

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. 13,956

APPLICATION OF COG OPERATING, LLC, )  
FOR EXCEPTION TO THE WELL DENSITY )  
LIMITATIONS OF RULE 104.B.(1) AND )  
FOR SIMULTANEOUS DEDICATION WITHIN )  
THE UNIT AREA OF THE GRAYBURG-JACKSON )  
WEST COOPERATIVE UNIT, EDDY COUNTY, )  
NEW MEXICO )

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, Jr., Hearing Examiner

July 26th, 2007

Santa Fe, New Mexico

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This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, Jr., Hearing Examiner, on Thursday, July 26th, 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

July 26th, 2007  
Examiner Hearing  
CASE NO. 13,956

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\* \* \*

## A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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Suite 300  
Santa Fe, New Mexico 87501  
By: J. SCOTT HALL

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2 9:30 a.m.:

3           EXAMINER JONES: Let's go back on the record and  
4 call Case Number 13,956, Application of COG Operating, LLC,  
5 for exception to the well density limitations of Rule  
6 104.B.(1) and for simultaneous dedication within the unit  
7 area of the Grayburg-Jackson West Cooperative Unit, Eddy  
8 County, New Mexico.

9           Call for appearances.

10          MR. HALL: Mr. Examiner, Scott Hall, Miller  
11 Stratvert law firm, Santa Fe, appearing on behalf of the  
12 Applicant, COG Operating, LLC, and I have two witnesses  
13 this morning.

14          EXAMINER JONES: Any other appearances?  
15 Will the witnesses please stand to be sworn?  
16 (Thereupon, the witnesses were sworn.)

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

20                                 DIRECT EXAMINATION

21 BY MR. HALL:

22           Q. For the record, please state your name.

23           A. Brent Robertson.

24           Q. Mr. Robertson, by whom are you employed and in  
25 what capacity?

1           A.    I'm employed by COG Oil and Gas, LP, and I'm a  
2 senior petroleum landman handling southeast New Mexico.

3           Q.    Okay, and where do you live and work?

4           A.    I live in Midland, Texas, and I work in Midland,  
5 Texas, for COG Oil and Gas, LP.

6           Q.    Have you previously testified before the Division  
7 and had your credentials as a petroleum landman established  
8 as a matter of record; is that correct?

9           A.    Yes, that's correct.

10          Q.    Are you familiar with the lands that are the  
11 subject of this Application, as well as the Application  
12 itself?

13          A.    Yes.

14               MR. HALL:  At this point, Mr. Examiner, we'd  
15 offer Mr. Robertson as an expert petroleum landman.

16               EXAMINER JONES:  Mr. Robertson is qualified as an  
17 expert petroleum landman.

18          Q.    (By Mr. Hall)  Mr. Robertson, would you briefly  
19 summarize for the Examiner what it is that COG is asking  
20 for by this Application?

21          A.    Yes, we are asking for an exception to the  
22 spacing regulations to allow more than four oil wells per  
23 40-acre tract within the confines of the Grayburg-Jackson  
24 West Cooperative Unit area.  Basically one interval is  
25 approved for waterflooding across the unit area, and there

1 are other intervals that are not, so we've got situations  
2 where we have a need to drill more than -- more wells to  
3 the intervals that are not currently approved for  
4 waterflooding.

5 Q. All right. When did you first become involved in  
6 the West Co-op Unit?

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

9 Q. Let's look at Exhibit 1, if you would identify  
10 that for the Hearing Examiner and explain what it shows.

11 A. Okay. Exhibit 1 is a map depicting the Grayburg-  
12 Jackson West Unit boundary in gray. And also the map  
13 depicts the locations of the existing wells on the unit.  
14 The active producing wells are indicated by the red  
15 indicator, the plugged and abandoned wells are indicated by  
16 the black symbols with the line stricken through it. The  
17 active injection wells are indicated by the white circle  
18 with the arrow slash going through them. And the wells  
19 that are currently closed in are indicated in blue.

20 Q. Would you give the Hearing Examiner a brief  
21 summary of the history of the development of this unit?

22 A. The unit was created in 1966 for the purposes of  
23 primary and secondary oil and gas recovery operations. I  
24 believe Tenneco was the initial operator of the unit. The  
25 unit agreement itself has been amended three times.

1           The first time -- the first amendment was to  
2 expand the horizontal boundaries of the unit to include an  
3 additional 400 acres.

4           The second amendment to the unit was to increase  
5 the vertical limits of the unitized interval down to the  
6 base of the Paddock formation.

7           And the third amendment to the unit agreement was  
8 to expand the vertical limits of the unitized interval to  
9 extend down to the top of the Abo formation.

10          Q.    Was the original unitized formation approved by  
11 the Division, the Grayburg-San Andres?

12          A.    That's correct, yes.

13          Q.    And those steps are between 2200 feet, 3600  
14 feet --

15          A.    That's correct --

16          Q.    -- is that right?

17          A.    -- yes.

18          Q.    By the way, what's the underlying mineral  
19 ownership committed to the unit?

20          A.    The mineral ownership underlying the unit area is  
21 -- all except for one 40-acre tract is entirely owned by  
22 the State of New Mexico. The 40-acre tract that is not  
23 owned by the State of New Mexico is owned by a fee owner,  
24 it's Mossman Midwest Company. I believe they're in  
25 Roswell. And it pertains to all depths as well, so there's

1 no depth severances.

2 Q. And as you've indicated, the unit was formed for  
3 primary and secondary operations. Would you tell the  
4 Examiner what was the injection formation for those  
5 operations?

6 A. The injection interval that was approved for  
7 waterflooding was the Grayburg-San Andres formation, which  
8 was, I believe, the interval from 2200 feet to 3600 feet.

9 Q. Now again, you've mentioned that the unit  
10 agreement has been amended a number of times. Last year  
11 did COG receive State Land Office approval to expand the  
12 vertical limits of the unitized formation again?

13 A. Yes, we did.

14 Q. And was that pursuant to Order Number R-3127-B?

15 A. That's correct, yes.

16 Q. And what formations comprise the unitized  
17 interval now?

18 A. Currently the unitized interval across the  
19 Grayburg-Jackson West Unit consists -- it includes from the  
20 top of the Seven Rivers formation to the base of the  
21 Glorieta-Yeso-Paddock formation, and those are depths from  
22 1116 feet to 4636 feet below the Kelly bushing as shown on  
23 the Schlumberger log of the Diamondback State Number 1  
24 well.

25 And I believe also, it's actually been increased

1 from that point -- that takes it down to the base of the  
2 Paddock, but it's been further extended to the top of the  
3 Abo formation.

4 Q. And is that by virtue of Order Number R-3127-C --

5 A. Yes.

6 Q. -- in Case Number --

7 A. Yes.

8 Q. -- 13,848?

9 A. Correct.

10 Q. And as a result of all of those orders, are all  
11 of those formations now administered as a single common  
12 source of supply?

13 A. Yes, they are.

14 Q. And can you tell us the name of that pool?

15 A. Yes, the common source of supply is -- it's a  
16 mouthful, but it's the Grayburg-Jackson-Seven Rivers-Queen-  
17 Grayburg-Glorieta-Yeso Pool, pool code 28509.

18 Q. Now, are the pool boundaries for the pool and the  
19 unit area coterminous both vertically and horizontally now?

20 A. Yes.

21 Q. Now let's refer back to Exhibit 1. Can you  
22 identify for the Examiner the situations where you have 40-  
23 acre tracts that are occupied by more than four wells?

24 A. Yes. On the map -- as I mentioned earlier, the  
25 wells that are indicated in blue are wells that we have

1 closed in because of the spacing requirements. The 40-acre  
2 tracts would be in Section 21 of 17 South, 29 East, Unit O,  
3 which would be, I guess, the southeast quarter -- excuse  
4 me, the southwest quarter of the southeast quarter. And in  
5 Section 28 there would be Unit A which is the northeast  
6 quarter of the northeast quarter, and then Unit H which  
7 would be the southwest of the northeast quarter.

8 Q. Would you explain to the Hearing Examiner how COG  
9 determined that there might be an issue with respect to the  
10 drilling densities within the unit?

11 A. Yes, we had originally permitted a unit well to  
12 drill, being the GJ West Co-op Unit Well Number 153, and we  
13 received -- the Division approved our application for  
14 permit to drill. And our regulatory technician in the  
15 office had a question about this particular instance and  
16 she contacted the Hearing Examiner, I believe, at that time  
17 when we were in the process of drilling the well to  
18 determine if we indeed had an issue. And at that point in  
19 time we were advised to consult with our legal counsel and  
20 address the issue in that fashion. So that's the reason  
21 we're here today.

22 Q. And is the Unit Well 153 in the northeast quarter  
23 of 28?

24 A. Yes, it is.

25 Q. What's the current status of that well?

1           A.    It is currently producing, from the Blinebry I  
2 believe.

3           Q.    Okay.  In your capacity as a professional  
4 landman, are you familiar with the Division's regulations  
5 governing well locations and development densities?

6           A.    Yes.

7           Q.    And you're also familiar with Division Rule  
8 104.B.(1) then?

9           A.    Yes.

10          Q.    And what's your understanding of the operation of  
11 that rule?

12          A.    My understanding is that Rule 104.B.(1) allows no  
13 more than ~~five~~ <sup>four</sup> oil wells on a 40-acre tract, unless it's a  
14 situation where waterflooding operations have been  
15 approved.  And in the event the waterflood operations have  
16 been approved, it would be at the operator's -- I guess at  
17 the operator's discretion and recommendation as to how to  
18 develop the waterflood, as to how many wells would be  
19 allowed per 40-acre tract.  But I don't believe there's a  
20 limit on the number for waterflooding.

21          Q.    Now in the case of waterflood operations for this  
22 unit, are they currently limited to the Grayburg-San Andres  
23 formation?

24          A.    Yes, that's correct.

25          Q.    And does COG seek to access additional oil

1 reserves in formations other than the Grayburg-San Andres  
2 formation?

3 A. Yes, we do.

4 Q. And is it your understanding that Rule 104.B.(1)  
5 may be interpreted in such a matter so that drilling  
6 additional wells to the Blinebry in those 40-acre tracts  
7 occupied by more than four or five waterflood wells would  
8 be prohibited?

9 A. Yes, that's correct, it could be interpreted that  
10 way.

11 Q. And if the rule is interpreted in such a manner,  
12 would COG be prevented from accessing additional otherwise  
13 recoverable reserves?

14 A. Yes.

15 Q. With respect to the Unit Well 153 drilled to the  
16 Blinebry, did COG file an Application for administrative  
17 approval for authorization to produce that well and the  
18 other wells in the northeast quarter of Section 28?

19 A. Yes, we did.

20 Q. Okay. Have you received any word back from the  
21 Division on that?

22 A. I don't believe we've received anything back from  
23 the Division as of current date.

24 Q. Okay. Are there other wells within that 40-acre  
25 tract that COG was compelled to shut in?

1           A.    Yes, we shut in additional wells within that  
2 tract so that we would be in compliance with spacing  
3 requirements as they exist.  Those wells would be the GJ  
4 Unit Number 17 and Number 64 wells.

5           Q.    And COG did that voluntarily?

6           A.    Yes, sir, we did that voluntarily.

7           Q.    By this Application, does COG request a blanket  
8 exception from the well density limitations of the Rule and  
9 approval for simultaneous dedication for all wells in all  
10 formations in the unit area?

11          A.    Yes, we do.

12          Q.    And does COG have plans to drill and develop  
13 additional areas and formations within the unit area?

14          A.    Yes.

15          Q.    And do those plans include drilling in 40-acre  
16 tracts already occupied by four or more wells?

17          A.    Yes, they do.

18          Q.    By this Application COG does not seek the  
19 expansion of its authorization to inject, does it?

20          A.    No, we do not.

21          Q.    How was it determined that a formal application  
22 and hearing would be necessary for this case?

23          A.    We contacted the Division regarding, you know,  
24 the situation that we had with the GJ 153 well.  And then  
25 we, at the suggestion of the Hearing Examiner, contacted

1 our legal counsel. And then we also had visited with David  
2 Brooks about the situation. And he's very familiar with  
3 this particular unit, having heard a couple of prior cases  
4 on this particular unit.

5 So given the past -- the recent history  
6 surrounding the cases and hearings that we've had, the  
7 Division felt that it would be in the best interest of  
8 everybody to just make a record of this particular  
9 proceeding, and clearly -- have a clear indication of what  
10 is and what's not -- you know, what the rules are regarding  
11 the density -- the well density pattern on this unit.

12 Q. And didn't the Division also want area operators  
13 to be notified of COG's proposal?

14 A. That's correct.

15 Q. If you'll turn to the stack of exhibits, Exhibit  
16 Number 4 is our notice affidavit, and the second page of  
17 that --

18 A. Okay.

19 Q. -- is that a list of all of the offset operators  
20 offsetting the unit here?

21 A. That's correct, yes.

22 Q. Were all of those operators notified of COG's  
23 Application?

24 A. Yes, they were.

25 Q. And did COG receive any objections to the

1 Application?

2 A. No, we did not receive any objections.

3 Q. Mr. Robertson, if COG's request for relief is  
4 granted will the unit working interest owners and the  
5 royalty owners in the unit benefit?

6 A. Yes, they will, by virtue of the additional wells  
7 that we would be able to drill and hydrocarbons that we  
8 would hope to produce from the additional drilling.

9 Q. All right. And by the way, who owns the unit  
10 working interest?

11 A. The unit working interest is owned totally by COG  
12 Oil and Gas, LP. We have 100 percent of the working  
13 interest in the unit.

14 Q. If COG's Application is not granted and COG is  
15 prevented from drilling and producing otherwise recoverable  
16 reserves in other formations, will waste result?

17 A. Yes.

18 Q. Were Exhibits 1 through 4 prepared by you or at  
19 your direction?

20 A. Yes, they were.

21 MR. HALL: At this time, Mr. Examiner, we'd move  
22 the admission of Exhibit 1, which is the unit area map.  
23 Exhibit 4 is my notice affidavit. The list of offset  
24 operators was compiled by Mr. Robertson. We'd move the  
25 admission of both those exhibits.

1 EXAMINER JONES: Exhibits 1 and 4 will be  
2 admitted.

3 MR. HALL: That concludes our direct examination  
4 of this witness.

5 EXAMINATION

6 BY EXAMINER JONES:

7 Q. Okay, Mr. Robertson, I'm glad Mr. Hall brought a  
8 landman today. Are you familiar with -- obviously land  
9 issues. Are you also familiar with all the reporting to  
10 the District offices?

11 A. I'm familiar with it. I'm not responsible for  
12 reporting, but I am somewhat familiar, yes, sir.

13 Q. Okay. You're not -- Let me ask you this and rule  
14 out something here. You're not asking for more than four  
15 wells per 40-acre proration unit in any one zone, are you?  
16 Like for instance the Blinebry?

17 A. Right, no.

18 Q. You consider that Blinebry reservoir, even though  
19 this is all by our rules one common source of supply.

20 A. Uh-huh.

21 Q. Obviously there's different formations here, and  
22 you guys are trying to manage them. So you're not -- you  
23 don't want to drill more than four wells per 40 in the  
24 Blinebry itself, do you?

25 A. That's correct, no, we're not -- the only time --

1 the only situation where we would have more than four wells  
2 in a 40-acre tract would be where we've got waterflooding  
3 operations that are already approved, which would be the  
4 Grayburg-San Andres. But that's correct, we don't propose  
5 to drill more than four wells in the Blinebry or the  
6 Paddock or any other formation -- unitized formation, other  
7 than those -- the Grayburg-San Andres, which is approved  
8 for waterflooding.

9 Q. Okay, that's -- that sounds pretty good.

10 Were you guys getting turned down by the District  
11 office on --

12 A. No, we received approved APDs to drill, it's just  
13 that we -- our regulatory technician actually raised the  
14 question to me, and I -- you know, I said we've got four  
15 wells per 40 acres, you know.

16 But beyond that, if you've got wells that are in  
17 that 40-acre tract that are producing in the waterflood-  
18 approved zone, I don't know if that counts or not. So  
19 that's kind of how it came to a head.

20 But no, we were not denied anything through the  
21 -- from the OCD.

22 Q. Okay. But you're basically here asking for a  
23 simultaneous dedication order that spells out exactly the  
24 terms of the simultaneous dedication to where the zone  
25 other than the -- any one zone, except for the -- obviously

1 the waterflood zones, Grayburg-San Andres, could not still  
2 have more than four wells completed in any one zone at a  
3 time. Is that okay?

4 A. That's correct.

5 MR. HALL: Mr. Jones, there seemed to be a  
6 diversity of opinions between the District office and the  
7 Santa Fe office how we ought to approach this issue, and it  
8 was precipitated by differing interpretations of the Rule  
9 itself. It didn't seem to be a violation of the Rule, in  
10 view of the fact that increased densities involve separate  
11 formations, and it was really only by virtue of the fact  
12 that the property was unitized and consolidated into a  
13 single pool --

14 EXAMINER JONES: Oh.

15 MR. HALL: -- that this issue came up. Had the  
16 unitized interval not been extended vertically, I don't  
17 think we'd be having this discussion at all.

18 EXAMINER JONES: Okay. But since it is all one  
19 unit, you're only reporting production from -- Let's say a  
20 well is completed in the Seven Rivers and the Blinebry and  
21 it's downhole commingled there. You're reporting -- it  
22 wouldn't be a state downhole commingle, it would be  
23 internal to COG downhole commingle. You're just reporting  
24 production by pool anyway?

25 MR. HALL: Under a single pool code, that's

1 right.

2 Q. (By Examiner Jones) Single pool code. So  
3 there's no way except internally you guys can keep track of  
4 the management of your reservoir as far as your Grayburg-  
5 San Andres?

6 A. That's correct. The new pool code was  
7 established, I believe, at the last hearing when we amended  
8 the unit. The third amendment to the unit, that's when the  
9 new pool code -- thereafter the new pool code was  
10 established.

11 Q. Okay. And this was called a co-op for what  
12 reason?

13 A. A cooperative unit?

14 Q. Yeah.

15 A. It's my understanding that the main difference a  
16 cooperative unit versus a compulsory unit is that nobody  
17 was forced into this unit. All the royalty owners, all the  
18 working interest owners -- only one working interest owner,  
19 but all the royalty owners have agreed to participate or  
20 have production from the unit allocated on a -- in this  
21 case it's allocated on a surface acreage basis. Everybody  
22 signed the unit agreement and -- or ratifications of the  
23 unit agreement, versus having to be forced into a unit.

24 And that's my understanding of the main  
25 difference, and that's why they refer to it as cooperative

1 units.

2 Q. Okay. So it's an acreage-only allocation factor?

3 A. Yes, sir.

4 Q. And it's never going to be changed from that, I  
5 guess.

6 I notice you have an upper Penn, Atoka and Morrow  
7 production on the edge or kind of right below the eastern  
8 edge of this. Is that all owned by COG?

9 A. On the eastern edge, outside the unit?

10 Q. There's some that's actually under the unit.

11 A. If it's within that unit boundary, then it's  
12 owned by COG Oil and Gas, LP. If it's not within the unit  
13 boundary, then we -- I believe Marbob has an offset unit  
14 over here. I think it's the Dodd Federal Unit.

15 Q. I was just looking at the pool boundaries, and  
16 it's possible --

17 A. Yeah.

18 Q. -- that they were inactive wells.

19 A. Yes. I might have to have our engineer address  
20 that in a little bit more detail. She may be more  
21 knowledgeable about that. But that's certainly possible,  
22 there could be some overlapping pools. The pool  
23 description could overlap a little bit.

24 Q. Okay. Let's see, I think -- The EUR tax credit  
25 was never applied for on this, not that you would ever need

1 it --

2 A. Well, I think that -- We may have actually asked  
3 for that in our last hearing that we had. But with the  
4 price of oil about \$70-plus a barrel, you know, I don't  
5 know. I'm not sure when that price break kicks that tax  
6 break in, so -- or price level, but...

7 EXAMINER JONES: Okay. Well, I think --  
8 appreciate you coming.

9 THE WITNESS: Sure, my pleasure.

10 EXAMINER JONES: Thank you.

11 MR. HALL: Mr. Examiner, I have available for you  
12 if you'd like copies of the unit agreement and all the  
13 amendments.

14 EXAMINER JONES: I was going to ask about that,  
15 because we see these orders, but they always talk about  
16 modifying the unit agreement to extend the depths, but I've  
17 never seen a real unit agreement.

18 MR. ROBERTSON: It's an old one.

19 EXAMINER JONES: Okay.

20 MR. HALL: Be glad to make that available to you.

21 EXAMINER JONES: Okay.

22 MR. HALL: I also compiled all of the orders, all  
23 of the unit orders and the -- order for this unit as well.

24 EXAMINER JONES: Okay, thank you. Thank you very  
25 much.

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GAYLE BURLESON,

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

DIRECT EXAMINATION

BY MR. HALL:

Q. For the record, please state your name.

A. Gayle Burleson.

Q. Ms. Burleson, by whom are you employed and in what capacity?

A. COG Operating, LLC, in Midland, Texas, as a senior reservoir engineer.

Q. And you've previously testified before the Division and had your credentials as a petroleum engineer/reservoir engineer accepted as a matter of record?

A. Yes.

Q. You're familiar with this unit and this Application?

A. Yes.

MR. HALL: At this point, Mr. Examiner, we'd offer Ms. Burleson as a qualified petroleum engineer.

EXAMINER JONES: Ms. Burleson is qualified as an expert petroleum reservoir engineer.

Q. (By Mr. Hall) If you would, Ms. Burleson, give the Hearing Examiner an overview of the development within the Grayburg-Jackson Unit.

1           A.    The development of the unit began when the unit  
2 was unitized in 1966 in the Grayburg-San Andres formation.  
3 They started with four injectors in Section 28, kind of in  
4 the southern parts. It was expanded in 1968 to 11  
5 injectors, kind of throughout the unit.

6           The Paddock development did not begin until 1984,  
7 and then we began Blinebry development this year, in 2007,  
8 after we received the order.

9           Q.    With respect to injection operations, does COG  
10 have any plans to expand the waterflood operations, either  
11 vertically or horizontally anywhere within the unit?

12          A.    Not at this time. We currently have 10 active  
13 injectors, and they are injecting in the Grayburg-San  
14 Andres.

15          Q.    And by this Application COG is not asking for  
16 authorization to expand the waterflood; is that correct?

17          A.    Yes, that's correct.

18          Q.    Would you review the operations that have  
19 occurred in the Blinebry today?

20          A.    This year we have drilled 10 Blinebry wells and  
21 completed them -- well, not completed them. We have seven  
22 producing. Two are waiting on completion, and one is  
23 actually in the process of being completed, and we have an  
24 additional well currently drilling.

25          Q.    And do you plan to further develop the Blinebry

1 in the unit?

2 A. Yes.

3 Q. To your knowledge, is the Blinebry geologically  
4 separated from the waterflood interval in the Grayburg-  
5 Jackson?

6 A. Yes, it is.

7 Q. Do the waterflood operations affect the Blinebry  
8 at all?

9 A. No, they do not.

10 Q. Do your development plans for the Blinebry also  
11 include drilling and 40-acre tracts occupied by the  
12 waterflood wells?

13 A. Yes, they do.

14 Q. And does COG have any plans to re-enter and  
15 recomplete any of the waterflood operation wells in the  
16 Blinebry?

17 A. No, not at this time.

18 Q. Okay. Let's look at Exhibit 2. Identify this  
19 and explain to the Hearing Examiner what this demonstrates.

20 A. Exhibit 2 is again our G-J Unit outline base map,  
21 and we further have colored this in not just for producers  
22 but by formation. So the purple circles are Grayburg-San  
23 Andres producers or injectors, the red circles are Paddock  
24 producers, and the blue are Blinebry.

25 And so if you have a circle that's half red and

1 half purple, it actually has the Paddock and Grayburg-San  
2 Andres open. And then there are a few wells that are all  
3 three colors, so they will have Blinebry, Paddock and  
4 Grayburg-San Andres producing.

5 And then we also went through the development as  
6 it stands now. If we can only have four wells per 40-acre  
7 tract, we colored the tracts where it would limit future  
8 drilling. And a green 40-acre tract, basically there's  
9 already four producing wells on that green tract, so you  
10 could not drill any future wells. And then a pink, you  
11 could only drill one future well. So we determined how  
12 many wells would be hindered by not being able to drill  
13 these.

14 Q. And if Rule 104 is interpreted to prevent any  
15 further development in those tracts occupied by four more  
16 wells, do you have an estimate of the reserves that you  
17 would be precluded from recovering?

18 A. I do. That is Exhibit 3, and we basically broke  
19 it out for potential Blinebry reserves lost and then  
20 potential Paddock reserves lost. And from these green and  
21 pink 40-acre tracts, I calculated that 19 Blinebry wells  
22 would not be able to be drilled.

23 And using our average type curve, decline-curve  
24 reserve model for the Blinebry in our year-end reserve  
25 report, the gross reserves lost would be 700,000 barrels of

1 oil and 3 billion cubic feet of gas, gross.

2 To the royalty owners -- they own 12 1/2 percent  
3 of the unit -- that would be a loss of 87,500 barrels of  
4 oil and 375,000 cubic feet of gas.

5 And we assumed a flat pricing, we looked at NYMEX  
6 closing prices on 7-23 and adjusted it for what we get out  
7 there, you know, taking deducts, and that would get us an  
8 oil price of \$69 per barrel of oil and \$6 per MCF gas.

9 So just using that calculation with these  
10 barrels, an approximate value lost for the Blinebry to the  
11 royalty owners could be \$8.3 million.

12 We did the same calculation for Paddock, and  
13 actually we are developing the Blinebry right now on 20-  
14 acre spacing, so really two wells per 40. But the Paddock  
15 has been developed throughout this whole township-range  
16 section on 10-acre spacing, four wells per 40, so it  
17 actually limits future Paddock drilling by 23 wells.

18 We applied our same average reserve case for  
19 those 23 wells, for oil and gas, and came up with a million  
20 barrels of oil and 4 billion cubic feet of gas, gross, and  
21 then again netted it to the royalty owners, and that value  
22 lost would be \$11.6 million. So total, you're looking at  
23 probably \$20 million, close.

24 Q. And with respect to the reference to the royalty  
25 owners in Exhibit Number 3, except for the one 40-acre fee

1 tract, is the royalty owned entirely by the State of New  
2 Mexico?

3 A. Yes.

4 Q. Ms. Burleson, do you have an opinion whether the  
5 Tubb or Drinkard formations show potential for additional  
6 development?

7 A. We do not believe the Tubb shows potential. It  
8 appears to be wet, it has been tested. The Drinkard, we  
9 actually testified to that in January, our geologist did.  
10 There is a Drinkard well to the west of this unit. We have  
11 not tested the Drinkard within the G-J Unit outline. At  
12 this time we don't know that there's potential, but it's  
13 possible.

14 Q. And in your opinion, if COG's Application is not  
15 approved and further development is prohibited in those  
16 occupied 40-acre tracts, will waste result?

17 A. Yes.

18 Q. Do you recommend that the Division enter an order  
19 providing for blanket exception to the development density  
20 limitations where wells will be drilled to other  
21 formations?

22 A. Yes.

23 Q. And do you also recommend that the order provide  
24 for simultaneous dedication of all present and future wells  
25 within the unit?

1 A. Yes.

2 Q. And in your opinion, will a single order  
3 governing all present and future production be an efficient  
4 way for both the Division and COG to administer development  
5 within the unit?

6 A. Yes.

7 Q. Otherwise, would COG be required to submit  
8 applications on a well-by-well basis for exception?

9 A. That is correct.

10 Q. Can you tell us throughout the unit area how many  
11 potential well locations are there at full development in  
12 all reasonably productive formations?

13 A. If you go back to Exhibit 2, you can see that we  
14 don't have production throughout the entire unit currently.  
15 If we developed it fully throughout the unit outline, and  
16 again making our assumption of the Grayburg-San Andres on  
17 10-acre spacing, four wells per 40, we would have remaining  
18 123 wells that we could drill; in the Paddock, again that  
19 same assumption, four wells per 40, we would have 170  
20 remaining; and in the Blinbry with two wells per 40, 100  
21 remaining, for a total of 393 wells. But some of those  
22 would be drilled one wellbore, and you might could produce  
23 all three zones. That was the reason for extending the  
24 vertical limits, so that we don't have to go drill 393  
25 total wells to develop this acreage.

1 Q. Ms. Burleson, were Exhibits 2 and 3 prepared by  
2 you --

3 A. Three was --

4 Q. -- or at your direction?

5 A. -- prepared by me, and 2 was under my advisement.

6 MR. HALL: Okay. That concludes our direct of  
7 this witness. We'd move the admission of Exhibits 2 and 3,  
8 Mr. Examiner.

9 EXAMINER JONES: Exhibits 2 and 3 will be  
10 admitted.

11 Okay, thanks again for bringing a landman and a  
12 reservoir engineer. Appreciate that.

13 EXAMINATION

14 BY EXAMINER JONES:

15 Q. So you're asking for any that's more than four  
16 per 40 to be grandfathered. Are there any tracts that have  
17 more than four wells per 40 that are completed in zones  
18 other than the Grayburg-San Andres?

19 A. Let me make sure. Well, they're completed in the  
20 Grayburg-San Andres and the Paddock.

21 Q. So they're downhole commingled?

22 A. They are.

23 Q. How does that work?

24 A. Well, all of our production is downhole  
25 commingled, but the injection is only going in the

1 Grayburg-San Andres.

2 Q. Okay. Okay, so you keep your wells pumped off,  
3 you're okay?

4 A. Right, and we do.

5 Q. Okay, so -- but you're still -- you're not asking  
6 for more than 40 for other zones --

7 A. No --

8 Q. -- besides --

9 A. -- that is correct.

10 Q. Okay.

11 A. Yeah, no more than four wells per 40 in any one  
12 zone.

13 Q. Okay. What about the depth to the Abo? Is the  
14 last order satisfactory to you about the depth definition,  
15 as far as the particular well and the log and everything?  
16 Is it easy for your geologist or yourself to correlate  
17 across the formation, to stay away from the Abo?

18 A. It is, yes.

19 Q. So you don't want any clarification on that at  
20 all?

21 A. No.

22 Q. And there's nothing -- no potential in the Abo?

23 A. There is Abo potential. We don't actually have  
24 any Abo production within the units, but there is the  
25 Empire-Abo Unit, sits off to the southwest, and then there

1 are Abo wells sitting off to the southeast. We have not  
2 identified any current potential locations within the G-J  
3 Unit.

4 Q. Okay. So you're pretty excited about this  
5 Blinebry? Is it going to be a --

6 A. So far --

7 Q. -- pretty --

8 A. -- yes.

9 Q. Okay.

10 A. We currently have two rigs running in this unit.

11 Q. All right. And do you anticipate a lot of  
12 downhole commingling? I mean, as far as internally to COG,  
13 just to justify these wells? Do they have to be justified  
14 that way?

15 A. We do. It's just -- it's an efficient way to  
16 produce all of the reserves if you have fewer wellbores,  
17 cheaper operations with fewer wells. And we testified in  
18 January we have seen no crossflow and no potential for  
19 waste.

20 Q. Is it pretty easy to calculate your -- keep track  
21 of your reserves between zones?

22 A. No.

23 Q. It's never easy, I know.

24 A. Right. What we are doing currently is, we are  
25 drilling the wells to the Blinebry and testing them, you

1 know, for several months before we go back and add the  
2 Paddock. We also have a really good history of Paddock  
3 production, of the wells that we know were Paddock  
4 producers. And then the Grayburg-San Andres has been  
5 producing since, really, I think the late '30s. It just  
6 wasn't unitized until the '60s.

7 So we have a pretty good feel across the unit  
8 also of what a Grayburg-San Andres producer would produce.

9 Q. Is the pressure similar in the formations, or is  
10 the Grayburg-San Andres all pressured up now?

11 A. We haven't seen it. We do -- occasionally when  
12 we're drilling, we get some waterflows at that area, but  
13 it's not bad at all. So it's definitely controllable.

14 Q. You're able to pump them off if you do commingle  
15 them downhole?

16 A. Right.

17 Q. We have another operator, proposed downhole  
18 commingle allocation based on the gas analysis, actually,  
19 between -- that's historical, between zones up in the San  
20 Juan Basin. I'm not sure that could ever be used here  
21 because this is -- I don't know if their signatures are  
22 different on their different formation --

23 A. They are.

24 Q. -- fluids. They are different?

25 A. Uh-huh, a little bit. The gas. Well, the

1 Grayburg-San Andres doesn't make as much gas as the Paddock  
2 and Blinebry does.

3 Q. Okay. Well, that was just a -- seems like an  
4 exciting new potential way to keep -- reservoir management,  
5 to keep a better track of what's between each zone.

6 Let me ask you this, and I'll let you go.

7 Do you need four wells per 40 to -- as far as  
8 just continuity in your Blinebry or your Paddock even?

9 A. We believe so. The Paddock and the Blinebry are  
10 very tight dolomite, and the Blinebry especially comes and  
11 goes a lot. It's about 600 foot thick, and you have little  
12 carbonate stringers that come and go. Pretty much the tops  
13 and the bottoms correlate across, but you have porosity  
14 strings that just come and go throughout, east and west,  
15 and north and south.

16 The Paddock is a little more continuous, but we  
17 have evaluated this across our -- we have about -- I don't  
18 know how many acres total, but across a five-township range  
19 in this area we have a lot of Paddock production, and we've  
20 evaluated 40 acres versus 20 acres versus 10 acres.

21 Q. Okay.

22 A. We did not see, really, any difference in 40-acre  
23 versus 20-acre wells. And 10-acre wells were probably  
24 about 75 percent, on a reserve basis, of the 20- and 40-  
25 acre wells. But definitely economic and justifiable. You

1 wouldn't get those reserves if you didn't drill down to  
2 10s.

3 Q. And you're not asking for anything less than  
4 that, though?

5 A. No, no.

6 Q. As far as the day-to-day -- Actually, let's talk  
7 about the engineering and the -- or actually the reservoir  
8 engineering, the reserves and everything. Does COG do all  
9 that, or is the operator -- the contract operator, Mack,  
10 are they doing that?

11 A. No, we do the reservoir engineering, and we  
12 prepare a reserve report internally, and then that is  
13 audited by Cawley, Gillespie and Associates out of Fort  
14 Worth --

15 Q. Okay.

16 A. -- each year.

17 Q. So you or people working for you just decide  
18 about well density and things like that --

19 A. Yes.

20 EXAMINER JONES: -- based on your...

21 Okay, I think that's all the questions I have.

22 MR. THOMAS: (Shakes head)

23 THE WITNESS: Thank you.

24 EXAMINER JONES: Thanks very much. I appreciate  
25 you putting this on. I know it took a while, but --

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MR. HALL: Glad to do it. Thank you, Mr.  
Examiner.

EXAMINER JONES: With that, we'll take Case  
13,956 under advisement.

(Thereupon, these proceedings were concluded at  
10:12 a.m.)

\* \* \*

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. \_\_\_\_\_  
heard by me on \_\_\_\_\_  
\_\_\_\_\_, Examiner  
Oil Conservation Division

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 July 29th, 2007.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 16th, 2010