

## NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOHearing Date FEBRUARY 20, 1992 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
William A. San	Empire San Francisco	Santa Fe
Ray Miller	Marbob Energy Corp.	Artesia
John R. Gray	Marbob Energy Corp.	Artesia
James Bruce	Hinkle Law Firm	Albuquerque
Rhea Graham	EMPRD	Santa Fe

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NEW MEXICO OIL CONSERVATION DIVISION  
STATE LAND OFFICE BUILDING  
STATE OF NEW MEXICO  
CASE NO. 10216

IN THE MATTER OF:

Case 10216 being Reopened Pursuant to  
the Provisions of Division Order  
No. R-6849-A, for the West Nadine-  
Blinebry Pool, Lea County, New Mexico

BEFORE:

MICHAEL E. STOGNER  
Hearing Examiner  
State Land Office Building  
February 20, 1992

REPORTED BY:

CARLA DIANE RODRIGUEZ  
Certified Shorthand Reporter  
for the State of New Mexico

**ORIGINAL**

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

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FOR THE NEW MEXICO OIL CONSERVATION DIVISION:

ROBERT G. STOVALL, ESQ.  
General Counsel  
State Land Office Building  
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

THE HINKLE LAW FIRM  
500 Marquette, N.W., Suite 800  
Albuquerque, New Mexico 87102  
BY: JAMES G. BRUCE, ESQ.

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1                   EXAMINER STOGNER: I'm Michael E.  
2 Stogner, appointed Hearing Examiner for today's  
3 Docket No. 5-92. Please note today's date,  
4 Thursday, February 20, 1992.

5                   Call the first case, No. 10216.

6                   MR. STOVALL: In the matter of Case  
7 10216 being reopened pursuant to provisions of  
8 Division Order No. R-6849-A, which order approved  
9 a limiting gas-oil ratio of 7,000 to 1 for the  
10 West Nadine-Blinebry Pool in Lea County, New  
11 Mexico.

12                   EXAMINER STOGNER: Call for  
13 appearances.

14                   MR. BRUCE: Mr. Examiner, my name is  
15 Jim Bruce from the Hinkle Law Firm in  
16 Albuquerque. I'm representing Cross Timbers Oil  
17 Company, which is appearing today encouraging  
18 that the 7,000 to 1 GOR rule be made permanent  
19 for the pool.

20                   MR. STOVALL: That's the Hinkle-Cox Law  
21 Firm, is that correct, Mr. Bruce?

22                   MR. BRUCE: Yes. This isn't a  
23 personal injury case.

24                   EXAMINER STOGNER: Any other  
25 appearances in this matter?

1           If not, will the witness please stand  
2 to be sworn at this time.

3           [And the witness was duly sworn.]

4           MR. BRUCE: Briefly, Mr. Examiner, this  
5 pool, when it was originally discovered, had its  
6 GOR increased from the 2,000 to 1 in the  
7 statewide rules to 4,000 to 1. A year ago, Cross  
8 Timbers came in and applied, in Case 10216, to  
9 increase the GOR to 10,000 to 1.

10           The 7,000 to 1 GOR was granted by the  
11 Examiner at that time and, as I said, today Cross  
12 Timbers is appearing in support of making that  
13 7,000 to 1 GOR permanent.

14           FRANKLIN TERRY PERKINS, JR.

15 Having been first duly sworn upon his oath, was  
16 examined and testified as follows:

17           EXAMINATION

18 BY MR. BRUCE:

19           Q.       Would you please state your name for  
20 the record.

21           A.       My name's Franklin Terry Perkins, Jr.

22           Q.       Where do you reside?

23           A.       I reside in Fort Worth, Texas.

24           Q.       Who are you employed by?

25           A.       I'm employed by Cross Timbers Oil

1 Company.

2 Q. In what capacity?

3 A. I'm a reservoir engineer for them.

4 Q. Have you previously testified before  
5 the Division?

6 A. Not before the Division but before the  
7 Texas Railroad Commission.

8 Q. Would you please outline your  
9 educational and employment background?

10 A. I got a B.S. degree in chemical  
11 engineering from the University of Texas in  
12 1982. In July of 82, I went to work for Exxon  
13 Company, U.S.A., in their Southwestern Division  
14 in Midland, Texas, as a reservoir engineer.

15 I worked for Exxon for nine and a half  
16 years in the capacity as a reservoir engineer.  
17 In November of 91, I went to work for Cross  
18 Timbers Oil Company, and in 87 I became a  
19 registered petroleum engineer in the state of  
20 Texas.

21 Q. Does your area of responsibility  
22 include Southeast New Mexico?

23 A. Yes, it does.

24 Q. Are you familiar with the reservoir and  
25 engineering matters related to the West

1 Nadine-Blinebry Pool?

2 A. Yes, I am.

3 MR. BRUCE: Mr. Examiner, I tender Mr.  
4 Perkins as an expert reservoir engineer.

5 EXAMINER STOGNER: Mr. Perkins is so  
6 qualified.

7 Q. Mr. Perkins, would you please refer to  
8 Exhibits 1 through 4 and very briefly go through  
9 those for the Examiner.

10 A. Exhibit 1 is just a locator map, just  
11 showing where the West Nadine-Blinebry Pool is.  
12 It's approximately eight miles south of Hobbs.

13 Exhibit 2 is a lease map outlining the  
14 West Nadine-Blinebry Pool. It's outlined in  
15 blue, with Cross Timbers' acreage colored in  
16 yellow.

17 Exhibit 3 is just a base map of the  
18 West Nadine-Blinebry Pool, and again it has Cross  
19 Timbers' acreage outlined in yellow.

20 Exhibit 4 is a structure map contoured  
21 on top of the Blinebry formation, and we still  
22 have the Cross Timbers' acreage outlined in  
23 yellow.

24 Q. Please move on to Exhibit 5 and go into  
25 this in a little bit more detail.



1           A.       Exhibit 5 is a type log of this section  
2 and the area. This is a log of the Cross Timbers  
3 Oil Company Christmas #2 well. It's located in  
4 the northeast quarter of the northeast quarter of  
5 Section 7, Township 20 South, Range 38 East.

6                   We've included both the top of the  
7 Glorieta above the Blinebry and the top of the  
8 Tubb below the Blinebry, for your reference.

9                   As a result of some of the subsurface  
10 geological study that was done last year, we've  
11 subdivided the Blinebry formation into five  
12 different producing zones. These five zones are  
13 a result of cyclic sedimentation, when the  
14 Blinebry was deposited in a tidal flat  
15 environment.

16                   If you'll note on the type log, in  
17 purple is indicating negative density porosity,  
18 and that's also an indication of anhydrite  
19 within the reservoir. The yellow is indicating  
20 density positive density porosity and the orange  
21 is part of the neutron porosity.

22                   The significance of this exhibit is to  
23 show that the Blinebry reservoir is vertically  
24 stratified and that these five separate zones or  
25 reservoirs are not in vertical communication with

1 each other.

2 Q. Thank you. Would you please move on to  
3 Exhibit 6 and discuss its significance?

4 A. Exhibit 6 is a structure map contoured  
5 on top of Zone 5 in the Blinebry. All wells that  
6 are producing out of Zone 5 are highlighted in  
7 orange.

8 The McAllister #2 well has been added  
9 since last year, so that makes eight wells  
10 producing out of Zone 5 in the fifth zone of the  
11 Blinebry.

12 Q. So when the original hearing was done  
13 last year, there were only seven wells in Zone 5?

14 A. That's correct.

15 Q. Would you please, then, discuss Exhibit  
16 7.

17 A. Exhibit 7 is a net porosity isopach of  
18 Zone 5. I think again we have the eight wells  
19 that are producing out of Zone 5 highlighted.

20 I think the significance of this  
21 exhibit is to show that not only is the Blinebry  
22 vertically stratified and separated, but it is  
23 also horizontally separated as well.

24 Q. Okay. And then, moving on to Exhibit  
25 8, what does that represent?

1           A.       Exhibit 8 is a current cum and current  
2 rate map for all wells within the pool. Each  
3 well has a little pinwheel on it indicating which  
4 zones these wells are producing out of. This  
5 production on the map is basically from July of  
6 91.

7           Q.       Would you please discuss production  
8 from the wells in the pool? And I would refer  
9 you to Exhibits 9, 10 and 11.

10          Q.       Exhibits 9 and 10 are monthly  
11 production rates in July and October of all wells  
12 within the West Nadine-Blinebry Pool. We have  
13 both oil and gas monthly production with  
14 corresponding GORs for each well.

15                   I think you'll note that if you look in  
16 the July production for the McAllister #2 well,  
17 the rates were significantly down. That's about  
18 the time that we recompleted the McAllister #2  
19 into Zone 5. The rates have significantly  
20 increased.

21                   I think you'll also see that the rate  
22 in the McAllister #4 well, the gas rate  
23 especially has decreased but the oil rate came  
24 down in October. The reason for that was due to  
25 some down time in the well. We've got the rate

1 back up to where it was, and even a little bit  
2 higher.

3 Exhibit 11 is basically a cumulative  
4 production comparison of all wells within the  
5 pool and a cumulative GOR comparison.

6 Q. On Exhibit 11, the cumulative GOR is  
7 about 2,500. That is much lower than the more  
8 recent GOR, isn't it?

9 A. That's correct.

10 Q. What does Exhibit 12 represent?

11 A. Exhibit 12 is a GOR comparison of  
12 Blinebry pools within the Hobbs District. I  
13 think you will see that several of the pools in  
14 this area are producing GORs in excess of 7,000  
15 to 1.

16 Q. And would you then please move on to  
17 Exhibits 13, 14 and 15, discuss their  
18 significance, and discuss what effect, if any,  
19 the increase in GOR has had on production in this  
20 pool.

21 A. Exhibit 13 is a production plot of the  
22 West Nadine-Blinebry Pool. I think, as you can  
23 see, since we have completed additional wells in  
24 Zone 5, the oil production is basically  
25 flattened. You don't see an increase in decline

1 rates. With the increased GOR, it doesn't appear  
2 that the production has been adversely affected.

3 Exhibit 14 is a plot of the McAllister  
4 #4 well. This well was completed in Zone 5 back  
5 in April of 90. You can see the big kick in oil.  
6 Correspondingly, after you had the kick in oil  
7 you had a subsequent increase in gas, and that's  
8 why the hearing last year was called, for the  
9 increased GOR.

10 In July of 91, the McAllister #2 was  
11 completed in Zone 5. You can see the gas rate  
12 for Well #4 has fallen off but the oil rate has  
13 continued to carry along in the rate that it  
14 was. It appears that basically the gas has been  
15 drawn up to the McAllister #2 well. The rate  
16 hasn't increased significantly over what the #4  
17 was producing, but there is some small  
18 incremental gas rate.

19 Exhibit 15 is a plot of the McAllister  
20 #2 well. This well was completed in Zone 5 in  
21 July of this year. You can see the increase in  
22 gas rate. It has continued to be a high rate  
23 there for the gas, and the oil rate has come up a  
24 little bit also.

25 I think you can see that basically what

1 we've projected last year and this year, that  
2 there is a gas cap in Zone 5. It's located  
3 around the McAllister #2 well and we believe, by  
4 producing at a higher GOR, that will allow us to  
5 effectively produce both oil and gas reserves  
6 from this reservoir.

7 Q. In your opinion, has the increase in  
8 the GOR harmed the reservoir at all?

9 A. It doesn't appear to have harmed the  
10 reservoir, no, sir.

11 Q. In your opinion, should the 7,000 to 1  
12 GOR rule be made permanent for this pool?

13 A. Yes, I believe it should be made  
14 permanent.

15 Q. In your opinion, is the granting of  
16 this application or the continuance of the 7,000  
17 to 1 GOR in the interest of conservation and the  
18 prevention of waste?

19 A. Yes, sir.

20 Q. Were Exhibits 1 through 15 prepared by  
21 you, under your direction, or compiled from  
22 company records?

23 A. Yes, they were.

24 MR. BRUCE: Mr. Examiner, I move the  
25 admission of Exhibits 1 through 15.

1                   EXAMINER STOGNER: Exhibits 1 through  
2 15 will be admitted into evidence at this time.

3                   EXAMINATION

4 BY EXAMINER STOGNER:

5           Q.       Mr. Perkins, I was trying to quickly  
6 scan the difference between some of your first  
7 exhibits as to those exhibits that were--

8           A.       I think some of the exhibits that were  
9 presented last year was also for waiving the  
10 overproduction on Well #4. That was not granted  
11 and that production was made up. After the  
12 hearing, the well was shut in.

13          Q.       You show that Well #2.

14          A.       Yes, sir.

15          Q.       When was that completed?

16          A.       That was completed in Zone 5 in July of  
17 91. That's the addition that I talked about.

18          Q.       Had that well produced from any of the  
19 other zones?

20          A.       Yes, sir. I think if you'll look at  
21 your production map, you can see, like I said,  
22 these pinwheels indicate which zones these wells  
23 are producing from.

24                   The McAllister #2 well is producing  
25 from Zones 1, 2, 3, 4 and 5. The colored

1 pinwheels are the zones that they are completing  
2 from. That would be Exhibit 8. We basically  
3 went in and just added perforations in Zone 5 in  
4 the #2 in July of 91.

5 Q. What effects did you see on that  
6 Christmas #2 well?

7 A. The Christmas #2 well is not producing  
8 out of Zone 5. It's only producing out of Zone  
9 1. That's another option that we have and we're  
10 currently looking at possibly going in and  
11 completing that in Zone 5.

12 Q. Now, you show that well to have a high  
13 GOR.

14 A. Yes, sir. The rates are fairly low.  
15 You're looking at five barrels a day and  
16 basically 68 Mcf of gas. So it's getting towards  
17 the end of its producing life in Zone 1, and I  
18 think that's why you see the higher GOR.

19 Q. Before the effective date of the higher  
20 increase of the GOR, did that well produce about  
21 the same barrels of oil?

22 A. I believe so, yes, sir. I don't  
23 believe it was much higher than that.

24 Q. It was much higher. As far as the oil  
25 production goes, I'm looking at a July 1990



1 production, Exhibit #13, from the original case.  
2 And it had 200 barrels of oil, is that correct?  
3 Do you have that?

4 A. Let's see. That's 200 barrels of oil a  
5 month?

6 Q. Right.

7 A. So that would be what, about six  
8 barrels a day?

9 Q. Right. So there has not been much of a  
10 decrease?

11 A. No, sir, there sure hasn't. That would  
12 be consistent with its decline, I believe. These  
13 wells right here go on hyperbolic decline, and  
14 when you get down to those low rates, they  
15 basically stay fairly flat for a significant  
16 period of time.

17 Again, I think from what we  
18 demonstrated last year and even this year, you  
19 don't see any vertical communication between  
20 zones; so, I don't believe by completing Well #2  
21 in Zone 5 it will affect Zone 1 production. I  
22 think you can see that by the plot of the overall  
23 pool production, which is Exhibit 13.

24 Q. It appears that Bravo Operating  
25 Company, shown on your Exhibit No. 10 on the

1 original case and Exhibit 8 today, is the only  
2 other producer that has any perforations in Zone  
3 5. Is that still true?

4 A. As far as we know, yes, sir, it is.

5 Q. You do have some production figures  
6 today. Let's see, that's the--

7 A. It would be the Filbert #1 and the  
8 Eggbert #1.

9 Q. No significant changes that I can see?

10 A. No, sir. I think if you also look at  
11 probably your net porosity map of Zone 5, you can  
12 see it appears that those wells are even in a  
13 separate reservoir structurally, from a net  
14 porosity standpoint.

15 Q. Of course this application or the GOR  
16 is pool Y, so that would effect all zones, not  
17 only Zone 5?

18 A. That's correct.

19 Q. In your opinion, and I'm sure you've  
20 had time to reserve the production figures from  
21 the time the 10,000 to 1 increase was approved of  
22 wells in any other zone, did you see any  
23 significant changes that could be harmful to this  
24 reservoir?

25 A. No, sir, we sure didn't. And basically

1 the reason we came here was for the increase for  
2 Zone 5. It doesn't appear that any of the other  
3 GORs in other zones have increased significantly.

4 EXAMINER STOGNER: Are there any other  
5 questions of this witness? If not, he may be  
6 excused.

7 Mr. Bruce?

8 MR. BRUCE: Nothing further, Mr.  
9 Examiner.

10 EXAMINER STOGNER: Does anybody else  
11 have anything further in the reopened case, Case  
12 10216?

13 If not, this case will be taken under  
14 advisement.

15 (And the proceedings concluded.)

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Mahal Stogner

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3 CERTIFICATE OF REPORTER4 STATE OF NEW MEXICO )  
5 ) ss.  
6 COUNTY OF SANTA FE )7 I, Carla Diane Rodriguez, Certified  
8 Shorthand Reporter and Notary Public, HEREBY  
9 CERTIFY that the foregoing transcript of  
10 proceedings before the Oil Conservation Division  
11 was reported by me; that I caused my notes to be  
12 transcribed under my personal supervision; and  
13 that the foregoing is a true and accurate record  
14 of the proceedings.15 I FURTHER CERTIFY that I am not a  
16 relative or employee of any of the parties or  
17 attorneys involved in this matter and that I have  
18 no personal interest in the final disposition of  
19 this matter.20 WITNESS MY HAND AND SEAL February 26,  
21 1992.22  
23   
24 CARLA DIANE RODRIGUEZ, RPR  
25 CSR No. 4