

## 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. 10659

APPLICATION OF MERIDIAN OIL INC.  
 -----

REPORTER'S TRANSCRIPT OF PROCEEDINGSEXAMINER HEARING

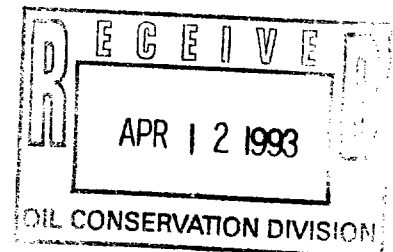
BEFORE: Michael E. Stogner, Hearing Examiner

March 18, 1993

Santa Fe, New Mexico

This matter came on for hearing before the  
 Oil Conservation Division on March 18, 1993, at the  
 Oil Conservation Division Conference Room, State Land  
 Office Building, 310 Old Santa Fe Trail, Santa Fe, New  
 Mexico, before Deborah O'Bine, RPR, Certified Court  
 Reporter No. 63, for the State of New Mexico.

**ORIGINAL**



CUMBRE COURT REPORTING  
 P.O. BOX 9262  
 SANTA FE, NEW MEXICO 87504-9262  
 (505) 984-2244

## I N D E X

March 18, 1993  
 Examiner Hearing  
 CASE NO. 10659

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TOM O'DONNELL

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

FOR THE DIVISION: ROBERT G. STOVALL, ESQ.  
General Counsel  
Oil Conservation Commission  
State Land Office Building  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

FOR THE APPLICANT: KELLAHIN AND KELLAHIN  
117 N. Guadalupe  
Santa Fe, New Mexico  
BY: W. THOMAS KELLAHIN, ESQ.

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P.O. BOX 9262

SANTA FE, NEW MEXICO 87504-9262

(505) 984-2244

1 EXAMINER STOGNER: The hearing will come to  
2 order. Call next case, No. 10659.

3 MR. STOVALL: Application of Meridian Oil  
4 Inc. for a nonstandard gas proration unit, Lea County,  
5 New Mexico.

6 EXAMINER STOGNER: Call for appearances.

7 MR. KELLAHIN: Mr. Examiner, I'm Tom  
8 Kellahin of the Santa Fe law firm of Kellahin and  
9 Kellahin appearing on behalf of Meridian Oil Inc.

10 EXAMINER STOGNER: Any other appearances?

11 Do you have a witness in this case, Mr.  
12 Kellahin?

13 MR. KELLAHIN: Yes, sir, Mr. Examiner. I'd  
14 like the record to reflect that Mr. Tom O'Donnell  
15 continues under oath. He is the expert witness in  
16 this case as well. We would like to have him continue  
17 to be recognized and qualified as an expert in this  
18 case.

19 EXAMINER STOGNER: Let the record show that  
20 Mr. O'Donnell is still qualified and under oath from  
21 the previous case.

22 TOM O'DONNELL,  
23 the witness herein, after having been previously sworn  
24 upon his oath, was examined and testified as follows:

25 EXAMINATION

1 BY MR. KELLAHIN:

2 Q. Mr. O'Donnell, would you refer to what is  
3 marked as Exhibit No. 1 and identify that display for  
4 us?

5 A. Exhibit No. 1 outlines the Rhodes Gas Pool,  
6 which is the Yates-Seven Rivers Pool and the  
7 Scarborough Pool, which is the Yates-Seven Rivers  
8 Pool. It also identifies the proposed 160-acre  
9 nonstandard proration unit which is labeled the  
10 proposed extension of Rhodes Gas Pool.

11 And also marked on there, we have  
12 identified the cross-section going from the  
13 Scarborough Pool starting with M going to M', it  
14 starts at the Scarborough Pool, goes into the Rhodes  
15 Pool, and that is actually our Exhibit 2.

16 Q. What's identified by the orange dots?

17 A. The orange dots are all Rhodes gas wells,  
18 and I might just add that the boundaries of each pool  
19 are based on the Byrum's October 1992 edition.

20 Q. The orange dots indicate wells that at one  
21 time, either currently now or in the past, were  
22 producing from the pool?

23 A. Correct.

24 Q. Describe for us what the problem is.

25 A. We have proposed the Farnsworth "B" Federal

1 #1 in the northeast of the northeast of Section 7.  
2 Our geologic study shows that that well should be part  
3 of and is a logical extension of the Rhodes Field.  
4 And to form a standard 160-acre proration unit in the  
5 shape of a square, we would actually be going into the  
6 Scarborough Pool.

7 Q. What is your proposed solution?

8 A. Our proposed solution is to approve or  
9 create a nonstandard 160-acre tract that is  
10 essentially vertical that borders between the  
11 Scarborough and the Rhodes Pool, and we feel it is a  
12 logical extension of the Rhodes Pool.

13 Q. Your proposed nonstandard spacing unit is  
14 that area shaded in the pink?

15 A. That's correct.

16 Q. What is the status of the acreage committed  
17 to the Scarborough Pool insofar as it's potentially  
18 affected or excluded from your spacing unit?

19 A. I'm sorry, I don't quite get your question.

20 Q. In Section 7?

21 A. Correct.

22 Q. The pool boundary for the Scarborough Pool?

23 A. Correct.

24 Q. Is all of the west half of the section plus  
25 the west half of the east half?

1 A. Correct.

2 Q. When you look at the Scarborough Pool  
3 production?

4 A. Correct.

5 Q. Is the northwest quarter committed to wells  
6 in that pool?

7 A. Yes.

8 Q. What kind of wells are producing in the  
9 northwest quarter?

10 A. Basically, oil wells.

11 Q. How many oil wells are committed to the  
12 Scarborough Pool in the northwest quarter of the  
13 section?

14 A. It appears there are four of them there.  
15 And the Scarborough Pool, the oil is developed on  
16 40's.

17 Q. What is the spacing for the gas wells in  
18 the Scarborough?

19 A. 640 acres.

20 Q. You mean 160 -- 640 in the Scarborough?

21 A. In the Scarborough is 640, I believe.

22 Q. When you make that transition into the  
23 Rhodes Pool, what is the spacing for your wells in  
24 that pool?

25 A. In the Rhodes Pool is 160 acres for a gas

1 well.

2 Q. Have you been in contact with the owner of  
3 the west half of the northeast quarter of 7, which  
4 would be the 80-acre tract that you would include in a  
5 standard spacing unit for your well?

6 A. Yes, we have.

7 Q. And who is that operator?

8 A. It is operated by Bruce Wilbanks.

9 Q. What has been the result of conversations  
10 with Bruce Wilbanks about how to develop and commit  
11 the east half of this section into production?

12 A. He is willing to develop it by himself. We  
13 had talked about several -- we had discussed an  
14 agreement where he would develop his acreage, we would  
15 develop our acreage, if it turned out that we actually  
16 are an extension and approved as an extension of the  
17 Rhodes Field.

18 Q. Summarize for us your technical reasons for  
19 the opinion that the east half of the east half of 7  
20 is a logical extension of the western boundary of the  
21 Rhodes Gas Pool.

22 A. Okay. I can show that on my Exhibit No. 2.

23 Q. Let's do that. Let's go to the display on  
24 the hearing room wall that's Exhibit No. 2. Before  
25 you talk about it, tell us where it is. Where's your



1 line of cross-section?

2 A. Okay. The cross-section crosses from  
3 Section 12 into Section 7, and 10 is in Section 8. It  
4 is labeled M-M'. It starts in the Scarborough Pool  
5 and ends in the Rhodes Gas Pool.

6 Q. Take us from west to east starting on the  
7 left margin of the cross-section, and show us what it  
8 indicates to you.

9 A. Okay. Here you're coming from the Delaware  
10 Basin up on a structural high in the Scarborough Pool.

11 Q. Through the first well and then to the  
12 second well?

13 A. Correct.

14 Q. By the time you get to the third well in  
15 the cross-section, what happens?

16 A. You are coming downdip. The second well is  
17 highest on structure on the cross-section.

18 Q. You have a point identified on the  
19 cross-section between the third and the fourth well,  
20 it says "Proposed Location"?

21 A. Correct.

22 Q. Describe for us what's happening in this  
23 formation as we move from the third to the fourth  
24 well.

25 A. As the formation continues from the third

1 to our proposed fourth well, you have a low axis,  
2 which we use or we believe is the dividing line  
3 between the Scarborough and the Rhodes Pool. We have  
4 that point identified on the structure map here.

5 Q. Where is "here"?

6 A. This is on the cross-section.

7 Q. It is the northwest corner of the structure  
8 map within this section?

9 A. Correct.

10 Q. Tell us what then happens.

11 A. This structure map demonstrates how the  
12 Scarborough Pool is basically an anticline. As you  
13 come off the Scarborough Pool, you are down into  
14 essentially a valley that separates the Scarborough  
15 and the Rhodes Pools, and we have that listed as the  
16 low axis. And that low axis you can see on the  
17 cross-section is the dividing line between the third  
18 well and our proposed location.

19 Q. What does this information tell you with  
20 regards to the logical boundary between the east side  
21 of Scarborough and the west boundary of Rhodes?

22 A. This tells me that the east half of the  
23 east half, which is our proposed nonstandard 160-acre  
24 proration unit, that it is a logical extension of the  
25 Rhodes Pool, and it is basically where they have

1 previously picked the boundaries of the Scarborough  
2 Pool confirms the prior pick of the Scarborough Pool.

3 Q. As a reservoir engineer, have you studied  
4 the production information, done the necessary  
5 engineering calculations to determine whether or not  
6 there is going to be any impact on correlative rights  
7 --

8 A. Yes.

9 Q. -- of the offsetting interest owners by  
10 putting this well as proposed?

11 A. Yes, we have.

12 Q. And what is end result of that calculation  
13 and those studies?

14 A. Okay. My Exhibit No. 3, this is on the  
15 cross-section on the wall, this is actually the second  
16 from the right. It is the Rhodes Gas Storage Unit No.  
17 26. It is -- and on the base map here, as you can  
18 see, we have the cross-section outlined. It is just  
19 the eastern offset to the Farnsworth "B" Federal #1.

20 The Rhodes Gas Storage Unit #26 was drilled  
21 in 1991. I have a volumetric calculation and a  
22 decline curve. On the decline curve in the upper  
23 right-hand corner, you can see the EOR is projected to  
24 be about 655 million cubic feet.

25 On the volumetrics, I'm assuming an 80-acre

1 drainage. All the data here was either taken off of  
2 logs or measured or calculated the Z factor. And the  
3 gas in place for an 80-acre drainage area is  
4 approximately 704 million cubic feet. Assuming an 80  
5 percent recovery factor gives you essentially 600  
6 million cubic feet, which is in the ballpark for our  
7 decline curve.

8 Q. The end result of that calculation  
9 demonstrates what to you, Mr. O'Donnell, about the  
10 appropriate amount of acreage being drained or  
11 affected by a well?

12 A. It shows me, since we are looking at  
13 forming a vertical 160-acre proration unit, that we  
14 won't have a correlative rights problem in the fact  
15 that Bruce Wilbanks is the offset to the west, and,  
16 therefore, he could develop his own acreage.

17 Q. Would it be necessary to have more than one  
18 well in the northeast quarter of Section 7 in order to  
19 fully develop the hydrocarbons that are recoverable in  
20 each of the pools?

21 A. In the northeast quarter of Section 7?

22 Q. Yes, sir.

23 A. There possibly could be the need for one  
24 other well.

25 Q. Let's turn now to Exhibit No. 4. Identify

1 and describe that.

2 A. Exhibit No. 4 is just another example of  
3 the limited drainage of some of these wells. We don't  
4 have a whole lot of examples like this because we just  
5 haven't had too many infills. Most of the wellbores  
6 out here have been producing for a number of years.

7 This one here, the Shepherd "B" #3, which  
8 is located in 26 South, Range 37 East, Section 5-A, it  
9 produced 1.3 Bcf and currently is P & A'd.

10 The Shepherd Federal #7, which is located  
11 in the same 160-acre quarter section, was recompleted  
12 in unit letter B in 1991. It is producing 130 Mcf a  
13 day. Cumulative production to date is 91 million  
14 cubic feet, and its predicted EOR is 500 million cubic  
15 feet.

16 I also have provided an actual production  
17 and a decline curve, which is a separate page and  
18 still Exhibit No. 4.

19 Q. Okay.

20 A. This essentially demonstrates that the 3  
21 "B" did not fully drain the 160-acre quarter section,  
22 and a second well was needed.

23 Q. As part of your studies of the Rhodes Gas  
24 Pool, do you have any preliminary conclusions as a  
25 reservoir engineer concerning the issue of infill

1 drilling the 160 acre spacing units?

2 A. My concerns are that it will take two wells  
3 per 160 acres to efficiently drain the pool. Right  
4 now, presently, how the rules stand, we will not be  
5 able to put that second well in unless it has been  
6 grandfathered in already.

7 Q. Will the granting of this application  
8 afford you a wellbore and therefore additional  
9 reservoir data that can support the filing of an  
10 application for an infill procedure for production  
11 from this pool?

12 A. Yes. If this well comes in as expected, we  
13 could further look at this pool and possibly request  
14 another well be drilled in the southeast of the  
15 southeast of Section 7. And at that time it probably  
16 will require an amendment to the pool.

17 Q. So the answer to the question is that this  
18 is a viable candidate for continuing study of infill  
19 drilling for additional recovery?

20 A. Correct.

21 Q. Have you received multiple waivers from  
22 Bruce Wilbanks concerning this topic?

23 A. Yes. Exhibit No. 5 is an Agreement and a  
24 Waiver between Meridian Oil and Bruce Wilbanks.  
25 Richard Reeve is the owner with Bruce Wilbanks as the

1 operator.

2 Q. And that's Exhibit No. 5?

3 A. Exhibit No. 5.

4 Q. And Exhibit No. 6 is notification of the  
5 nonstandard proration unit?

6 A. Yes. Exhibit No. 6 is his waiver that we  
7 had sent into the state.

8 Q. And Exhibit 7 is a further notification to  
9 Mr. Willbanks of the subject of this hearing?

10 A. Correct.

11 Q. Which was originally scheduled back on  
12 January 21, I believe?

13 A. Correct. This notification to Bruce  
14 Wilbanks and Richard Reeve that this issue could not  
15 be handled administratively, and that it will be going  
16 to hearing. And it was originally set up at January  
17 21.

18 Q. When you look at your Exhibit No. 1, did  
19 Meridian Oil Inc. control all the other adjoining  
20 spacing units or the operation of those tracts that  
21 surround this request?

22 A. Yes, we do.

23 MR. KELLAHIN: That concludes my  
24 examination of Mr. O'Donnell. We'll move of the  
25 introduction at this time of his Exhibits 1 through 7.

1 EXAMINER STOGNER: Exhibits 1 through 7  
2 will be admitted into evidence at this time.

3 Mr. Stovall, do you have any questions?

4 EXAMINATION

5 BY MR. STOVALL:

6 Q. Looking at your cross-section and structure  
7 map, do you think that low axis -- it appears to me  
8 that it runs about on the boundary line of your  
9 proration unit and of the Scarborough Pool; is that  
10 correct?

11 A. Correct.

12 Q. Pretty close do it? Does it actually form  
13 any sort of barrier which would impede drainage of the  
14 west half of that quarter section?

15 A. No, it's not a barrier. It is just a low  
16 separating the two structures. Some of the production  
17 from the Scarborough field is oil, and it produces  
18 quite a bit of water.

19 We see that there is a water drive coming  
20 from the Delaware Basin side. It appears to come up  
21 on the high of the Scarborough Field. By the time you  
22 get down to the low and you get back to the Rhodes  
23 Field, the water just hasn't moved through. So you  
24 see a little difference in production. It is not a  
25 perm barrier. It is not a fault or anything like



1 that. It is strictly a low that appears to divide the  
2 field structurally.

3 Q. What about in, I guess that's Section 8.  
4 I'm seeing you've got another 160 acres there. Funny,  
5 it's an L-shaped unit. Is that an undeveloped and  
6 currently not in the Rhodes Pool?

7 A. That is not in the Rhodes Pool correct.  
8 That completion there, which is the Moberly, I  
9 believe, "A" 1, operated by Armstrong, that is an oil  
10 well, and therefore the gas pool could not -- had to  
11 basically go around that oil well. That is completed  
12 down in the Seven Rivers where we are developing the  
13 Yates, and therefore that's why it was shaped the way  
14 it is.

15 Q. So your proration unit, you didn't  
16 anticipate that your proration unit should be or that  
17 the Rhodes should be expanded to include your  
18 proration unit?

19 A. Correct.

20 Q. But then it would leave that, I guess the  
21 other 120 acres excluding that -- is that 160 or 120,  
22 that Armstrong well -- or 40?

23 A. They're developed on 40's, I believe, but  
24 this is not -- all that is is a boundary. I guess  
25 you're looking at the remaining acreage in the Section

1 8?

2 Q. Correct.

3 A. Outside? That's not dedicated necessarily  
4 to anything.

5 Q. Oh, I understand that.

6 A. Right. That is just left out of the gas  
7 pool in that section. The one thing that formation of  
8 this 160 won't do is box that in. My understanding is  
9 that you cannot essentially have an island for an oil  
10 pool in the middle of this gas pool. It still will be  
11 on the outside, outer boundaries of the gas pool, and  
12 will not be boxed in by the formation or the extension  
13 of the Rhodes Pool.

14 Q. That would assume -- do I take that as a  
15 recommendation then that if the extension is done to  
16 the Rhodes Pool, that it not include either the 120 or  
17 the 160 in Section 8?

18 A. Correct.

19 MR. STOVALL: I think that's all I have.

20 EXAMINATION

21 BY EXAMINER STOGNER:

22 Q. You mentioned or you give testimony today  
23 about the 80-acre drainage and such and that this well  
24 would help build a future case to establish infill.  
25 Are you talking about infill for this particular

1 proration unit or perhaps infill for the whole pool?

2 A. We're looking at infill for the whole  
3 pool. I've identified several locations where I feel  
4 that we need another well. In my discussions with Mr.  
5 Kellahin, it seems that we'll probably have to amend,  
6 request an amendment to the field rules, to the pool  
7 rules, to be able to put that second well on a  
8 proration unit.

9 The unfortunate part is due to that rule,  
10 we haven't had many infill wells for the last 10 or 20  
11 years. So I don't have any recent information except  
12 for that Shepherd #7, which I have an exhibit on.

13 Q. Are you aware of any other oil wells in  
14 that Rhodes area in the Seven Rivers or Yates  
15 formation, for that matter?

16 A. There was one in Section No. 5, as you can  
17 see, the Rhodes Pool essentially comes back and then  
18 out again, Section No. 5 on the northern edge of the  
19 pool? There was a Seven Rivers well up there. I  
20 believe -- in fact, I think it was the 7 that was  
21 recompleted to the Rhodes Pool, and as of right now,  
22 this doesn't show an update to the Rhodes Pool, but  
23 that was one.

24 There are Rhodes oil wells down further  
25 south where Texaco has waterflood and Meridian has a

1 small Moberly waterflood, where you essentially get  
2 downstructure in the Yates, it becomes oil productive  
3 to the south.

4 Q. Would it be prudent perhaps to form an  
5 associated pool to address those issues and address  
6 those concerns and form an oil proration then unit  
7 amongst a gas proration unit, like include that in the  
8 Division's Order R-5353 series of pools?

9 A. I'm not familiar with that one.

10 Q. Are you familiar with the associated pools?

11 A. Associated oil and gas pools such as the  
12 Jalmat?

13 Q. Yes.

14 A. I'm familiar, yes, with those.

15 Q. Well, that isn't associated, but that's  
16 under the gas proration rules of 8170. You're not  
17 familiar with the associated pools under Order R-5353?

18 A. No, I'm not. I don't know the specifics of  
19 it.

20 MR. KELLAHIN: I am, Mr. Examiner. We're  
21 moving in that direction, trying to figure out how to  
22 establish rules for both the gas and the oil in the  
23 Rhodes, and it's one of the issues that we have to  
24 address.

25 EXAMINER STOGNER: Okay.

1           THE WITNESS: Yeah, we are addressing that,  
2 and I can't really speak on the specifics of it. Tom,  
3 Mr. Kellahin, and myself are trying to work out a  
4 solution.

5           Q.     (BY EXAMINER STOGNER) Perhaps that is one  
6 solution, to put it in the associated pool rules under  
7 Order R-5353 amended, I think, through K or L at this  
8 point. So there are quite a few out in New Mexico,  
9 associated rules. You mentioned you had looked at  
10 Byrum's. I suggest you might look at the associated  
11 pool rules and Byrum's and perhaps add that to your  
12 knowledge of this area?

13          A.     Okay.

14           EXAMINER STOGNER: I don't have any other  
15 questions, Mr. O'Donnell

16                   FURTHER EXAMINATION

17 BY MR. STOVALL:

18          Q.     I do have one, just one. In the Rhodes  
19 Pool, are there a fair amount of oil wells in that  
20 pool?

21          A.     As I mentioned, down further towards the  
22 south, there are none. Inside the boundaries of the  
23 gas pool, you cannot drill an oil well the way the  
24 rules stand.

25           As you can see, towards the southern end of

1 the Rhodes, it's outside the Rhodes Gas Pool but to  
2 the southern end of it on the outskirts of it, yes,  
3 there are quite a few oil wells. Texaco has expanded  
4 their waterflood down there. Meridian has a small  
5 waterflood. So, yes, there are to the south.

6 There have been some oil wells inside this  
7 pool, as you can see, inside the gas pool. I think  
8 the majority of those are Langlie-Mattix wells, if I'm  
9 correct.

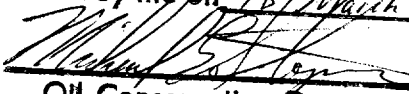
10 EXAMINER STOGNER: Any other questions of  
11 Mr. O'Donnell?

12 MR. KELLAHIN: No, sir.

13 EXAMINER STOGNER: He may be excused.  
14 Anything further in Case 10659?

15 MR. KELLAHIN: No, sir.

16 EXAMINER STOGNER: Okay. It will be taken  
17 under advisement.

18  
19 I do hereby certify that the foregoing is  
20 a complete record of the proceedings in  
21 the Examiner hearing of Case No. 10659,  
22 heard by me on 18 March 1993.  
23 , Examiner  
24 Oil Conservation Division  
25

1 CERTIFICATE OF REPORTER  
2

3 STATE OF NEW MEXICO )

4 ) ss.

5 COUNTY OF SANTA FE )

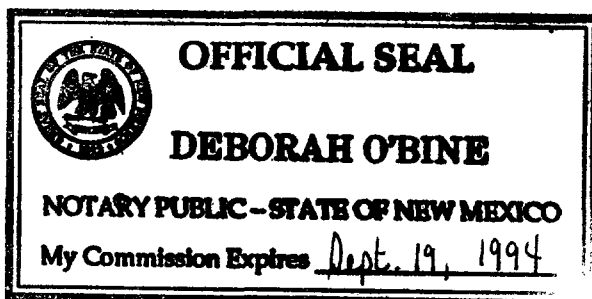
6 I, Deborah O'Bine, Certified Shorthand  
7 Reporter and Notary Public, HEREBY CERTIFY that I  
8 caused my notes to be transcribed under my personal  
9 supervision, and that the foregoing transcript is a  
10 true and accurate record of the proceedings of said  
11 hearing.

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

16 WITNESS MY HAND AND SEAL, March 30, 1993.

17 *Deborah O'Bine*  
18

19 DEBORAH O'BINE  
20 CCR No. 63



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