previous witness, and if I don't get it
21 sufficiently clarified, perhaps he can, but the pool
22 designation, the applicable pool designation, what
23 are the -- is this unit area currently the Grayburg
24 Jackson Paddock? Is that the pool designation?

25 A I am not exactly sure of the exact name of

1 it, but that sounds fairly close.

2 MR. BROOKS: Okay. And what are the
3 currently established vertical limits of the pool?

4 A As shown in the type log on the green
5 above, that is our vertical limitations.

6 MR. BROOKS: Okay. Well, what I am
7 trying to -- I'm trying to go back to these orders
8 because they went through them, and I am not sure --

9 MR. HALL: Mr. Examiner, if you look
10 at the application itself, that's explained there,
11 and the Grayburg Jackson Paddock Pool is the current
12 nomenclature for the pool.

13 MR. BROOKS: Does that include all of
14 the unitized -- everything that is currently unitized
15 in the unit?

16 MR. HALL: Yes, to -- and it
17 includes -- it goes from the top of the Seven Rivers
18 to 500 feet below the top of the Paddock.

19 MR. BROOKS: Okay. And that's the
20 same definition as -- for the unit?

21 MR. HALL: The unitized, current
22 unitized formation is contained within that.

23 MR. BROOKS: Okay. The area that you
24 propose to expand the unit into, is that in the same
25 pool?

1 MR. HALL: Same pool.

2 MR. BROOKS: Okay. The pool is
3 already -- the pool already includes that area?

4 MR. HALL: Yes.

5 MR. BROOKS: As defined in the
6 applicable nomenclature order?

7 MR. HALL: Which is an exhibit.

8 MR. BROOKS: Which is one of the
9 exhibits?

10 MR. HALL: Yes.

11 MR. BROOKS: Okay. That's what I was
12 trying to establish. So we don't have to do anything
13 with the nomenclature in this case?

14 MR. HALL: That's right.

15 MR. BROOKS: Okay. I believe that --
16 now, this 5,000 foot boundary is -- the significance
17 of that is that it is the top of the Grayburg Deep
18 Unit, correct?

19 A Yes, sir.

20 MR. BROOKS: Okay. So it doesn't
21 have any particular geologic significance? 5,000
22 feet is just wherever 5,000 feet is?

23 A Yes, sir.

24 MR. BROOKS: Okay. Mr. Bruce?

25 MR. BRUCE: I do have a few

1 questions.

2 MR. BROOKS: Okay. I'm sorry I
3 interrupted you.

4 EXAMINATION

5 BY MR. BRUCE:

6 Q Mr. Reyes, in looking at this -- depending
7 on where you are in the unit, you're going to be
8 adding some Blinebry to the unitized area, correct?

9 A Correct.

10 Q And in virtually all of it, you will be
11 adding at least -- I should say you will be adding
12 some Paddock in certain areas of the unit?

13 A No, sir. If you go back to look at the
14 cross-section, you know, that 500-foot below the
15 Paddock, it runs pretty much where we pick -- well,
16 we pick the top of the Blinebry. Now, it is all
17 called Yeso, and the Blinebry pick can be -- that is
18 an interpretive pick, so yeah, we can go back and
19 forth on that. But in my opinion, in my
20 interpretation of this, that 500-foot interval pretty
21 much captured all of the Paddock production that we
22 would identify as Paddock production.

23 Q Okay. Well, I was just looking at your
24 final map here.

25 A Okay.

1 Q And looking at the Grayburg Deep Unit
2 Number 10 well, and that would show that you would be
3 capturing some of the Paddock?

4 A Okay. In looking at it, you're looking at
5 maybe less than 20 feet. And if you're a log
6 interpreter, that's pretty tight rock. I don't know
7 that we would even -- us, we would attempt to put --
8 try to do that.

9 Q But depending on where you were, just
10 looking at your maps --

11 A Yes, sir.

12 Q -- there might be some Paddock? It might
13 not be productive, but there might be Paddock added?

14 A And the word I would use would be minimal,
15 yes, sir.

16 Q But throughout the unit, you're going to
17 be adding a portion of the Blinebry?

18 A Yes, sir.

19 Q Okay. And looking at -- maybe looking at
20 the map on the -- your Exhibit 11, the well on the
21 east side, the COG Polaris B Federal Number 20 --

22 A Yes, sir.

23 Q -- could you describe how -- and this is
24 not a unit well, correct?

25 A It is not. It is outside the unit.

1 Q Could you discuss how -- and just step
2 back. You've described -- you say that generally the
3 Paddock and the Blinebry are referred together as the
4 Yeso?

5 A That is correct.

6 Q How is the Yeso typically completed and
7 frac'd in one of these wells?

8 A Are you referring to COG or in general?

9 Q How does COG do it?

10 A Everybody does it a little bit different.

11 Q Oh, sure.

12 A Well, it depends on what we're trying to
13 accomplish as far as capturing reserves. As you can
14 refer back to the structure map, that has a bunch of
15 red dots in the middle and the blue dots to the right
16 and to the left, the Blinebry section was not
17 developed until recently and mostly by -- directed by
18 us, because overall, the interval tends to be pretty
19 tight, the porosity is very low, but due to recent
20 and better frac designs, we were able to establish
21 production into the Blinebry.

22 The Blinebry has been a very productive
23 overall interval for us. So depending on -- our
24 reservoir engineer I think will be speaking after me
25 so I am not going to get into a lot of detail, but

1 some of those Blinebry sections, we actually test
2 separately just so that we can figure out reserve
3 numbers to calculate to know whether it is an
4 economic venture for us to do.

5 And then after a certain amount of time,
6 we go back and we add the Paddock, and then we move
7 on. There is also times we also do it at the same
8 time. Again, it is just a function of cost and time
9 and just -- and our expertise is also involved in
10 this, so we're the front runners in this Yeso
11 production and development.

12 Q And in looking at your Exhibit 11 and, you
13 know, you've got COG wells at either end of the
14 cross-section, is it typical to have one frac in the
15 Paddock and then three in the Blinebry?

16 A Yes, sir, it is typical. It varies at
17 times. Again, we're still learning and trying to,
18 you know, better design, make them cheaper, make them
19 better, more economic, so it is not an actual cookie
20 cutter, but it's something that we're doing
21 currently.

22 Q And now just a couple of final questions.
23 You don't need to look at it -- well, it's down on
24 your -- on Exhibit 11, the map showing the wells in
25 the cross-section. There are currently no Blinebry

1 producers in the Burch Keely Unit?

2 A That is correct.

3 Q And then one more, is it -- if COG's
4 application is granted and you frac at the top of the
5 Blinbry, is it possible to frac into zones below
6 5,000 feet?

7 MR. HALL: At this point,
8 Mr. Examiner, I've been pretty generous with holding
9 objections. We have a prehearing statement from
10 ConocoPhillips, and I don't think under the rules,
11 they are really allowed to cross-examine, and this is
12 way beyond the scope of Mr. Reyes' direct testimony.

13 MR. BRUCE: Well, Mr. Examiner, I
14 think as you well know, this was a conflict. Mr.
15 Hall got the case yesterday. I got it yesterday
16 morning. I didn't file a motion for a continuance
17 because Mr. Hall's witnesses were on the way up. I
18 think a little leeway should be granted because of
19 the circumstances of this case and Mr. Carr having a
20 conflict out of this.

21 MR. BROOKS: What is ConocoPhillips'
22 position? I was going to ask you that in conclusion
23 but --

24 MR. BRUCE: And really the final
25 question that I asked Mr. Reyes gets to the heart of

1 the matter. At this 5,000 foot level, the Grayburg
2 Deep Unit interest owners and the interest owners
3 above 5,000 feet in the Burch Keely Unit both own
4 interest in the Blinbry.

5 MR. BROOKS: Yeah.

6 MR. BRUCE: And if they are going to
7 be fracing near that 5,000 foot level, they may be
8 fracing into the Grayburg Deep Unit and recovering
9 reserves from that, and that is ConocoPhillips'
10 objection to this application in a nutshell.

11 MR. BROOKS: So you are -- you do
12 object to the application?

13 MR. BRUCE: I do.

14 MR. BROOKS: You are opposing --

15 MR. BRUCE: We do object to the
16 application.

17 MR. HALL: And all I am trying to do
18 at this point is make a statement and that's all. I
19 can't present evidence.

20 MR. BROOKS: Well, I'm not sure the
21 rule prohibits cross-examining witnesses. However,
22 the question of being beyond the scope of direct is
23 good in New Mexico, contrary to Texas procedure, as I
24 understand it. I am going to overrule the objection,
25 and I will allow you to proceed with your

1 examination. We will take this into consideration in
2 determining what evidence we rely on.

3 MR. BRUCE: And really I just have
4 that one final question, Mr. Examiner.

5 MR. BROOKS: Okay. Go ahead.

6 Q (By Mr. Bruce) Which is is the potential
7 there if COG fracs at the top of the Blinbry, frac
8 into zones below 5,000 feet? In other words, into
9 zones which are part of the Grayburg Deep Unit?

10 MR. HALL: Same objections, beyond
11 the scope, and violates Rule 4-14.

12 MR. BROOKS: I will overrule the
13 objection. Go ahead and answer the question.

14 A Since I am not an engineer and I'm not
15 the -- I don't design the fracs, I am not an expert,
16 and I can't testify to say what the results on that
17 would be. I would defer that to our engineer.

18 MR. BRUCE: Thank you, Mr. Examiner.

19 MR. BROOKS: Mr. Jones?

20 MR. JONES: Sounds kind of
21 unfortunate about this 5,000 foot, and also since the
22 surface might not be totally level out there, also,
23 but it seems you have a lot of experience out there
24 looking at these logs, and you've probably looked
25 this over. Do you see any instances where the

1 perforations that you might pick to develop this
2 Blinebry interval would -- could because of
3 reservoir -- if you weren't limited to your 5,000
4 feet, would you extend directly across vertically
5 through that limit?

6 A You know, I really don't know because
7 especially in the Blinebry section, if you go back
8 and refer to the logs, you look at the porosity
9 profile, it is such tight rock, and it is really
10 microfractured. You know, I don't know where that
11 fracture will end up going, whether sideways, up, or
12 down. Again, I would have to defer that to our
13 reservoir engineer.

14 I don't get to pick the intervals that we
15 frac. As you can tell, they are fairly uniform.
16 They are 200 feet thick, and they are sort of put
17 within -- in that section. So I mean, you know,
18 we're talking about volume versus, you know, a big
19 porosity zone where you tap into it and you move
20 forward.

21 MR. JONES: So what do you see as the
22 average porosity in this Blinebry interval?

23 A You know, this Yeso, it is pretty
24 widespread. It goes all the way to Texas, all the
25 way around the bend, to the shelf edge. It hugs the

1 shelf edge all the way around. So I mean, it varies.
2 We can drill -- we're drilling -- as you've seen in
3 the map, we're drilling -- you drill one next to the
4 other, and you can't even match them.

5 MR. JONES: Okay.

6 A The porosity just changes overall. So you
7 can't really put your finger on it and say, "This is
8 what you're going to get."

9 MR. JONES: So it might vary from
10 well to well?

11 A Absolutely. Yes, sir.

12 MR. JONES: But in general, can
13 you -- you said earlier that the Paddock Blinebry was
14 a carbonate, general carbonate, and it is bounded by
15 the siltstone Glorieta and the siltstone Tubb; is
16 that correct?

17 A It is identified by it, yes, sir.

18 MR. JONES: And you arbitrarily split
19 this interval one-third for Paddock, and two-thirds
20 for Blinebry?

21 A Yes, sir.

22 MR. JONES: So is it true that the
23 Paddock is generally -- the best porosity
24 permeability is in the upper part of that big
25 carbonated interval, which would include the Paddock

1 and not the Blinebry?

2 A That is correct. You can look at any of
3 the logs, and you can see the porosity profile. It
4 is better developed, and that's why you see more red
5 dots and not the blue dots.

6 MR. JONES: But COG is kind of a
7 pioneer in trying to develop the Blinebry; is that
8 correct?

9 A Yes, sir. And there are other operators
10 that are doing the same as we are.

11 MR. JONES: Okay. The injection
12 wells that you will put in, because you are extending
13 this unit, will you extend -- do you put injection
14 wells down into the Blinebry, also?

15 A We just recently acquired this property
16 not even two weeks ago.

17 MR. JONES: Okay.

18 A I don't even know what injection wells
19 there are to my knowledge yet. I mean, we have a
20 rough count. We're just now, you know, getting into
21 our system and figuring out what to do with it.

22 MR. JONES: So as part of this
23 application, you don't include specific applications
24 to deepen injection wells?

25 A No.

1 MR. JONES: No C-108 is part of this
2 application?

3 A No.

4 MR. JONES: We are going to see a
5 flurry of C-108s I take it.

6 A Hopefully.

7 MR. JONES: Hopefully. Okay.

8 MR. BROOKS: Anything further from
9 counsel?

10 MR. HALL: Nothing further from this
11 witness.

12 MR. BROOKS: Very good. The witness
13 may stand down, and we will take a 15 -- or a
14 ten-minute recess before we proceed with the next
15 witness.

16 (A recess was taken.)

17 MR. BROOKS: You may call your next
18 witness, Mr. Hall.

19 MR. HALL: Mr. Examiner, we call Ken
20 Craig to the witness stand.

21 KEN CRAIG

22 After having been first duly sworn under oath,
23 was questioned and testified as follows:

24 EXAMINATION

25 BY MR. HALL:

1 Q For the record, please state your name.

2 A Ken Craig.

3 Q Mr. Craig, you were sworn previously this
4 morning; is that correct?

5 A Yes.

6 Q Where do live and by whom are you
7 employed?

8 A I live in Midland, Texas, and I am
9 employed by COG Operating.

10 Q And what do you do for COG?

11 A I am the New Mexico lead reservoir
12 engineer.

13 Q Are you familiar with the Burch Keely Unit
14 in the application that was filed by Marbob in this
15 particular matter?

16 A Yes, I am.

17 Q You've previously testified before the
18 division and had your credentials as a petroleum
19 engineer established as a matter of record before?

20 A I have not.

21 Q Give the hearing examiner a brief summary
22 of your educational background and work experience,
23 please.

24 A I have a bachelor of science degree in
25 mechanical engineering from the University of Texas

1 at Arlington. I started work with Amoco in 1991, and
2 since that time, all of my experience has been in
3 West Texas or Southeast New Mexico. I have done
4 several -- had several different positions:
5 Operations engineer, reservoir engineer, facilities
6 engineer, and I am current team lead for the
7 reservoir group for Concho.

8 MR. HALL: Mr. Examiner, we offer
9 Mr. Craig as an expert petroleum engineer.

10 MR. BROOKS: Your expertise is
11 primarily in reservoir engineering, correct?

12 A I have done a little bit of all of it. I
13 started out as a production engineer with Amoco, so
14 several years of that.

15 MR. BROOKS: So you go across various
16 specialities there?

17 A I have.

18 MR. BROOKS: He is so qualified.

19 Q (By Mr. Hall) Mr. Craig, would you
20 explain to us the process that COG utilized to
21 evaluate possible development of the expanded unit
22 interval we have been talking about here today?

23 A When we first looked at the Burch Keely
24 Unit, it was apparent that we only had rights down to
25 500 foot below the top of the Paddock, which has been

1 a very productive zone for us, but we realized that
2 there was pay below that, but above the unit below us
3 that we could also try to develop.

4 So we looked at several options. One
5 would be to continue on our way with drilling Paddock
6 wells and individual Blinebry wells -- all of these
7 are vertical wells. We discussed horizontal wells
8 through the Blinebry by itself just outside of the
9 unit, not counting it as a unit well. But by far the
10 best option that we came up with would be to expand
11 the unitized interval and pick up that stranded
12 Blinebry pay.

13 Q Let's look at Exhibit 12. What does that
14 show the examiner?

15 A This is just an indication of the plans
16 that we have to develop the Burch Keely Unit. You
17 can see where we plan to drill over 200 wells in the
18 next five years. By doing this, we think we can
19 recover additional reserves, over five million
20 barrels of oil just from that Blinebry pay that we
21 can develop now.

22 Q So in addition to new drills, you have a
23 number of add-ons --

24 A Right.

25 Q -- within the unit as well?

1 A That would be some work that we would do
2 in the existing Paddock wells by deepening those and
3 just pooling that pay.

4 Q Does it make sense from an engineering
5 economic perspective to try to develop the Blinebry
6 reserves as a standalone project outside of the unit?

7 A A project to drill a Blinebry only well
8 would be uneconomical for us to drill.

9 Q Okay. Let's look at Exhibit 13. What
10 does that show us?

11 A This is just some of the data from the
12 Burch Keely Unit itself as the top line, and that
13 shows the target that we would be going for if we
14 were just drilling Burch Keely Unit Paddock wells.
15 As Mr. Reyes' map showed, we have established
16 production east and west of the Burch Keely Unit in
17 our other Concho development wells.

18 And we tried to put an estimate based on
19 some selective tests of what kind of reserves that
20 they would contribute to a well. And then we came
21 down to the next to the last line there as a drill
22 option just for this upper Blinebry piece, a zero
23 percent rate of return for us to try to drill that by
24 itself. But if we can add that to a typical Burch
25 Keely Paddock well, it gets us much better economics.

1 Q In terms of the Blinebry reserves, do you
2 have an estimate of additional Blinebry reserves that
3 you could expect to recover if you implemented your
4 development plans shown on Exhibit 12?

5 A If you just took the 24 MBOE top number
6 per well with the 200 plus wells that we do plan to
7 drill, that would be five million barrels or
8 equivalent that we would be adding.

9 Q And that is oil that would not go
10 recovered if this application is not granted?

11 A That's true.

12 Q Address an additional matter that has come
13 up this morning. Based on your experience, Concho's
14 experience in developing Blinebry reserves, is there
15 a likelihood of fracturing into nonowned Blinebry
16 reserves in this particular project?

17 A We have some in-house data now that
18 supports, my opinion, that most frac growth is in an
19 upper direction and not a downward direction.

20 Q All right. In your opinion, Mr. Craig,
21 would granting the application in this case be in the
22 interests of conservation and protection of
23 correlative rights and prevention of waste?

24 A I'm sorry. I didn't hear the first --

25 Q Would granting this application be in the

1 interest of conservation, the prevention of waste,
2 and protection of correlative rights?

3 A Yes, it would.

4 Q Were Exhibits 12 and 13 prepared by you?

5 A Yes.

6 MR. HALL: At this point, we would
7 move the admission of Exhibits 12 and 13, and that
8 concludes our direct of this witness.

9 MR. BROOKS: Objections?

10 MR. BRUCE: No objection.

11 MR. BROOKS: No objections? Twelve
12 and 13 are admitted.

13 (Exhibits 12 and 13 admitted.)

14 EXAMINATION

15 BY MR. BRUCE:

16 Q Just a couple of questions, Mr. Craig.
17 Mr. Craig, you said a Blinebry only well would be
18 uneconomical?

19 A For the pay that we're discussing.

20 Q Okay. That's what my next follow-up was.

21 A Yes.

22 Q For the 250 plus feet that you're looking
23 at, that would be uneconomical?

24 A That's right.

25 Q Okay. And you mentioned that your

1 in-house data, what type of data is that?

2 A That is the microseismic data. There
3 seems to be a lot of that right now.

4 Q And you don't have that data with you here
5 today?

6 A No, sir.

7 MR. BRUCE: That's all I have,
8 Mr. Examiner.

9 MR. BROOKS: I don't really have any
10 questions for you. Mr. Jones?

11 MR. JONES: Mr. Craig, the porosity
12 in the Blinebry, can you resolve the oil that you're
13 recovering -- project to recover in the Blinebry with
14 the porosity that you see on the logs? In other
15 words, is there a mystery about where this stuff is
16 coming from?

17 A There is a mystery about where this comes
18 from. It is a very tight pay and really only the use
19 of modern fracture technology has got us to the point
20 where we can develop that pay. It used to be an
21 overlooked horizon.

22 Q Okay. Adding it to the unit, isn't it
23 true you can always apply for downhole commingle
24 authority to drill a well through this Blinebry
25 and -- in other words, if you need these wells

1 deepened for economic purposes to -- this is all
2 federal acreage, I take it?

3 A Uh-huh.

4 MR. JONES: Couldn't you do downhole
5 commingles, apply for downhole commingles?

6 A We would expect to do that.

7 MR. JONES: Okay.

8 A Yes.

9 MR. JONES: Okay. Well, you don't
10 have to if you include it in the unit, I guess, but
11 it will all be the same ownership all around. I
12 guess that's not a big question. I guess my
13 primary -- what I was trying to get to here, you're a
14 reservoir engineer; is that correct?

15 A Yes.

16 MR. JONES: So is this primary
17 production you're looking at down here, or is this
18 some secondary oil that you want to waterflood?

19 A No. This would just be primary
20 production.

21 MR. JONES: Okay. I think I heard
22 earlier that there is only a small fraction of
23 injection wells out here compared to the producing
24 wells; is that correct?

25 A That's true. I believe those are in the

1 shallower horizon and not the Blinebry.

2 MR. JONES: So you're really not
3 projecting to waterflood this Blinebry at all?

4 A Not at this time.

5 MR. JONES: And I think we had a case
6 recently where we were going to try to waterflood the
7 Blinebry. So you think it might be feasible in the
8 future?

9 A I guess it could be feasible. I have done
10 several Clearfork waterfloods on the Texas side, and
11 it would be better pay than this that we would
12 waterflood.

13 MR. JONES: Okay. So it doesn't
14 sound like you really like it that well for secondary
15 recovery?

16 A Not now.

17 MR. JONES: Pretty much looking at
18 ultimate primary. The fracs that grow upward, does
19 that mean that you might -- your interests here might
20 be getting potentially drained by fracs that are
21 instituted within the Grayburg Deep Unit down deeper?

22 A It is possible.

23 MR. JONES: Do you have any frac
24 simulators that you guys use in-house or through
25 service company simulators?

1 A The completion engineers design all the
2 fracs. I don't get involved in that.

3 MR. JONES: Have you seen any of
4 them?

5 A I have not. I've just seen the data from
6 the microseismic.

7 MR. JONES: So you have actually done
8 some microseismic work to look for directions that
9 these fracs are going?

10 A Directions and height.

11 MR. JONES: And height?

12 A Yes.

13 MR. JONES: About what size frac job
14 would you need out here in this -- as far as the
15 gallons of water and pounds of sand?

16 A I would have to defer that to the
17 completions engineer.

18 MR. JONES: And you don't have one
19 here, do you?

20 A No, sir.

21 MR. JONES: Well, that's all my
22 questions.

23 MR. BROOKS: If COG owns 100 percent
24 of the working interest in this that is being under
25 examination here of the upper portion of the

1 Blinebry, what is the difference it makes whether it
2 is incorporated into the unit, and then you can drill
3 wells that were completed in the Blinebry and in the
4 unit even if it were not incorporated in the unit,
5 could you not?

6 A I am not sure how that would work.

7 MR. BROOKS: You're not going to be
8 waterflooding it you said?

9 A That's right.

10 MR. BROOKS: So what would be the
11 obstacle then? Would it be that you would have to
12 separate the production by zone? Would that be the
13 obstacle to completing wells in the Blinebry and in
14 the unit?

15 A It would be difficult to tell the
16 contribution from the unitized interval in this
17 stranded pay.

18 MR. BROOKS: Okay. That's all my
19 questions. Counsel have anything further in view of
20 the examiner questions?

21 MR. HALL: I do not, not of this
22 witness. I would offer to recall Dean Chumbley to
23 the stand, who I think can offer some additional
24 explanation about the point you raised on the
25 overrides.

1 MR. BROOKS: Okay. Yeah, I would
2 appreciate that.

3 MR. HALL: That concludes our
4 examination of this witness, if he may be excused.

5 MR. BROOKS: Anything, Mr. Bruce?

6 MR. BRUCE: No, sir.

7 MR. BROOKS: The witness may stand
8 down.

9 MR. HALL: And we would recall
10 Mr. Chumbley to the stand briefly.

11 MR. BROOKS: Very good.

12 DEAN CHUMBLEY

13 After having been previously duly sworn under
14 oath, was questioned and testified as follows:

15 EXAMINATION

16 BY MR. HALL:

17 Q Can you briefly, Mr. Chumbley, about the
18 unit agreement itself, which is Exhibit Number 4, can
19 you explain to the hearing examiner -- it is correct
20 Marbob, now Concho owns 100 percent of the working
21 interest in the unit?

22 A Yes, sir.

23 Q When the unit agreement was originally
24 approved by the interest owners, did that include
25 ratification by the overriding royalty interest

1 owners?

2 A Yes, sir, it did.

3 Q And the royalty interests, the BLM has
4 approved this as well?

5 A Yes, sir.

6 Q Exhibit 2, the unit agreement, shows
7 overriding royalty interest ownership, correct?

8 A Yes, sir.

9 Q It is not likely that the ownership is
10 owned by the same owners. Now it's somewhat
11 outdated; is that correct?

12 A With the passage of time, I would assume
13 that there is some changes in ownership.

14 Q But the quantum of the overriding royal
15 interest burden is the same; is that right?

16 A Yes, sir.

17 Q So extension of the unit as Marbob and
18 Concho are requesting do not alter participation in
19 unit production at all; is that correct?

20 A It does not alter it.

21 Q Who did Marbob acquire the unit property
22 from?

23 A Phillips Petroleum Company.

24 Q And who decided on the 5,000 foot cutoff
25 for ownership?

1 A I was not involved in those negotiations,
2 but I assume that since that is the operator of the
3 deeper unit, that it coincided with that, and that's
4 the decision.

5 Q So was that a reservation in the
6 conveyance, the ownership was reserved at 5,000 feet
7 by Phillips?

8 A We were -- yes, we were assigned to 5,000
9 foot.

10 Q So we're not seeking to expand the unit
11 horizontally, correct?

12 A Correct.

13 Q Not asking to add any additional tracts,
14 correct?

15 A Correct.

16 Q Not asking to bring in any additional
17 ownership or new owners; is that right?

18 A That's right.

19 Q So that's why participation will remain
20 the same?

21 A That's correct.

22 MR. HALL: That concludes my redirect
23 of this witness.

24 MR. BROOKS: Okay. Mr. Bruce?

25 MR. BRUCE: No questions.

1 MR. BROOKS: I believe I have -- I
2 believe I understand what you said, so I will not ask
3 any further questions. Very good. The witness may
4 stand down. Do counsel wish to say anything further
5 before we take this case under advisement?

6 MR. HALL: I do, Mr. Examiner. I may
7 have created some confusion by some of the comments I
8 made about the vertical extent of the Grayburg
9 Jackson Pool. I will try to clear that up for you.
10 If you look at the type log, it shows the bottom of
11 the current pool, and you can also refer to Order
12 Number R-10067. The pool goes down to 500 feet below
13 the top of the Paddock formation. That order --
14 nomenclature order is our Exhibit 3. It is the
15 source for that.

16 MR. BROOKS: That is the Grayburg
17 Jackson Paddock Pool?

18 MR. HALL: It is currently the
19 Grayburg Jackson Pool.

20 MR. BROOKS: The Grayburg Jackson
21 Pool?

22 MR. HALL: Grayburg Jackson Pool is
23 the nomenclature. I think I indicated to you that
24 the expanded unit interval was within the pool. It
25 is not. It goes down into that extension. It would

1 go into the Grayburg Deep Unit Pool.

2 MR. BROOKS: Okay. The nomenclature
3 order cuts it off at 500 feet below the base of the
4 Paddock?

5 MR. HALL: Correct.

6 MR. BROOKS: Okay.

7 MR. HALL: I think I created some
8 confusion.

9 MR. BROOKS: Yeah. Okay. And it
10 looks like that's going to include a substantial
11 portion of the expansion; is that correct? Because
12 when you look at this map, at this cross-section,
13 this dotted green line is the basic Paddock; is that
14 right?

15 MR. HALL: No. The Paddock is the
16 solid line, and then the bottom of the pool is
17 500 feet below that.

18 MR. BROOKS: Below the top of the
19 Paddock or below the bottom of the Paddock?

20 MR. HALL: The top of the Paddock.

21 MR. BROOKS: So the pool goes down to
22 500 feet below the top of the Paddock?

23 MR. HALL: Correct.

24 MR. BROOKS: So that's why this
25 dotted line is parallel to the solid line?

1 MR. HALL: Right. That's the
2 500-foot pool cutoff.

3 MR. BROOKS: And that line more or
4 less corresponds with the boundary between the
5 Paddock and the Blinebry, but not exactly?

6 MR. HALL: I think that's right.

7 MR. BROOKS: That's the way it looks
8 on this cross-section anyway. Okay.

9 MR. HALL: The dotted red line is
10 ownership.

11 MR. BROOKS: That's the 5,000 feet
12 below the surface, right?

13 MR. HALL: Yes, sir.

14 MR. JONES: Correct me if I am wrong,
15 but the Grayburg Jackson Pool has different depths
16 depending on whether it is in the Burch Keely Unit or
17 not; is that correct?

18 MR. HALL: I don't think so.

19 MR. JONES: I think it was just
20 defined as deepened specifically for the Burch Keely
21 at one time by Marbob. And then in surrounding
22 areas, it was deepened through some COG applications.

23 MR. HALL: I think the answer to that
24 question is in the nomenclature order where it
25 addresses that, and that is the Order R-10067.

1 MR. BROOKS: And which exhibit is
2 that?

3 MR. HALL: That's 3.

4 MR. BROOKS: Okay. In your
5 application, have you asked for any revision of the
6 nomenclature?

7 MR. HALL: It does not, and really
8 don't know that that is necessary. It could be taken
9 care of by administrative downhole commingling
10 orders.

11 MR. BROOKS: Well, yeah, but it would
12 make a lot of paperwork less necessary if we were to
13 corresponded it to --

14 MR. HALL: We can probably take care
15 of that.

16 MR. BROOKS: -- to the unit
17 boundaries assuming you did do that. Okay. Mr.
18 Bruce, did you have anything further?

19 MR. BRUCE: I think I stated my
20 objection, you know, Mr. Examiner, and unfortunately,
21 there is this 5,000 foot cutoff which doesn't go
22 along with any top or bottom of a formation, and that
23 creates problems with respect to potential
24 completions in that zone, and ConocoPhillips is
25 simply worried about protecting its correlative

1 rights in the deeper unit.

2 MR. BROOKS: Okay. Very good. And
3 if nothing further, then Case Number 14558 will be
4 taken under advisement.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 14558
heard by me on Oct 28, 2010
David K. Bish Examiner
Oil Conservation Division


REPORTER'S CERTIFICATE

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I, CONNIE JURADO, do hereby certify that I reported the foregoing case in stenographic shorthand and transcribed, or had the same transcribed under my supervision and direction, the foregoing matter and that the same is a true and correct record of the proceedings had at the time and place.

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

WITNESS MY HAND this 28th day of October, 2010.



Connie Jurado, CCR, RPR
New Mexico CCR No. 254
Expires: December 31, 2010