

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

APPLICATION OF YATES PETROLEUM )  
CORPORATION FOR POOL EXTENSION )  
AND THE ASSIGNMENT OF A SPECIAL ) CASE NO. 10327  
DEPTH BRACKET OIL ALLOWABLE, )  
EDDY COUNTY, NEW MEXICO. )  
----- )

REPORTER'S TRANSCRIPT OF PROCEEDINGS  
EXAMINER HEARING  
BEFORE: MICHAEL E. STOGNER, Hearing Examiner  
June 13, 1991  
Santa Fe, New Mexico

This matter came for hearing before the Oil  
Conservation Division on June 13, 1991, at the Oil  
Conservation Division Conference Room, State Land office  
Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico,  
before Linda Bumkens, CCR, Certified Court Reporter No.  
3008, for the State of New Mexico.

FOR: OIL CONSERVATION DIVISION  
(COPY)

BY: LINDA BUMKENS CCR  
Certified Court Reporter  
CCR No. 3008

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## APPEARANCES

17	FOR YATES PETROLEUM COMPANY:	LOSEE, CARSON, HAAS & CARROLL, P.A. BY: MR. ERNEST L. CARROLL, ESQ 300 American Home Building Artesia, New Mexico 88211-0239
18	FOR KAISER FRANCIS OIL COMPANY:	CAMPBELL & BLACK, P.A. BY: MR. WILLIAM F. CARR, ESQ. 110 No. Guadalupe Santa Fe, New Mexico 87501
19		
20	FOR THE DIVISION:	ROBERT G. STOVALL, ESQ. General Counsel Oil Conservation Division State Land Office Building Santa Fe, New Mexico 87504
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1 MR. STOGNER: Call the next case, number  
2 10327.

3 MR. STOVALL: Application of Yates Petroleum  
4 Corporation for pool extensions and the assignment  
5 of a special depth bracket oil allowable, Eddy  
6 County, New Mexico.

7 MR. STOGNER: Call for appearances.

8 MR. CARROLL: Mr. Examiner, my name is Ernest  
9 Carroll with the law firm of Losee, Carson, Haas &  
10 Carroll of Artesia, New Mexico, and I appear here on  
11 behalf of the applicant, Yates Petroleum  
12 Corporation.

13 MR. STOGNER: Any additional appearances?

14 MR. CARR: May it please the Examiner, my name  
15 is William F. Carr with the law firm Campbell &  
16 Black, P.A., of Santa Fe. I represent Kaiser  
17 Francis Oil Company. I do not intend to call  
18 witnesses.

19 MR. STOGNER: Any other appearances?  
20 Mr. Carroll, you may proceed. I'm sorry. You have  
21 some witnesses?

22 MR. CARROLL: Yes. I have three witnesses,  
23 Mr. Examiner.

24 MR. STOGNER: Will you stand to be sworn at  
25 this time?

1 (Witnesses sworn)

2 MR. CARROLL: Mr. Examiner, our first witness  
3 will be Mike Burch. I really hate to mention this,  
4 but we got to looking yesterday at the case  
5 advertisement, and it shows the north half and the  
6 southeast quarter of section 16. We applied to  
7 include all of section 16. I don't know why the  
8 southwest quarter -- and I'm thinking that we had  
9 drilled a well on the southwest -- isn't that where  
10 the number -- our second well that we have drilled  
11 in this area we drilled in that southwest quarter,  
12 and I don't know why it got left out, but our  
13 application is for the south half of section 9, all  
14 of section 16, and the north half of section 21.

15 MR. STOGNER: I think we can straighten this  
16 out. How do you pronounce that?

17 MR. CARROLL: "Medano" is the way we pronounce  
18 it.

19 MR. STOGNER: This Delaware pool is an  
20 existing pool, right? And it takes in the southwest  
21 quarter of section 16, so we're going to expand it  
22 to include the south half, the north half -- I mean,  
23 the south half of 9, the north half and southeast  
24 quarter of 16 since the southwest quarter is already  
25 designated to it, and then the north half of 21. So

1 essentially it's -- it will be all of 16 <sup>is</sup> ~~as~~ the  
2 expansion <sup>is</sup> authorized. ~~was~~

3 <sup>was</sup> MR. CARROLL: When was the pool field first  
4 established? That's what we can't understand.

5 MR. STOGNER: Okay. It was designated the  
6 southwest quarter of section 16 by order number  
7 R9473, April 1st of 1991. Los Medanos  
8 M-e-d-a-n-o-s, Delaware pool.

9 MR. CARROLL: Do you know who applied for  
10 that, does it say?

11 MR. STOVALL: Do you have a copy of the  
12 order? I'll go get a copy of the order.

13 MR. CARROLL: We weren't aware of it.

14 MR. STOGNER: What was the order number?

15 MR. STOVALL: 9473.

16 MR. STOGNER: I've got it right here.

17 MR. STOVALL: Application of the OCD.

18 MR. STOGNER: It came on a regular  
19 nomenclature case and the discovery well was the  
20 Yates Petroleum, Medano M-e-d-a-n-o. State Well  
21 number 1, which is this well today in Unit K.

22 MR. CARROLL: Well, that's where it was --

23 MR. STOGNER: Then it was assigned a bonus  
24 discovery allowable of 21,090 barrels of oil to be  
25 produced over a two-year period. Was that the depth

1 bracket allowable you wanted today?

2 MR. CARROLL: No.

3 MR. STOGNER: All right. No problem.

4 MR. CARROLL: I guess that's where --

5 MR. STOVALL: Does that appear in the  
6 nomenclature and you didn't pick it up? It looks  
7 like --

8 MR. CARROLL: That's why. That's what  
9 happened. There's no problem there.

10 MR. STOVALL: You've got to watch Mike. He  
11 gets ahead of you.

12 MR. STOGNER: But you are asking for something  
13 other than the 21,090 barrels of oil.

14 MR. CARROLL: That's right. We're asking for  
15 special pool rules. That's what's going on.

16 MR. STOGNER: All right.

17 MR. CARROLL: That's cleared up.

18 EXAMINATION

19 BY MR. CARROLL:

20 Q. Would you please state your name and your  
21 occupation?

22 A. My name is Mike Burch. I'm a petroleum  
23 landman with Yates Petroleum Corporation, Artesia,  
24 New Mexico.

25 Q. Mr. Burch, you have previously testified

1 before the New Mexico Oil Conservation Division and  
2 been qualified as an expert in the field of a  
3 petroleum landman; is that correct?

4 A. Yes, I have.

5 MR. CARROLL: Mr. Stogner, I would tender  
6 Mr. Burch as an expert in that area.

7 MR. STOGNER: Mr. Burch is so qualified.

8 Q. (By Mr. Carroll) Mr. Burch, let's turn to  
9 some of the exhibits that you've prepared for  
10 presentation of this case. First of all, Exhibit  
11 Number 1, would you mind explaining what that  
12 exhibit is?

13 A. Exhibit number 1 in the hashed outline  
14 marks our request for the pool extension to include  
15 the south half of section 9, all of section 16 and  
16 the north half of section 21.

17 Q. All right. And that's of 2331; right?

18 A. 23 south, 31 east, that's correct. The  
19 bold black outline is a one-mile boundary around the  
20 pool boundaries.

21 Q. All right. And that boundary was the  
22 boundary that you used for notice purposes; is that  
23 correct?

24 A. That's correct.

25 Q. All right. And the hash line actually on

1 there denotes the boundaries of this particular pool  
2 that we're requesting rules?

3 A. Yes, the pool boundaries; that's correct.

4 Q. Exhibit number 2, and what is Exhibit 2?

5 A. Exhibit 2 lists the section, townships, and  
6 ranges within the pool boundary and the one-mile  
7 boundary around the pool boundaries. It also lists  
8 the operators within that area. It also lists the  
9 lessors of mineral interest.

10 Q. All right. With respect to these operators  
11 that are shown here on Exhibit 2, were each one of  
12 those operators notified of this hearing?

13 A. Yes, they were.

14 Q. Now, with respect to three of these  
15 Meridian, Mobil and Phillips, the notice that was  
16 sent out to these people, was it given the full 20  
17 days?

18 A. No, it wasn't.

19 Q. All right.

20 A. Let me expand on that. The reason why is  
21 because the pool boundaries were extended to include  
22 the south half of 9 and the north half of 21. It  
23 extended our one-mile boundary around that pool  
24 boundary, so we had to make additional notifications  
25 which we did.



1 Q. All right. We're actually coming here on  
2 an amended application, I think, if I'm right. Yes,  
3 and that's the problem. When we amended we enlarged  
4 the area of the pool; is that correct?

5 A. That's correct.

6 MR. CARROLL: Mr. Stovall, the problem, we got  
7 our notice about 18 days prior to this hearing, the  
8 certificate that we mailed out. We have -- just for  
9 information -- we will produce as an exhibit  
10 Meridian has submitted a waiver to us, so the only  
11 two people that have not had the full 20-day --  
12 benefit of the full 20-day notice is Phillips  
13 Petroleum and Mobil.

14 Q. (By Mr. Carroll) Now, Mr. Burch, you have  
15 contacted both of those parties by telephone just  
16 prior to this hearing, have you not?

17 A. That's correct. I contacted Troy Rashad  
18 from Phillips, and they had no objections to what  
19 Yates was proposing here before the commission  
20 today. I also talked to Danny Pakino with Mobil  
21 Exploration and he didn't see that there would be  
22 any problem on Mobil's part for what we're proposing  
23 here today either.

24 Q. I don't know how we need to handle this  
25 little glitch, but we apologize to the commission.

1 It just slipped by us so our mail notices just did  
2 not get the full 20 days for at least those two  
3 people.

4 MR. STOVALL: I feel you can present the case  
5 and then we'll continue it for two weeks is what we  
6 do with that, if we don't have the formal waiver and  
7 we have appearances; something to cure that defect,  
8 and that's the way we do that.

9 Q. (By Mr. Carroll) then going to the Exhibit  
10 number 3, Mr. Burch, what is that exhibit?

11 A. That's a certificate of mailing and  
12 compliance with rule 1207 where we made contact with  
13 all of the listed operators.

14 Q. All right, and, again, this part of this  
15 Exhibit lists the operators to whom notice was sent,  
16 and copies of the return receipt cards and example  
17 letter?

18 A. That's correct.

19 Q. All right. Exhibit number 4, this exhibit  
20 was prepared, was it not, just as an informational  
21 so that the examiner would have everything before  
22 it, but this is, in fact, the application for the  
23 discovery allowable which we were just discussing a  
24 moment ago; is it not?

25 A. That's correct.

1 Q. And this is for the Medano "VA" State 1  
2 Well?

3 A. That's correct.

4 Q. All right. Exhibit 5. What is Exhibit 5?

5 A. Exhibit 5 are the waivers that have been  
6 obtained so far to date, including Bass Enterprises  
7 Production Company and also waiver from Meridian  
8 Oil, Incorporated.

9 Q. Have you been contacted by any of the other  
10 operators to whom notice was given and been advised  
11 of any option?

12 A. I have not.

13 Q. So at least to the best of your information  
14 there are no parties that have opposed this thing?

15 A. There have been no parties that have  
16 opposed this.

17 Q. Or at least communicated that fact to you?

18 A. That's correct.

19 MR. CARROLL: Mr. Examiner, that's all the  
20 questions I have of this particular witness, and I  
21 move for admission of Exhibits 1 through 5 which  
22 Mr. Burch was responsible for.

23 MR. STOGNER: Exhibits 1 through 5 will be  
24 admitted into evidence.

25 Mr. Burch, on Exhibit 4, and down at the

1 last part or the bottom portion, because of the  
2 difference between the top and the bottom of the  
3 Delaware you're seeking this application, and I  
4 guess for this particular well you're wanting the  
5 depth bracket allowable to be based on the  
6 lowest-most perforation which is at 6,037 feet; is  
7 that correct?

8 A. I'm going to refer that to our engineering  
9 and geologists if you want to ask them that  
10 question.

11 MR. STOGNER: Okay. And then they'll --

12 MR. CARROLL: I think that's really the  
13 shallower of the two, Mr. Stogner, but I may be  
14 incorrect myself.

15 A. It's an average.

16 MR. CARROLL: That was an average figure when  
17 that was prepared.

18 MR. STOGNER: So ask any questions such as  
19 that, how the allowable is calculated or what the  
20 lowest-most perforation, I need to ask the next  
21 witness?

22 MR. CARROLL: Mr. Collins will be the next  
23 witness, and he is the most familiar with those  
24 calculations.

25 MR. STOGNER: Okay. On Exhibit 1 you came up

1 with a boundary taken in the north half of 9 -- I'm  
2 sorry -- the south half of 9, all of 16 and north  
3 half of 21. How do you come up with that boundary  
4 as being the extent of this pool?

5 A. Well, that's like I say again, that's with  
6 the information we receive from geology and  
7 engineering as far as their calculations, what they  
8 felt they want to do with it.

9 MR. CARROLL: Mr. Stogner, Mr. Brent may, who  
10 is of the -- who will testify as to the geology of  
11 this area will hold that question, so basically it's  
12 just for your information. We don't have any good  
13 information to give an exact boundary other than  
14 that our information reflects it's at least as big  
15 as this, and it may be much bigger and it may need  
16 to be expanded, but we do not have any good geology  
17 beyond the boundaries that we have proposed.

18 MR. STOGNER: All right. If that be the case,  
19 I'll hold my questions until then. I don't have any  
20 other questions of Mr. Burch, and that was Exhibit 1  
21 through 5 that will be included, right?

22 MR. CARROLL: That's correct.

23 MR. STOGNER: Mr. Carroll.

24 MR. CARROLL: We next call Brent May.

25 EXAMINATION

1 BY MR. CARROLL:

2 Q. Would you state your name and occupation,  
3 Mr. May?

4 A. Brent May. I'm a petroleum geologist with  
5 Yates Petroleum in Artesia, New Mexico.

6 Q. Have you previously been qualified as to  
7 your credentials with respect to the field of  
8 petroleum geology and testified before the New  
9 Mexico OCD?

10 A. Yes, I have.

11 MR. CARROLL: Mr. Stogner, we would tender  
12 Mr. May as an expert in the field of petroleum  
13 geology.

14 MR. STOGNER: Mr. May is so qualified.

15 Q. (By Mr. Carroll) Mr. May, you have prepared  
16 some exhibits, and beginning with Exhibit 6, which  
17 is basically a synopsis of the -- or a general  
18 explanation of the geology that Yates has discovered  
19 out in this particular area, could you summarize  
20 briefly the reason why Yates is here and the  
21 geological aspects that this application brings to  
22 light?

23 A. The exhibit just explains the outlines of  
24 the geology and the outlines of the reservoir.  
25 Basically the exhibit just helps explain the other

1 exhibits that I'm about to -- that are about to be  
2 introduced.

3 Q. Could you give us that explanation, though,  
4 of the benefit of it? Basically this is a summary,  
5 and if you can give that to the examiner so he'll  
6 better understand what's going on.

7 MR. STOVALL: Mr. Carroll, are you asking him  
8 to read it?

9 MR. CARROLL: No. I'm not asking him to read  
10 it. I'm asking him to summarize it. The summary is  
11 presented for your benefit, but I'd like for him to  
12 just summarize the geological aspects.

13 A. Basically it explains about a cross section  
14 I have, a north cross section, showing the Delaware  
15 section and the two zones that we are producing from  
16 presently. Also I have a structure map on the Bell  
17 Canyon and a net porosity map through the top zone  
18 which I call the Medona Zone. We also have a  
19 structure map on a shale marker in the Brushy  
20 Canyon, and a net porosity map on the bottom  
21 producing zone, which I call the Basal Brushy Zone.

22 Q. Why don't we go on then into your  
23 Exhibit 7-A, and would you basically tell us what --  
24 Exhibit 7-A and 7-B what are they?

25 A. Exhibit 7-A is a completion report for the

1 Medona "VA" State 1 and it just shows the intervals  
2 of 4218-26 and 4229-37, 7825-28, 7838-44, and  
3 7846-56 of intervals that have been perked and are  
4 open. Exhibit 7-B is another completion report for  
5 the Medona "VA" State number 3, and it shows that  
6 the intervals that are open are 4196-4206, 4210-13,  
7 77911-7826, and 7924-7979.

8 Q. Mr. May, with respect to the area that  
9 Yates Petroleum is requesting that the pool  
10 boundaries be expanded to, Yates does have two  
11 wells; is that correct, within those boundaries?

12 A. That is correct, we have two wells that are  
13 producing.

14 Q. And these are the two wells for which these  
15 completion reports cover?

16 A. That is correct.

17 Q. All right. Why don't you go to Exhibit 8,  
18 and if you'd explain what that is and what the  
19 purposes of this exhibit are, and what conclusions  
20 that you can draw from it?

21 A. This stratigraphic cross section A-A' is  
22 oriented north south and shows two productive zones  
23 in the Delaware which I call the Medano and Basal  
24 Brushy Zones. The formations present on the cross  
25 section are the Castile, Bell Canyon, and Brushy



1 Canyon and Bone Springs. Note that the lower Bell  
2 Canyon, the Cherry Canyon and the Upper Brushy  
3 Canyon are not shown because of the space  
4 limitation.

5           The upper part of the cross section using  
6 the top of the Delaware as a datum, shows the Medano  
7 Zone within the Upper Bell Canyon formation. The  
8 lower part of the cross section using the shale  
9 marker as datum shows the Basal Brushy Zone which is  
10 in lower Brushy Canyon formation and is  
11 approximately 250 feet above the top of the Bone  
12 Springs formation. The prospective reservoirs are  
13 covered in orange, and basically this cross section  
14 was made to show the stratigraphic position of the  
15 producing zones and to emphasize that both the  
16 Medano and Basal Brushy Zones are within the Permian  
17 Delaware group. Also it was produced to show that  
18 these two zones are not stratigraphically equivalent  
19 to the producing zone of the nearest Delaware field  
20 which is the Sand Dunes Cherry Canyon pool which is  
21 producing out of the Cherry Canyon formation.

22       Q. Any other conclusions that may be drawn  
23 from this exhibit, Mr. May?

24       A. No. I think I've stated everything in  
25 here.

1 Q. All right. Why don't we go to your  
2 Exhibit 9.

3 A. This is a structure map of the Bell Canyon  
4 structure map using the top of the Bell Canyon as a  
5 datum. It shows a general eastward dip, a  
6 structural high with closures present in section 16  
7 of 23 south 31 east, and this structural high will  
8 enhance production within the proposed pool  
9 boundaries, and suggests Medano Zone could possibly  
10 be wet to the south outside of the proposed pool  
11 boundaries.

12 Q. All right. Go to your Exhibit 10, and,  
13 Mr. May, I think that a number of these Exhibits, 9,  
14 10, 11, and 12 basically help provide an answer to  
15 Mr. Stogner's earlier question as how did we define  
16 limits, and that's really the purpose behind these  
17 four exhibits; is it not?

18 A. That is correct.

19 Q. Okay. In your discussion if you might  
20 touch on that concern that Mr. Stogner had so that  
21 we can take it in proper perspective in conjunction  
22 with these exhibits?

23 A. Okay. Exhibit 10, this is the Medano Zone  
24 net porosity map and it shows the limits of the  
25 reservoir. This zone is interpreted to be a

1 submarine channel facies trending north south. The  
2 net porosity map represents the thickness of the  
3 reservoir with a porosity of 22 percent or greater.  
4 Cutoff value of 22 percent is used because it  
5 appears to double with productive and nonproductive  
6 reservoirs, and this map delineates the reservoir  
7 for the Medona Zone, and shows that it falls within  
8 the proposed pool boundaries, so I should say that  
9 outside the pool boundaries I don't foresee this  
10 zone occurring except to the south, which I stated  
11 earlier on the structure map, it appears to be wet.

12 Q. You have certain wells; there's two  
13 solid-colored wells marked. What wells are those?

14 A. In section 16 the solid, red-colored well  
15 and -- let's see -- that would be Unit F is the  
16 Medano "VA" State 3 and the solid-colored red dot  
17 and Unit K, I believe, is the Medano State -- Medano  
18 "VA" State No. 1. I have an open red circle in  
19 Unit L which is a proposed location for the Medano  
20 "VA" State No. 4. The gas well symbol in Unit E is  
21 the Medano "VA" State No. 2 which is completed in  
22 the Morrow presently, and I might add that up in  
23 section 9 I have an open circle showing a well, that  
24 is a surface location for deviated hole, and as of  
25 this date that is a tight hole, so I have no

1 information to the north.

2 Q. Who is the operator of that particular  
3 well?

4 A. Santa Fe Energy.

5 Q. Santa Fe. Isn't it also true, Mr. May, that  
6 basically your geologic information then is limited  
7 by just the couple of wells that you have drilled  
8 out there -- or in the wells drilled in section 16?

9 A. That is true. The geologic information is  
10 limited to the Medano "VA" States 1, 2 and 3. There  
11 are no other Delaware wells producing out of these  
12 intervals within the area.

13 Q. All right. If you go to your  
14 Exhibit Number 11.

15 A. This is the Basal Brushy Canyon structure  
16 map with a top of a shale marker used as a datum.  
17 It shows general easterly dip. The map just shows  
18 that the Basal Brushy Zone should be above the  
19 oil/water contact in most of the proposed pool  
20 areas, and I should state we don't know exactly  
21 where the oil/water contact is right now, but both  
22 of the producing wells are above it.

23 Q. All right. We go to your Exhibit Number 12?

24 A. Exhibit 12 is the Basal Brushy Zone net  
25 porosity map. It shows the outline of the reservoir

1 and illustrates the depositional pattern of the  
2 submarine sand system and associated channel  
3 conflicts. Cutoff value of 18 percent is used for  
4 this map. The lower porosities will produce fluids  
5 at greater depths, plus 18 percent was used instead  
6 of the 22 percent utilized for the Medano Zone. The  
7 east channel running through section 16 has been  
8 tested and proven productive, while the west channel  
9 is untested.

10 This map also delineates the limits of the  
11 lower reservoir which is the Basal Brushy Zone, and  
12 shows that the productive eastward channel lies  
13 within the proposed pool boundaries.

14 Q. This is, in fact, then, the lower zone  
15 which Yates would ask, or is asking, the OCD to base  
16 the allowable on?

17 A. That is correct.

18 Q. The depth that this particular zone occurs  
19 in?

20 A. That is correct.

21 Q. And from the basis of these four exhibits,  
22 it does show that, again, the productive area of  
23 both of these two zones is limited to the confines  
24 of the area which you have proposed for the creation  
25 of this special pooling?

1 A. That is correct.

2 Q. All right. Now those are all the exhibits  
3 that you have prepared today; is that correct?

4 A. That is correct.

5 Q. I will move for admission of Exhibits 6  
6 through 12, Mr. Stogner.

7 MR. STOGNER: Exhibits 6 through 12 will be  
8 admitted into evidence at this time.

9 MR. CARROLL: And that's all the questions I  
10 have of this witness at this time.

11 MR. STOGNER: The two solid dots in the middle  
12 of each one of your exhibits, what 9, 10, 11, and  
13 12, or is it 10, 11, and 12, those are the only  
14 Delaware producing wells within that 9 section  
15 interval?

16 A. It is. Yes, that is correct. I believe  
17 the closest other Delaware production is the Sand  
18 Dunes Cherry Canyon pool which I believe is  
19 approximately two to two and a half miles to the  
20 east and it produces out of the Cherry Canyon, not  
21 the Bell Canyon or the Brushy Canyon, which are two  
22 wells we're producing from.

23 MR. STOGNER: Was seismic data used for any of  
24 these interpretations?

25 A. No, there was not. This is strictly

1 subsurface.

2 MR. STOGNER: Okay. On that number 3, when  
3 was that well completed, do you know?

4 A. The number 3? Let's see. We turned in a  
5 completion report dated February 21, 1991.

6 MR. STOGNER: And the number 3 well is the one  
7 in unit letter F; is that correct?

8 A. Yes, that is correct.

9 MR. STOGNER: Is that well producing?

10 A. Yes, it is producing.

11 MR. CARROLL: Unit 7-B deals with that  
12 particular well, Mr. Stogner.

13 MR. STOGNER: 7-B?

14 MR. CARROLL: 7-B.

15 MR. STOGNER: Okay. But the well is presently  
16 producing at this time?

17 A. Yes, it is.

18 MR. STOGNER: I don't think it shows it on  
19 here. Now, your C105 showing that the lower perfs  
20 are the ones in which the number 3 well is producing  
21 from; is that correct?

22 A. There is also, I believe, a sundry added on  
23 to that shows that the upper Medano Zone is also  
24 open in that well. It should be in with  
25 Exhibit 7-B, and it is also showing -- the perfs

1 should be shown on the cross section too.

2 MR. STOGNER: Yes. Have you discussed this  
3 aerial extent with our geologist in the Artesia  
4 District office?

5 A. No, I have not.

6 MR. STOGNER: And you do not know if any other  
7 portion other than the southwest quarter is up for  
8 nomenclature or regular nomenclature expansion at  
9 this point? What I mean by that are normal  
10 nomenclature procedures.

11 A. As far as I know.

12 MR. STOGNER: I have no further questions of  
13 Mr. May at this time. Mr. May, you may be excused.

14 EXAMINATION

15 BY MR. CARROLL:

16 Q. Would you please state your name and  
17 occupation?

18 A. My name is Brian Collins. I'm a petroleum  
19 engineer with Yates Petroleum in Artesia, New  
20 Mexico.

21 Q. You have not testified prior to this date  
22 before the OCD, have you?

23 A. No.

24 Q. Would you then review briefly, first of  
25 all, your educational background relating to the



1 field of petroleum engineering and then also your  
2 work experience?

3 A. Okay. I graduated from New Mexico State  
4 University with a bachelor of science degree in  
5 civil engineering in May of 1980, and I worked  
6 approximately ten years for Exxon Company USA as a  
7 drilling engineer, subsurface engineer, and  
8 reservoir engineer, and I have worked a year for  
9 Yates Petroleum as a petroleum engineer.

10 MR. CARROLL: Mr. Stogner, we would tender  
11 Mr. Collins as an expert in the field of petroleum  
12 engineering.

13 MR. STOGNER: Mr. Collins is so qualified.

14 Q. (By Mr. Carroll) Mr. Collins, you have  
15 prepared -- we're really one of the principal  
16 parties working with respect to this application; is  
17 that correct?

18 A. That's correct.

19 Q. Basically, and you have prepared some  
20 exhibits, if you would, and just to facilitate and  
21 expedite this matter, let you summarize the purpose  
22 of this application and the perceived need, the  
23 reason behind it, and as you go through exhibits,  
24 especially Exhibits 13 and 14, you might explain  
25 what these exhibits or really the purpose of them

1 and what they establish.

2       A.     Okay. Exhibit 13 is just a summary of our  
3 application. Basically we're trying to establish a  
4 pool and then address a lease 1 special pool rule as  
5 concerning the allowable. It will be -- the pool  
6 type is oil. We're asking areawise for section 16,  
7 the south half of section 9, the north half of  
8 section 21 of 23 south 31 east, Eddy County. It's  
9 the Delaware Sand formation.

10           The spacing, we're asking for 40-acre  
11 standard proration units per rule 104 for gas/oil  
12 ratio. We're asking for two thousand to one per  
13 rule 506A, and on the depth bracket allowable, we're  
14 asking that it be based on the lowest perforation in  
15 the well instead of the normal, shallowest  
16 perforation, primarily because of the large vertical  
17 separation between zones.

18           The next Exhibit, Exhibit 14, is  
19 considerations for the OCD in granting this  
20 application, reasons we feel like it should be  
21 granted, in that over six months of production to  
22 date, we've seen no evidence of mechanical problems  
23 or scale problems, or any other type of precipitated  
24 problems by having the two zones produced in the  
25 wellbore.

1           We've seen no -- and I'll show some  
2 additional exhibits to illustrate this -- we've seen  
3 no evidence of water coning in our production  
4 behavior to date. We haven't seen a, you know, a  
5 sudden increase in water production followed by a  
6 sudden decrease in oil production. It might be  
7 indicative of a coning problem. We have no evidence  
8 that there's a gas cap present in either zone. The  
9 original GLR is approximately 500-1 which is  
10 relatively lower than what you'd expect for a gas  
11 cap, and utilizing standings correlations, the  
12 estimate bubble point pressure is approximately 1250  
13 psi.

14           Our original reservoir pressure in each  
15 zone is greater than this 1250 psi, so therefore, we  
16 don't believe there is a gas cap present based on  
17 that. Neither productive interval dominates the  
18 production.

19           In one week average test -- on the first  
20 week average test on these wells on the number 1  
21 Well, the Bell Canyon contributed approximately 55  
22 percent of the total production, and on the Number 2  
23 well, the Bell Canyon contributed 33 percent, so  
24 there's not an overwhelming contribution by either  
25 zone on these wells.

1           We believe that, you know, we will be  
2 preventing economic waste by setting an allowable  
3 base on the deepest perforation, and in so doing,  
4 we'll have more incentive to drill wells, and the  
5 end result being that we'll maximize revenue to the  
6 State of New Mexico since this is predominantly a  
7 State lease in this pool.

8           We believe we'll protect correlative rights  
9 by developing both zones simultaneously and by  
10 producing the allowable base on the deeper  
11 perforation, and we believe we'll prevent mineral  
12 waste by fully developing both zones, and in  
13 addition, we'll be meeting the spirit of the OCD  
14 request to find ways to maximize oil production. We  
15 feel like this is another way to do that.

16         Q.    With respect to the physical problems  
17 encountered in producing two zones that are  
18 separated by the amount of distance that we find  
19 these two zones, your Exhibit 15 does deal with that  
20 particular issue, does it not?

21         A.    That's correct.

22         Q.    Would you then describe that exhibit to the  
23 examiner?

24         A.    Okay. I apologize that this is a fairly  
25 busy exhibit, but the easiest way to look is find

1 the packer at the Bone Spring and ignore everything  
2 else below that for what I'm explaining.

3           This particular well has 9 and 5/8-inch  
4 production casing, and is a dual water disposal well  
5 -- producing well, and it produces from the Bell  
6 Canyon Zone at approximately 4200 feet, and the  
7 Brushy Canyon at approximately 7800 feet. The  
8 vertical separation between the zones is 3638 feet  
9 which is a substantial difference or distance. In  
10 our six months of production experience to date  
11 we've had no production problems of any sort either  
12 mechanical or precipitate wise by having this  
13 wellbore configuration.

14       Q.    All right. Now your Exhibit 16, would you  
15 explain that exhibit and its relationship to the  
16 case?

17       A.    Okay. Exhibit 16 shows the Medano "VA"  
18 State No. 3, and it basically shows a more  
19 conventional wellbore, one that was drilled  
20 specifically to produce a Delaware sand. It  
21 utilizes five-and-a-half-inch casing. Basically we  
22 have the Bell Canyon completed at approximately 4200  
23 feet and the Brushy Canyon at approximately 78 to  
24 7900 feet. The vertical separation between zones is  
25 3773 feet on this particular well.

1 Q. On the basis of your statements and the  
2 items depicted in these last exhibits, in your  
3 professional opinion is there any physical or  
4 mechanical problem with respect to this request that  
5 Yates is making of the commission?

6 A. No.

7 Q. Now, Mr. Collins, you have previously in  
8 developing the sum total of considerations which  
9 covered not only the mechanical but also some of the  
10 legal considerations that the OCD is faced with, you  
11 dealt with the issue of waste and you feel that -- I  
12 believe, it is your opinion then that the granting  
13 of this application which calls for, in particular,  
14 this one basic change in the field -- normal field  
15 rules, basing the allowable on the deepest depth,  
16 you do feel that that will prevent economic waste  
17 also besides, and it is tied in with actual physical  
18 waste; is that correct?

19 A. That's correct.

20 Q. And Exhibit 17 is an illustration of what  
21 you're talking about; is that correct?

22 A. That's correct.

23 Q. Why don't you explain just what you're  
24 trying -- the point you're trying to make with  
25 respect to Exhibit 17?

1       A.     Basically, Exhibit 17 is an illustration of  
2 what I've called economic waste by not having a  
3 higher allowable. What I've done is prepared four  
4 cases or four scenarios. The first scenario is a  
5 case where there's one wellbore, both zones are open  
6 in the wellbore, and we have 187 barrel a day  
7 allowable. Case number two assumes a single  
8 wellbore with both zones open with an 80-barrel a  
9 day allowable, which is per the current statewide  
10 guide lines, and case number three is a scenario in  
11 which one well bore is drilled, but the zones are  
12 produced one at a time, basically the economic limit  
13 before coming up to the upper zone.

14             And case number four is a case where  
15 there's two wells drilled. One well is drilled  
16 specifically to the upper part of the Delaware, and  
17 the second well is drilled to the lower part of the  
18 Brushy Canyon.

19             What I've done is run some economics and  
20 come up with some discounted net present values and  
21 I don't want to dwell on these numbers per se, but  
22 in the last column I've got an incremental  
23 discounted net present value relative to case  
24 two -- case two being the base case of what the  
25 State rules allow at this point, an 80-barrel-a-day

1 allowable, and essentially what that says is that if  
2 we're constrained to an 80-barrel-a-day allowable  
3 versus 187-barrel-of-oil-a-day allowable, we will  
4 see approximately \$81,000 in economic waste to us,  
5 and then in the case three where you complete one  
6 zone at a time, relative to the base case, there's a  
7 waste of approximately \$146,000, and then the last  
8 case where two separate wells are drilled to  
9 effectively produce all the zones in this pool,  
10 we're looking at approximately \$278,000 of economic  
11 loss.

12 Q. Mr. Collins, is there any benefit of the  
13 adoption of this particular -- these special rules  
14 -- with respect to the problem of physical waste?  
15 Are you enhancing production of these two reservoirs  
16 by the adoption of these particular rules?

17 A. In my opinion we are, particularly compared  
18 with some of the other cases, the case three and  
19 four, for example. You can argue in those cases  
20 that due to producing one zone per well or one zone  
21 at a time, that you will actually lose oil reserves  
22 due to your economic limit.

23 Q. Being reached earlier?

24 A. Right. The assumption being economic limit  
25 is virtually the same, but if you've got two zones



1 open, you get that economic limit out of two zones  
2 as opposed to one zone.

3 Q. And isn't it also true that at least  
4 experience teaches one that the longer you have the  
5 well open, the more problems if the changing when  
6 you produce one zone you have to close that off,  
7 produce another zone. Murphy's Law does come into  
8 effect, does it not, in at least presenting more  
9 opportunities for problems to occur?

10 A. That's correct.

11 Q. And I think it is your testimony, though,  
12 that you don't feel that producing both zones at the  
13 same time is going to present any physical problems,  
14 mechanical, for Yates. It's a feasible plan and it  
15 has been working for some six months?

16 A. That's correct.

17 Q. And are there any other problems that have  
18 come to your attention based on that prior history  
19 with respect to mechanical issues that you can  
20 report to the commission?

21 A. No, no problems.

22 Q. Also the other consideration that the  
23 commission must deal with is the issue of  
24 correlative rights. Do you feel that by allowing  
25 Yates to -- granting this application, that such a

1 granting would in any way prejudice the rights of  
2 any other parties in this particular area of their  
3 correlative rights or their rights to produce oil  
4 and gas?

5 A. No.

6 MR. CARROLL: Mr. Examiner, I would move for  
7 admission of our Exhibits, I believe, 13 through  
8 17.

9 MR. STOGNER: Exhibits 13 through 17 will be  
10 admitted into evidence at this time.

11 MR. CARROLL: And I have no further questions  
12 of this witness at this time.

13 MR. STOGNER: Mr. Collins, does the schematic  
14 which you show as Exhibit 15, is that the present  
15 completion of the No. 1 well?

16 A. That's correct.

17 MR. STOGNER: Is that presently injecting into  
18 the Bone Spring?

19 A. Right.

20 MR. STOGNER: Do you have the order number  
21 that authorizes that?

22 A. I don't believe I do, not with me. No, I  
23 don't.

24 MR. STOGNER: Was that given administrative  
25 authorization?

1 A. That's correct.

2 MR. STOGNER: The producing interval or size  
3 of this completion, the two and 7/8 inch tubing?

4 A. Right.

5 MR. STOGNER: For the Delaware, where is that  
6 that set?

7 A. It sets at approximately 7800 feet.

8 MR. STOGNER: Do you know what the pressure or  
9 initial pressures are in each of the zones of the  
10 Delaware and the Brushy Canyon?

11 A. Based on the DST results from the Medano  
12 "VA" State No. 2 which is the Morrow gas well, that  
13 we dst'd the Bell Canyon and Brushy going down on  
14 that one. The Bell Canyon pressure was  
15 approximately 1800 psi, and the Brushy Canyon  
16 pressure was approximately 3560 psi.

17 MR. STOGNER: It's always been. I want to  
18 call it policy or procedure to look at the Delaware  
19 formation as one distinct pool, but this is an  
20 example where clearly there's two separate producing  
21 intervals, would you say?

22 A. Yes. There are two intervals.

23 MR. STOGNER: What is -- on the number 1 well,  
24 what's the present production rate?

25 A. Right now it's approximately 50 barrels of

1 oil per day and about a 190 barrels of water.

2 MR. STOGNER: How about for the number three?

3 A. It's approximately 70 barrels a day of oil  
4 and 80 to 85 barrels a day of water.

5 MR. STOGNER: Now that that also has  
6 perforations in both intervals, the upper and lower,  
7 does it not?

8 A. That's correct.

9 MR. STOGNER: What's the presentable  
10 allowable, depth bracket allowable for this pool?

11 A. As far as I know we have the, you know, the  
12 discovery allowable for the number 1 well which is  
13 approximately 120 barrels of oil a day, and the  
14 allowable for the other well, I would assume, would  
15 be the 80 barrels a day due to the shallowest  
16 perforation.

17 MR. STOGNER: But neither one of them are  
18 making its allowable?

19 A. Not at this time. The wells come on at a  
20 much higher oil rate than that. There's always the  
21 possibility we may drill other wells that will have  
22 a higher individual oil rate than these wells have.

23 MR. STOGNER: What was the initial production  
24 rate on the number 1?

25 A. The number 1 initially completed into the

1 Bell Canyon, and then later added the Brushy Canyon,  
2 so the number I'm going to give you is a, I think,  
3 an accurate but somewhat synthetic IP assuming that  
4 you completed both zones simultaneously.

5           On the number 1 well, if the extrapolated  
6 IP of both zones had been completed simultaneously,  
7 is approximately 160 barrels of oil per day.

8           MR. STOGNER: And how long did it take for the  
9 production to drop down to below 80 barrels a day?

10          A. I don't have all the production data in  
11 front of me, but I believe it was in there  
12 approximately five months.

13           MR. STOGNER: And in that particular case it  
14 was probably a little bit less time for it to meet  
15 its allowable since it has a higher depth bracket  
16 allowable -- I'm sorry -- a higher discovery  
17 allowable?

18          A. Yeah, right.

19           MR. STOGNER: How about the No. 3 well? Do  
20 you have the initial production on it, or was it  
21 extrapolated in the same manner or --

22          A. Yes, the same manner except we completed  
23 the Brushy Canyon first and came and got the Bell  
24 Canyon at a later date. The extrapolated rate on it  
25 would be approximately 210 barrels of oil per day.

1 MR. STOGNER: How long did it take before it  
2 dropped down to this present 70 barrels of oil per  
3 day?

4 A. I should say that's a pinpoint production  
5 figure from last week. There's times it's over 80  
6 barrels a day, so I'd say, what, February, so it's  
7 three to four months we're down close to 80 barrels  
8 a day.

9 MR. STOGNER: And you are now asking for  
10 the -- a depth bracket allowable between 7 and 8000  
11 feet; is that correct?

12 A. Well, we're asking for an -- right, that's  
13 correct.

14 MR. STOGNER: And that would be -- what do you  
15 come up with?

16 A. 187 barrels of oil per day.

17 MR. STOGNER: If this 187 barrels of oil per  
18 day debt bracket allowable would have been  
19 instituted from day one of the No. 1 completion, do  
20 you see that would have had any adverse effect on  
21 its present production rate, or production rate, or  
22 reservoir energy -- any harm to it?

23 A. I have no reason to believe there would be  
24 any harm.

25 MR. STOGNER: And you show this to be somewhat

1 localized. What is the -- again, what is the main  
2 reservoir energy, or what type of reservoir is it?

3 A. I believe it's a solution gas drive  
4 reservoir, volumetric depletion reservoir.

5 MR. STOGNER: In both intervals?

6 A. That's correct.

7 MR. STOGNER: Are these wells making any  
8 casing head gas at this time?

9 A. Yes, they are.

10 MR. STOGNER: Do you know what the GUR is on  
11 those wells?

12 A. The current GUR?

13 MR. STOGNER: Yeah.

14 A. It's in the range of 600 to 800. It varies  
15 from day to day. 700 might be a good average.

16 MR. STOGNER: Are there any other questions of  
17 this witness?

18 MR. STOVALL: Yeah. I've just got a couple.  
19 I'm looking at Exhibit 17. Why would cases three or  
20 four ever happen from an operational standpoint?  
21 Why would you do it that way?

22 A. From an operational standpoint, especially  
23 case four, I wouldn't do that way. These are  
24 basically used as illustrations. I'm just trying to  
25 illustrate a number of possible options, but they're

1 not necessarily options that would be done. I think  
2 case one and case two are the most realistic options  
3 here.

4 MR. STOVALL: Now, I mean, if this pool is  
5 established, and if your special rule is not  
6 granted, your special allowable is not granted, are  
7 you now still in the situation -- I mean, it doesn't  
8 make any difference now whether you completed both  
9 zones or the lower zone only, does it, because  
10 you've now got the depth bracket set for the pool;  
11 is that correct? Follow what I'm saying?

12 A. You're talking about the 80 barrel a day or  
13 the 187 a day?

14 MR. STOVALL: I'm assuming -- yeah. I'm  
15 talking about the 80, I'm sorry. If we don't grant  
16 what you ask for in terms of special allowable, the  
17 lowest perforation as opposed to the highest, under  
18 the rule, the statewide rule, it's the discovery  
19 well, the top perforation unit of the discovery well  
20 that sets the allowable for the pool; correct?

21 A. I wasn't sure if there was a discovery  
22 well, but the top perforation of the well, yeah.

23 MR. STOVALL: Okay. And it doesn't vary from  
24 well either. It essentially in the one well, so any  
25 additional wells that would be drilled in this pool,



1 it would still be worth your while to perforate both  
2 zones, would it not?

3 A. Yes, it would.

4 MR. STOVALL: Okay.

5 A. If I can add, I guess what, you know, part  
6 of my argument here is as an operator we want to  
7 maximize any profits we make on a drilling venture,  
8 and if we can do that, you know, there's a much  
9 greater chance that we'll continue to develop and  
10 continue to drill, and then there is some  
11 possibility that, you know, additional reserves may  
12 be developed that might not have been developed  
13 otherwise if we're constrained to a lower  
14 allowable.

15 MR. STOVALL: Okay. I don't have any further  
16 questions.

17 MR. STOGNER: You may be excused.  
18 Mr. Carroll, do you have anything else further?

19 MR. CARROLL: I do not, Mr. Examiner.

20 MR. STOGNER: Does anybody else have anything  
21 further in case number 10327? If not, this case  
22 will be taken under advisement -- excuse me, not to  
23 take it under advisement. It needs to be continued  
24 for two weeks to allow time to lapse on the notice,  
25 so this case will be continued to June 27th. At

1 that time it will be called for any additional  
2 testimony or anything else on the record. At that  
3 time it will be taken under advisement. I retract  
4 my earlier statement.

5 (The foregoing case was concluded at the  
6 approximate hour of 2:10 p.m.)

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*I Michael E. Stosman, do hereby  
certify that the foregoing is a  
correct record of the proceedings  
in the Examiner hearing of  
Case No. 10327, heard by  
me on 13 June 1991.*

1 STATE OF NEW MEXICO       )  
                                  ) ss.  
2 COUNTY OF BERNALILLO     )

3 REPORTER'S CERTIFICATE

4 BE IT KNOWN that the foregoing transcript of  
5 the proceedings were taken by me, that I was then  
6 and there a Certified Shorthand Reporter and Notary  
7 Public in and for the County of Bernalillo, State  
8 of New Mexico, and by virtue thereof, authorized to  
9 administer an oath; that the witness before  
10 testifying was duly sworn to testify to the  
11 whole truth and nothing but the truth; that the  
12 questions propounded by counsel and the answers of  
13 the witness thereto were taken down by me, and that  
14 the foregoing pages of typewritten matter contain a  
15 true and accurate transcript as requested by counsel  
16 of the proceedings and testimony had and adduced  
17 upon the taking of said deposition, all to the best  
18 of my skill and ability.

19 I FURTHER CERTIFY that I am not related to  
20 nor employed by any of the parties hereto, and have  
21 no interest in the outcome hereof.

22 DATED at Bernalillo, New Mexico, this day  
23 July 29, 1991.

24 My commission expires  
25 April 24, 1994

LINDA BUMKENS  
CCR No. 3008  
Notary Public