

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,751

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corporation for a  
unit agreement, Lea County, New Mexico

**ORIGINAL**

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

July 15, 1993

## 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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\* \* \*

## I N D E X

## Page Number

Appearances

2

MECCA MAURITSEN

Direct Examination by Mr. Carr

5

Examination by Examiner Catanach

8

BRENT MAY

Direct Examination by Mr. Carr

9

Examination by Examiner Catanach

17

Certificate of Reporter

19

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## E X H I B I T S

APPLICANT'S EXHIBITS:

Exhibit 1

5

Exhibit 2

6

Exhibit 3

7

Exhibit 4

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Exhibit 5

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Exhibit 6

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1 WHEREUPON, the following proceedings were had  
2 at 8:40 a.m.:

3 EXAMINER CATANACH: Okay, at this time we'll  
4 call Case 10,751.

5 MR. STOVALL: Application of Yates Petroleum  
6 Corporation for a unit agreement, Lea County, New  
7 Mexico.

8 EXAMINER CATANACH: Are there appearances in  
9 this case?

10 MR. CARR: May it please the Examiner, my  
11 name is William F. Carr with the Santa Fe law firm,  
12 Campbell, Carr, Berge and Sheridan.

13 I represent Yates Petroleum Corporation and I  
14 have two witnesses.

15 EXAMINER CATANACH: Any other appearances?  
16 Okay.

17 MR. STOVALL: The witnesses have been  
18 previously sworn, Mr. Carr, I believe.

19 MR. CARR: The witnesses have been sworn.

20 May it please the Examiner, the first witness  
21 is Mecca Mauritsen. I would request the record reflect  
22 that Ms. Mauritsen testified in a previous case and her  
23 credentials as a petroleum landman have been accepted  
24 and made a matter of record.

25 EXAMINER CATANACH: The record shall so

1 reflect.

2 MECCA MAURITSEN,

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

5 DIRECT EXAMINATION

6 BY MR. CARR:

7 Q. Ms. Mauritsen, could you briefly state what  
8 Yates Petroleum Corporation seeks with this  
9 Application?

10 A. Yes, sir, we're seeking voluntary approval of  
11 our Beartooth State Unit Agreement. It is  
12 approximately 2348.72 state acres in Lea County, New  
13 Mexico.

14 Q. Have you prepared exhibits for presentation  
15 here today?

16 A. Yes, sir, I have.

17 Q. Could you identify what has been marked as  
18 Yates Petroleum Corporation Exhibit Number 1?

19 A. Yes, sir, it's our Unit Agreement. It's on a  
20 State/Fee Exploratory form.

21 Q. Let's go to Exhibit A in this Agreement. And  
22 would you just summarize for Mr. Catanach the status of  
23 the acreage in the Unit area?

24 A. Yes, sir. There are seven state leases  
25 enclosed in the unit area.

1 Q. They're shown on Exhibit A.

2 And Exhibit B to the Unit Agreement is an  
3 ownership breakdown?

4 A. Yes, sir. It shows all the working interest  
5 owners for each tract and the royalty ownership, which  
6 is all State of New Mexico.

7 Q. What percentage of the working interest has  
8 been voluntarily committed to this Unit plan?

9 A. At this time we have a little bit over 88  
10 percent committed and are in the process of finalizing  
11 an agreement with Heyco on tract number 4.

12 Once we finalize our agreement, we'll have  
13 94.89 percent committed.

14 Q. What is the status of tract number 7?

15 A. It is uncommitted at this time, and we  
16 anticipate it will remain uncommitted.

17 Q. With the voluntary commitment that you've  
18 been able to obtain, will Yates have effective control  
19 of the Unit operations?

20 A. Yes, sir, we will.

21 Q. Could you identify what has been marked as  
22 Yates Exhibit Number 2?

23 A. Yes, sir, it's our letter from the  
24 Commissioner of Public Lands, giving us preliminary  
25 approval for our Unit and the Unit Agreement.

1 Q. And would you now identify Yates Exhibit 3?

2 A. Yes, sir, it's ratifications by the other  
3 working interest owners that we have, that have  
4 voluntarily joined the Unit at this time.

5 Q. The Unit Agreement designates Yates as Unit  
6 operator?

7 A. Yes, sir.

8 Q. And does the Agreement plan for the periodic  
9 filing of plans for development?

10 A. Yes, sir, it does.

11 Q. And how often are these plans to be filed?

12 A. Six months after completion of the first  
13 commercial well, and then once a year every year  
14 thereafter.

15 Q. Will Yates file these plans of development  
16 with the Oil Conservation Division at the time it files  
17 them with other government agencies?

18 A. Yes, sir.

19 Q. Will Yates also call a geological witness to  
20 review the technical aspects of this proposed unit?

21 A. Yes, sir, we will.

22 Q. Were Exhibits 1 through 3 compiled by you?

23 A. Yes, sir.

24 MR. CARR: At this time, Mr. Catanach, we  
25 move the admission of Yates Exhibits 1 through 3.

1 EXAMINER CATANACH: 1 through 3 will be  
2 admitted as evidence.

3 MR. CARR: And that concludes my examination  
4 of Ms. Mauritsen.

5 EXAMINATION

6 BY EXAMINER CATANACH:

7 Q. Ms. Mauritsen, tract number 7, is that --  
8 That's owned by Chevron?

9 A. Yes, sir.

10 Q. And have they refused to join the Unit? Is  
11 that the case?

12 A. Yes, sir, it's an HBP lease and as of Monday  
13 they were still uncommitted. They're still reviewing  
14 it, but we anticipate that it will remain uncommitted.

15 Q. The correct acreage in the Unit is 2348 --

16 A. -- point 72, yes, sir.

17 Q. And did you say tract number 4 you're about  
18 to close a deal on?

19 A. Yes, sir, they are going to farm out to the  
20 unit, and we just have not finalized the terms yet.

21 EXAMINER CATANACH: I have nothing else.

22 MR. CARR: At this time, Mr. Catanach, we  
23 call Mr. May.

24 I'd request that the record reflect that Mr.  
25 May has been previously sworn and that his credentials



1 as a petroleum geologist have been accepted and made a  
2 matter of record.

3 EXAMINER CATANACH: The record shall so  
4 reflect.

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

8 DIRECT EXAMINATION

9 BY MR. CARR:

10 Q. Mr. May, what formations are being unitized  
11 in the Beartooth State Unit?

12 A. I believe the Delaware, the -- and all other  
13 formations up to the surface.

14 Q. Have you prepared exhibits or have exhibits  
15 been prepared for presentation in this case?

16 A. Yes, they have.

17 Q. And have you reviewed these exhibits, and can  
18 you confirm the accuracy of the interpretation and the  
19 presentation?

20 A. Yes, I believe I can.

21 Q. Would you refer to what has been marked as  
22 Yates Petroleum Corporation Exhibit Number 4, identify  
23 that and review it for Mr. Catanach?

24 A. This is a west-east structural cross-section.  
25 The datum is set at a minus 2500 feet subsea.

1 I'd like to again -- Shown on this are the  
2 Delaware sands, on the right-hand side. And on the --  
3 excuse me, on the left-hand side.

4 On the right-hand side are shown the  
5 formations of the Glorieta and Blinebry.

6 I'd like to just start on the far left and  
7 discuss each well.

8 Starting on the left is the Gifford, Mitchell  
9 and Wisenbaker Horseback Number 1, located in Section  
10 33 of Township 26 South, 36 East. This well was  
11 originally drilled down to the Ellenberger, I believe,  
12 and was D-and-A'd.

13 The next well is the Gifford, Mitchell and  
14 Wisenbaker White Eagle Number 1, located in Section 22  
15 of Township 26 South, 36 East. This well too was  
16 originally drilled down to the Ellenberger, and it was  
17 plugged back and is currently producing out of the  
18 Strawn.

19 And the last well on the cross-section, on  
20 the far right, is the Continental Oil Eaves B-1 Number  
21 8 in Section 30 of Township 26 South, Range 37 East,  
22 and it was originally, I believe, drilled just to the  
23 Blinebry.

24 Shown on this cross-section -- Well, this  
25 cross-section runs basically from the shelf, across the

1 shelf margin and into the basin, with the back reef  
2 area or the shelf area on the far right of the cross-  
3 section, and the reef, which is probably the Capitan  
4 Goat Seep Reef, shown colored in blue in the middle,  
5 and with the more basinal type setting on the far left.

6 The Continental Eaves B-1 Number 8 was  
7 drilled through the back reef area, and that explains  
8 the Glorieta -- presence of the Glorieta and the  
9 Blinebry formations.

10 The White Eagle Number 1 and the Horseback  
11 Number 1 were both drilled in the more basinal type  
12 setting, and that explains the presence of the Delaware  
13 sands instead of the more -- instead of the shelf-type  
14 formations.

15 The primary objective of the initial test  
16 well is to test the carbonate debris flow within the  
17 Delaware sands. The Delaware sands are believed to  
18 have been deposited as turbidites and density flows  
19 into the Delaware Basin and in close proximity to the  
20 Reef, and within the Delaware sands are scattered  
21 debris flows.

22 We have one shown in the Horseback Number 1,  
23 just above the datum, which is not the objective here.  
24 It is a tight carbonate debris flow. The objective is  
25 a lower debris flow which appears in both the Horseback

1 Number 1 and the White Eagle Number 1.

2 These debris flows have been documented in  
3 both subsurface and outcrop.

4 Q. At this time, Mr. May, let's move on to Yates  
5 Exhibit Number 5, the structure map, and I'd ask you to  
6 review that for the Examiner.

7 A. This structure map uses a datum of a shale  
8 marker within the Delaware sands. It shows a west-to-  
9 southwest dip at -- generally of a rate of around 400  
10 feet per mile.

11 The unit outline is shown in red, along with  
12 the proposed location in Section 23.

13 The yellow line on the map represents the  
14 front edge of the reef facies with the area to the  
15 right of that yellow line being the reef or back reef  
16 area.

17 And to the left of the line is the more  
18 basinal sequence where the Delaware sands are found.

19 The wells that have been circled have  
20 actually penetrated deep enough for the carbonate  
21 debris flow that we are going after here, which there's  
22 only one in Section 8, 16, 17 of Township 25 -- Excuse  
23 me a second. No, that's right, same township. Of 26  
24 south, 36 east.

25 Also in Sections 22 and 33 of the same

1 township.

2 So there's very little control in this area.

3 Q. Let's go now to Yates Exhibit Number 6, your  
4 isolith. Would you review that for Mr. Catanach?

5 A. This is a debris flow isolith, only of the  
6 one debris flow that we showed on the cross-section.  
7 It shows the position of debris limits immediately west  
8 and downdip of the reef edge, which again is shown in  
9 yellow.

10 This map indicates an area of clean carbonate  
11 with a gamma ray reading of less than 30 API units and  
12 a porosity cutoff of greater than four percent.

13 And if you'll look on the map, the numbers  
14 indicating this, the far left indicates the gamma ray  
15 cutoff, and the number on the far right shows the  
16 porosity in feet.

17 Other producing carbonates in the Delaware  
18 Basin have shown that carbonates of less than four  
19 percent porosity are generally unproductive.

20 The key to this Beartooth Unit is the White  
21 Eagle Number 1, which is located in Section 22.

22 This well encountered 46 feet of porous  
23 carbonate debris at a depth of 6640 feet. Sample  
24 description indicates a porous fossil debris with  
25 hydrocarbon show in it.

1           The zone was not tested, though, in the well,  
2           and the well again is currently producing downhole from  
3           the Strawn.

4           Log calculations on this zone indicate  
5           potential pay.

6           The other well that demonstrates the limits  
7           of the debris flow is the Horseback Number 1 in Section  
8           3.

9           This test found a correlative carbonate  
10          debris flow, but was only five feet thick and had no  
11          porosity above four percent. And we believe that this  
12          well is probably indicating the more distal part of the  
13          debris flow as versus the White Horse [sic], which is  
14          probably a little more within the debris flow.

15          The wells that went deep enough to the  
16          northwest of the unit in sections 8, 16 and 17, did not  
17          see any evidence of the debris flow occurring in these  
18          wells, but we feel like this is important because we  
19          felt like if the debris flow had carried further north  
20          of the current unit boundaries we should have seen some  
21          distal facies in these wells, and we did not. So we  
22          believe that the debris flow does not carry any further  
23          north than what we have it shown here.

24          Also, not shown on this map and just across  
25          the border into Texas is a well that is due south of

1 the unit about a mile or two, and it did not show any  
2 carbonate debris flows either, so that's what we based  
3 the southern boundaries on.

4 I'd just like to point out that the pools to  
5 the east and northwest of the Unit are currently  
6 producing out of the Yates Seven Rivers. And the pool  
7 to the west, directly to the west of the Unit, is  
8 producing out of the Tansil.

9 The dry hole within the Unit in Section 26  
10 did not penetrate deep enough for this horizon, but did  
11 produce a few hundred barrels from the Tansil  
12 formation.

13 Q. Is that the well, the spot is virtually on  
14 the initial Unit well?

15 A. Yes, it's very close to the proposed  
16 location.

17 Q. Mr. May, what does your study of the Delaware  
18 formation in this area tell you about developing this  
19 property under a Unit plan?

20 A. There appears to be a carbonate debris flow  
21 thick in the area. The well in 22, the White Eagle  
22 Number 1, definitely shows that, that the zone is  
23 present in that well.

24 Also, as I pointed out, there's a lack of  
25 data on this zone in the area, and in fact a lack of

1 wells that even penetrated deep enough for this zone.  
2 So this -- the risk is fairly high here with the lack  
3 of data.

4 Q. How soon does Yates need to drill the initial  
5 well on this Unit?

6 A. I believe we have to drill before 8-1-93.

7 Q. Before August the 1st?

8 A. Yes, I believe that's correct.

9 Q. Does Yates request that the Order in this  
10 case be expedited to the extent possible?

11 A. Yes, we do.

12 Q. In your opinion, will approval of this  
13 Application and development of the Delaware formation  
14 in this area under a unit plan, will that be in the  
15 best interest of conservation, the prevention of waste  
16 and the protection of correlative rights?

17 A. Yes.

18 Q. Were Exhibits 4 through 6 prepared by you, or  
19 have you reviewed them and can you testify as to their  
20 accuracy?

21 A. That's true, yes, sir.

22 MR. CARR: At this time, Mr. Catanach, we  
23 offer Yates Exhibits 4 through 6.

24 EXAMINER CATANACH: Exhibits 4 through 6 will  
25 be admitted as evidence.



1 MR. CARR: That concludes my direct  
2 examination of Mr. May.

3 EXAMINATION

4 BY EXAMINER CATANACH:

5 Q. Mr. May, the unitized formation, again, is it  
6 from the surface to the base of the Delaware; is that  
7 correct?

8 A. I believe that's correct. All formations are  
9 from the surface to the base of the Delaware.

10 Q. As far as you know, nothing below the  
11 Delaware?

12 A. Not that I'm aware of, no.

13 Q. And am I correct in understanding that there  
14 currently is no Delaware production in this area?

15 A. That is correct, not on this map.

16 Q. Okay. The southern and eastern limits of  
17 your debris flow area were defined by what?

18 A. The eastern was defined by the edge of the  
19 reef, which is shown by the yellow line.

20 And the southern limits -- In fact, the  
21 southern limit of the Unit, I believe, goes right up to  
22 the state line, and there was a well just across into  
23 Texas, a mile or two south of the Unit, that did not  
24 have this zone in it.

25 Q. The edge of the reef on the eastern side, is

1 that pretty easy to define?

2 A. There could be some variance in there, but  
3 that's, I think, fairly close.

4 Q. Do you have any idea how much net feet of pay  
5 you would need to make a commercial well in this area?

6 A. It looks like the well in Section 22, the  
7 White Eagle Number 1, should be productive, so  
8 definitely if we have 46 feet or more it will be  
9 productive. And I would guess that we could probably  
10 get away with less than 46 feet.

11 It was a good, thick, clean carbonate that  
12 did have high porosity in it.

13 I think, too, the key is the porosity  
14 thickness too.

15 EXAMINER CATANACH: Okay, I have nothing  
16 further. The witness may be excused.

17 MR. CARR: We have nothing further in the  
18 case, Mr. Catanach.

19 EXAMINER CATANACH: Okay, there being nothing  
20 further, Case 10,751 will be taken under advisement.

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

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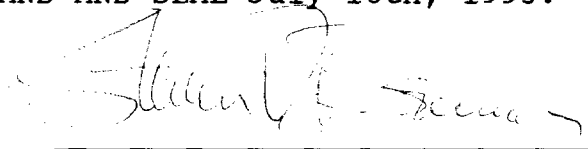
## 1 CERTIFICATE OF REPORTER

2  
3 STATE OF NEW MEXICO )  
4 ) SS.  
COUNTY OF SANTA FE )

5  
6 I, Steven T. Brenner, Certified Court  
7 Reporter and Notary Public, HEREBY CERTIFY that the  
8 foregoing transcript of proceedings before the Oil  
9 Conservation Division was reported by me; that I  
10 transcribed my notes; and that the foregoing is a true  
11 and accurate record of the proceedings.

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

16 WITNESS MY HAND AND SEAL July 16th, 1993.

17   
18 \_\_\_\_\_  
19 STEVEN T. BRENNER  
CCR No. 7

20 My commission expires: October 14, 1994  
21

22 I do hereby certify that the foregoing is  
23 a complete record of the proceedings in  
the Examiner hearing of Case No. 10751,  
24 heard by me on July 15, 1993.

25   
\_\_\_\_\_, Examiner  
Oil Conservation Division