

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. 12,649

IN THE MATTER OF CASE 12,649 BEING )  
REOPENED PURSUANT TO THE PROVISIONS OF )  
DIVISION ORDER NUMBER R-11,610, WHICH )  
ORDER PROMULGATED TEMPORARY SPECIAL POOL )  
RULES FOR THE CEDAR LAKE REEF-STRAWN )  
POOL IN EDDY COUNTY, NEW MEXICO, )  
INCLUDING PROVISIONS FOR 160-ACRE )  
SPACING UNITS AND DESIGNATED WELL )  
LOCATIONS )

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Oil Conservation Division

**ORIGINAL**

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

February 20th, 2003

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, February 20th, 2003, 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

February 20th, 2003  
 Examiner Hearing  
 CASE NO. 12,649

## PAGE

APPEARANCES

3

EOG WITNESS:

RANDALL S. CATE (Engineer)

Direct Examination by Mr. Carr

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Examination by Examiner Catanach

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REPORTER'S CERTIFICATE

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## E X H I B I T S

Applicant's

Identified

Admitted

Exhibit 1

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Exhibit 2

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Exhibit 3

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

## FOR THE DIVISION:

DAVID K. BROOKS, JR.  
Attorney at Law  
Energy, Minerals and Natural Resources Department  
Assistant General Counsel  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

## FOR EOG RESOURCES:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR  
110 N. Guadalupe, Suite 1  
P.O. Box 2208  
Santa Fe, New Mexico 87504-2208  
By: WILLIAM F. CARR

## FOR MEWBOURNE OIL COMPANY:

JAMES G. BRUCE  
Attorney at Law  
P.O. Box 1056  
Santa Fe, New Mexico 87504  
369 Montezuma, No. 213  
Santa Fe, New Mexico 87501

\* \* \*

## ALSO PRESENT:

WILLIAM V. JONES, JR.  
Petroleum Engineer  
New Mexico Oil Conservation Division  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

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1           WHEREUPON, the following proceedings were had at  
2   8:48 a.m.:

3           EXAMINER CATANACH: All right, at this time I  
4   will call Case 12,649, in the matter of Case 12,649 being  
5   reopened pursuant to the provisions of Division Order  
6   Number R-11,610, which order promulgated temporary special  
7   pool rules for the Cedar Lake Reef-Strawn Pool in Eddy  
8   County, New Mexico, including provisions for 160-acre  
9   spacing units and designated well locations.

10          Call for appearances.

11          MR. CARR: May it please the Examiner, my name is  
12   William F. Carr with the Santa Fe office of Holland and  
13   Hart, L.L.P. We represent EOG Resources in this matter,  
14   and I have one witness.

15          MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,  
16   representing Mewbourne Oil Company. I have no witnesses.

17          EXAMINER CATANACH: Any additional appearances?  
18   Mr. Carr, you may proceed.

19          MR. CARR: At this time we need to call and have  
20   sworn Randy Cate.

21          EXAMINER CATANACH: Is that the only witness?

22          MR. CARR: That's the only witness.

23          EXAMINER CATANACH: Okay, will the witness please  
24   be sworn in?

25          (Thereupon, the witness was sworn.)

1                                    RANDALL S. CATE,  
2       the witness herein, after having been first duly sworn upon  
3       his oath, was examined and testified as follows:

4                                    DIRECT EXAMINATION

5       BY MR. CARR:

6                Q.     Will you state your name for the record, please?

7                A.     It's Randall Cate.

8                Q.     Mr. Cate, where do you reside?

9                A.     In Midland, Texas.

10              Q.     By whom are you employed?

11              A.     EOG Resources.

12              Q.     Was EOG Resources the original Applicant in this  
13       case?

14              A.     Yes, it was.

15              Q.     What is your current position with EOG?

16              A.     I'm project reservoir engineer.

17              Q.     Have you previously testified before this  
18       Division?

19              A.     Yes, I have.

20              Q.     At the time of that testimony, were your  
21       credentials as an expert in petroleum and reservoir  
22       engineering accepted and made a matter of record?

23              A.     Yes, they were.

24              Q.     Are you familiar with the Cedar Lake Reef Strawn  
25       Pool?

1 A. Yes.

2 Q. And are you familiar with the recent production  
3 history from the one well in that pool?

4 A. Yes.

5 Q. Are you prepared to share the results of your  
6 recent work on this reservoir with the Examiner?

7 A. Yes.

8 MR. CARR: Are the witness's qualifications  
9 acceptable?

10 EXAMINER CATANACH: Mr. Cate is so qualified.

11 Q. (By Mr. Carr) Mr. Cate, would you briefly state  
12 what is the purpose of your appearing before the Division  
13 in this case today?

14 A. Yes, we'll present testimony and data to make the  
15 temporary pool rules that were adopted a year ago -- to  
16 make them permanent.

17 Q. I think initially it would be helpful if you  
18 state what those pool rules provided.

19 A. Okay. The pool rules -- It is an oil pool. The  
20 pool rules provided for 160-acre spacing with a GOR  
21 allowable of 4000. And also, based on MER data that was  
22 presented, we received a special depth allowable of 1120  
23 barrels of oil per day, which is basically twice the  
24 standard depth bracket allowable, and in addition to that  
25 there was a discovery allowable granted of 51,000 barrels,

1 roughly, to be over two years at roughly 70 barrels of oil  
2 a day.

3 Q. What we're really talking about here, Mr. Cate,  
4 is a small Strawn reservoir that has been developed with a  
5 single well; is that correct?

6 A. That's correct. When we presented the original  
7 Application, we had seismic data that showed the reef to be  
8 approximately 140 acres in size. It looked like it was  
9 entirely within the spacing unit now dedicated to it and  
10 entirely under EOG acreage. And at the time we presented  
11 data we thought the EUR would be between 350,000 barrels  
12 and 400,000 barrels, based on doing a study of analogous  
13 Strawn production such as the Lusk and the Cedar Lake field  
14 on similar field rules and similar petrophysical data, the  
15 gravity of the oil and the producing GORs, and now present  
16 data that basically what we presented at that original  
17 hearing, that is going to still be the case.

18 Q. Let's go to what has been marked EOG Exhibit  
19 Number 1. Would you identify and review that for Mr.  
20 Catanach?

21 A. Sure. This is simply just a plat. The red box  
22 up on the north part of the plat shows the 160-acre  
23 proration unit dedicated -- or spacing unit, dedicated to  
24 the well. Again, there have been no new wells, no  
25 attempted offset wells into this reservoir. These were the

1 same wells that were here a year and a half ago, so new  
2 activity.

3 And the south part of the plat, outlined in  
4 yellow, that is the Cedar Lake-Strawn field, which we used  
5 as one of the analogous fields at the original hearing. It  
6 has four wells that make up the Strawn production, and I'll  
7 go into a little more detail again, just as another  
8 comparison.

9 Q. But that pool is developed on 160-acre spacing  
10 and a 4000-to-1 GOR?

11 A. Yes, it is.

12 Q. Let's go to Exhibit Number 2. Would you review  
13 that?

14 A. All right, Exhibit Number 2 is a production plot  
15 for the last two years, basically, on this well. Again,  
16 it's a single-well pool. Cumulative production to this  
17 point is 303,000 barrels of oil and roughly 1 1/2 BCF of  
18 gas. To note -- The oil production did start off for the  
19 first four or five months at that thousand-barrel-a day.  
20 The production decline has been very stable, it has not  
21 been erratic, and the decline curve is predicting that the  
22 ultimate recovery now should be 373,000 barrels of oil and  
23 approximately 2.6 BCF of gas, which on the next exhibit  
24 I'll show you is precisely within the volumetric confines  
25 of what we had predicted in the original hearing.



1 Q. Are you ready to go to that next exhibit?

2 A. Yes.

3 Q. Let's go to the table titled "Cedar Lake Reef-  
4 Strawn Permanent Pool Rules Hearing", and I'd ask you to  
5 review the data on that exhibit for Mr. Catanach.

6 A. Okay. Again, the top bracket of data, I've  
7 looked at the Cedar Lake field, the Lusk field, both of  
8 which were 160-acre spacing and 4000 GOR, and compared  
9 bottomhole pressures and cumulative production data, oil  
10 gravities and gas gravities to the Cedar Lake field, and  
11 it's simply just showing that this field was very similar  
12 in those characteristics to the fields that had already  
13 been granted the 4000 GOR and the 160-acre spacing.

14 I then looked at volumetric calculations on the  
15 bottom half of the page. The Cedar Lake field and the Lusk  
16 field both calculated approximately 29- to 30-percent  
17 recovery factors. These are very high, it's a very  
18 efficient drainage mechanism in these reefs, probably due  
19 to the gas expansion, and the high GORs is giving a lot of  
20 energy and the resulting high recovery factor.

21 And so using a 29-percent recovery factor,  
22 knowing that we had predicted that this reservoir would be  
23 about 140 acres in size, and now we put our decline curve  
24 analysis showing an estimated ultimate recovery of 373,000  
25 barrels, we see 135 acres, based on the log data with 64

1 feet of pay.

2 So all the data fits that we presented. It looks  
3 like the field rules were proper. I would say that the  
4 well -- if you go back to Exhibit 2, the well is producing  
5 at approximately a 10,000 GOR, but currently 200 barrels of  
6 oil per day and almost 2 million a day of gas, but that is  
7 typical for what these other fields have done.

8 Q. Mr. Cate, in your opinion will adoption of the  
9 temporary pool rules on a permanent basis enable you to  
10 produce the remaining reserves from this well in an  
11 efficient manner and otherwise in the best interests of  
12 conservation and the prevention of waste and the protection  
13 of correlative rights?

14 A. Yes.

15 Q. Were Exhibits 1 through 3 prepared by you?

16 A. Yes, they were.

17 MR. CARR: Mr. Catanach, at this time we'd move  
18 the admission into evidence of EOG Exhibits 1 through 3.

19 EXAMINER CATANACH: Exhibits 1 through 3 will be  
20 admitted.

21 MR. CARR: And that concludes my examination of  
22 Mr. Cate.

23 EXAMINATION

24 BY EXAMINER CATANACH:

25 Q. Mr. Cate, as I recall this is basically a one-

1 well structure?

2 A. Yes, it is.

3 Q. So there won't be any additional wells drilled?

4 A. We will not drill another well. I can't speak  
5 to, you know, an offset operator.

6 Q. What's the remaining life of the well in your  
7 decline curve? You've got about another 40,000 barrels?

8 A. Yes, it's another 70,000 barrels, as of February,  
9 2003. I'm showing on this curve about maybe three years  
10 additional life. You know, it might limp along at very low  
11 rates for longer than that, but the majority of the  
12 remaining production should be gotten in the next three  
13 years.

14 Q. Was this a solution gas drive reservoir?

15 A. Yes.

16 Q. No water?

17 A. No water. It's very little. I mean, there is --  
18 I did include the water on the curve, and it's maybe three  
19 barrels a day, intermittently, so it is a solution gas  
20 drive.

21 Q. It doesn't look very different from the Cedar  
22 Lake area in terms of the producing characteristics and all  
23 that.

24 A. Yes, they are very similar.

25 Q. You do have a thicker pay section, I guess. That

1 would be the main difference?

2 A. Thicker pay section and smaller areal extent, but  
3 the ultimate recoveries are very similar.

4 EXAMINER CATANACH: Okay, I believe that's all we  
5 have, Mr. Carr.

6 MR. CARR: That concludes our presentation.

7 (Thereupon, these proceedings were concluded at  
8 8:59 a.m.)

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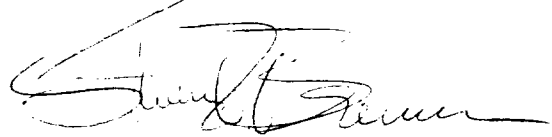
CERTIFICATE OF REPORTER

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 February 21st, 2003.



STEVEN T. BRENNER  
 CCR No. 7

My commission expires: October 16th, 2006