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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
CASE 10,787

EXAMINER HEARING

IN THE MATTER OF:

Application of Merrion Oil and Gas Company for an  
unorthodox oil well location, McKinley County, New  
Mexico

**ORIGINAL**

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO  
August 12, 1993

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A P P E A R A N C E S

FOR THE DIVISION:

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State Land Office Building  
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FOR THE APPLICANT:

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By: TOMMY ROBERTS  
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Farmington, New Mexico 87401

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E X H I B I T S

APPLICANT'S EXHIBITS:

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\* \* \*

1           WHEREUPON, the following proceedings were had  
2 at 9:15 a.m.:

3  
4           EXAMINER CATANACH: At this time we'll call  
5 Case 10,787.

6           MR. STOVALL: Application of Merrion Oil and  
7 Gas Company for an unorthodox oil well location,  
8 McKinley County, New Mexico.

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

11           MR. ROBERTS: Mr. Examiner, my name is Tommy  
12 Roberts. I'm with the Tansey law firm in Farmington,  
13 New Mexico.

14           I'm appearing on behalf of the Applicant, and  
15 the witness has previously been sworn.

16           EXAMINER CATANACH: Okay.

17                   STEVEN S. DUNN,  
18 the witness herein, after having been first duly sworn  
19 upon his oath, was examined and testified as follows:

20                   DIRECT EXAMINATION

21 BY MR. ROBERTS:

22           Q.    Would you state your name and your place of  
23 residence for the record?

24           A.    Steve Dunn, Farmington, New Mexico.

25           Q.    And what is your occupation?

1 A. Petroleum engineer.

2 Q. And by whom are you employed?

3 A. Merrion Oil and Gas Corporation.

4 Q. And for how long?

5 A. Seventeen years.

6 Q. And would you briefly describe your job  
7 responsibilities?

8 A. I'm basically responsible for production,  
9 reservoir drilling engineering and ongoing operations  
10 with respect to our producing properties.

11 Q. Are you familiar with the Application in this  
12 case?

13 A. Yes, I am.

14 Q. Have you previously testified before the Oil  
15 Conservation Division or Commission?

16 A. Yes, I have.

17 Q. And in what capacity?

18 A. As a petroleum engineer.

19 MR. ROBERTS: Mr. Examiner, I would ask that  
20 you recognize Mr. Dunn's qualifications as an expert in  
21 the field of petroleum engineering.

22 EXAMINER CATANACH: Mr. Dunn is so qualified.

23 MR. ROBERTS: Thank you.

24 Q. (By Mr. Roberts) Would you briefly describe  
25 the Application in this case?

1           A.    Merrion Oil and Gas is seeking an order  
2 approving an unorthodox oil well location for its High  
3 Hopes Number 1 well to be drilled 1220 feet from the  
4 north line and 1300 feet from the east line in Section  
5 28, Township 20 North, Range 5 West, McKinley County,  
6 New Mexico.

7           Q.    What's the basis for this request?

8           A.    We're seeking this unorthodox location on the  
9 basis of geology.

10          Q.    Refer to your Exhibit Number 1 and identify  
11 it and explain its relevance to the Application.

12          A.    Exhibit Number 1 is a well and structure plat  
13 across the Ojo Encino field. It specifically covers a  
14 portion of Township 20 North, Range 5 West, Sections  
15 21, 22, 27 and 28.

16                On the exhibit is a structure contour map on  
17 the top of the Entrada formation.

18                Also shown are the wells in the Ojo Encino  
19 field as well as nearby.

20                Also shown is the 40-acre proration unit that  
21 would be assigned to the High Hopes Number 1 well. The  
22 orthodox location window is shown thereon, and the spot  
23 for the High Hopes Number 1 location is also indicated  
24 on this exhibit.

25                I've also shown the oil-productive area that

1 we have defined on the basis of subsurface geology and  
2 three-dimensional seismic.

3 And the purpose of this exhibit is to show  
4 the Hearing Examiner the best structural position for  
5 our well to give us the best chance of encountering  
6 commercial hydrocarbons.

7 We drilled two wells previously, the Federal  
8 28-1, which is located in the northwest of the  
9 northeast quarter of 28, and the Oak Spring Number 1 in  
10 the northeast of the southeast quarter of 28. Both of  
11 those wells were deemed noncommercial, dry holes, have  
12 been plugged.

13 So we're taking our final shot at this thing,  
14 and we want to be as high structurally as we can.

15 And we have accounted for the natural  
16 tendency of the wellbore to drift, based upon our  
17 previous experience in the area, to the south and the  
18 west.

19 And that is the purpose of the exhibit.

20 Q. The proposed location for the High Hopes  
21 Number 1 well appears not to be within the actual  
22 boundaries of the Ojo Encino oil pool.

23 Why are you seeking a nonstandard location  
24 unit with respect to this well? Aside from the  
25 geology. It's not within the pool boundaries. Is it

1 within a mile of those --

2 A. It is within a mile of the Ojo Encino pool.

3 Q. What do the pool rules provide with respect  
4 to standard locations?

5 A. Statewide spacing, which requires a setback  
6 of 330 feet from the exterior boundaries of the  
7 proration unit.

8 Q. In your opinion, how do the available  
9 standard locations in this area compare geologically  
10 with the proposed nonstandard location?

11 A. If Merrion were required to drill at a  
12 standard location, we would not drill the well.

13 Q. Now, refer to what you have marked as Exhibit  
14 Number 2, and identify that exhibit.

15 A. Exhibit Number 2 is a lease ownership plat  
16 that has the same basic layout as Exhibit Number 1.  
17 The same four sections are depicted, mainly Sections  
18 21, 22, 27 and 28 of Township 20 North, Range 5 West.

19 And the map has been cleaned up somewhat from  
20 the previous map to show only the lease ownership in  
21 the vicinity of our High Hopes well, no longer show the  
22 well boundary, but you can compare it to Exhibit 1.

23 I did include the 40-acre proration unit in  
24 the orthodox window, which is in the northeast of the  
25 northeast of Section 28, and I also show the High Hopes

1 Number 1 proposed location.

2 The purpose of this exhibit is to apprise the  
3 Examiner with the ownership in the vicinity of the  
4 proposed High Hopes well and to show that we are moving  
5 away from offsetting leases and toward the interior of  
6 Merrion's lease -- Merrion owns 100 percent of Section  
7 28 -- and that correlative rights will thus be  
8 protected.

9 Q. In your opinion, would the drilling and  
10 production of the High Hopes Number 1 well at the  
11 proposed unorthodox location have any adverse effect or  
12 impact on offsetting lessees or leases?

13 A. It would not.

14 Q. I don't know that I asked you this, but could  
15 you briefly -- If I didn't ask it, and if you haven't  
16 already testified, could you briefly explain the nature  
17 of the operation on the High Hopes Number 1 well?

18 A. Are you asking me how we would drill the  
19 well?

20 Q. Right.

21 A. It will be drilled as a vertical test, and  
22 basically it's standard drilling for the area.

23 We'll be drilling a -- setting a 9 5/8  
24 surface casing at maybe 240 to 300 feet and drilling an  
25 8 3/4 hole, setting 7-inch casing, if we're successful.

1           We generally -- If we encounter hydrocarbons  
2 as we expect to here, we would probably drill stem test  
3 it, not so much to test for the hydrocarbons but to  
4 help us understand reservoir pressure.

5           The Entrada is kind of tricky with tilting  
6 oil/water contact, and we use that information to help  
7 us understand the reservoir better.

8           Q.    Now turn to what you've marked as Exhibit  
9 Number 3 and identify that exhibit.

10          A.    Exhibit Number 3 is a copy of the  
11 notification letter that was mailed to the two offset  
12 lease holders, namely Yates Petroleum Corporation in  
13 Artesia and Ms. Ruth Zager in Merion Station,  
14 Pennsylvania, and represents the notice that we have  
15 provided them of this hearing.

16          Q.    Have you had any response to this  
17 notification?

18          A.    I have not.

19          Q.    Do you have evidence that the notification  
20 was delivered to the addressees?

21          A.    On the back of that exhibit are the certified  
22 return receipts.

23          Q.    In your opinion, have the notice requirements  
24 relative to this Application and hearing been  
25 satisfied?

1 A. Yes, they have.

2 Q. Mr. Dunn, in your opinion will the granting  
3 of this Application be in the best interests of  
4 conservation, result in the prevention of waste and the  
5 protection of correlative rights?

6 A. Yes, it will.

7 Q. And were Exhibit Numbers 1 through 3 prepared  
8 by you or at your direction and under your supervision?

9 A. Yes, they were.

10 MR. ROBERTS: Move the admission of Exhibit  
11 Numbers 1 through 3 on behalf of the Applicant.

12 EXAMINER CATANACH: Exhibits 1 through 3 will  
13 be admitted as evidence.

14 MR. ROBERTS: I have no other questions for  
15 this witness on direct.

16 EXAMINATION

17 BY EXAMINER CATANACH:

18 Q. Mr. Dunn, the Federal 28 Number 1 and the Oak  
19 Spring Number 1, those were dry holes?

20 A. That's correct. The Federal 28-1 actually  
21 encountered about a 12-foot oil column, but in the  
22 Entrada that's not enough to make a commercial well.

23 Q. And the Oak Spring did not encounter  
24 anything?

25 A. Did not encounter anything. We had projected

1 it to come in high. It actually came in low. We had a  
2 kind of a bust on the seismic.

3 Of course, in defense to the geophysicist,  
4 this was down toward the southern edge of our seismic  
5 control.

6 Q. So what you're trying to do is, you're trying  
7 to drill the High Hopes high on the structure, as high  
8 as you can?

9 A. As high as we can, and we hope we hit the  
10 top.

11 MR. STOVALL: You don't have an isopach of it  
12 to -- Are you looking strictly for structure, or are  
13 you looking for thickness as well?

14 THE WITNESS: Well, we're looking for both.  
15 The structure -- The higher on the structure you get,  
16 if you're within the oil column, the better off you  
17 are, because the thicker the oil column will be.

18 On Exhibit Number 1, the peach-colored  
19 outlined area, which I've labeled as the oil productive  
20 area, is basically an isopach. What that shows is the  
21 oil column that we believe exceeds 10 feet in  
22 thickness.

23 Q. (By Examiner Catanach) Drilling at the  
24 proposed location instead of a standard location, do  
25 you think you're gaining about 50, 60 feet of

1 structure? Is that a good estimate there?

2 A. Yeah, approximately 50 feet.

3 Q. Mr. Dunn, did you testify that the wells in  
4 this area tend to deviate -- south and west, did you  
5 say?

6 A. That's correct.

7 We've drilled three wells in this field  
8 during my tenure, and all three of them were fairly  
9 consistent. They would -- By the time you top the  
10 Entrada, would deviate almost due west -- it's about  
11 ten degrees south of due west -- approximately 130 to  
12 170 feet, in that range, which is considered straight-  
13 hole drilling, but they will drift a little.

14 Q. If the well is productive, you really won't  
15 be -- your bottomhole location will not be on that  
16 proration unit?

17 A. That's correct.

18 Q. Now, that -- All of Section 28 is a common  
19 federal lease?

20 A. That is correct.

21 Q. Owned by Merrion?

22 A. Correct.

23 Q. So it's not a problem to rededicate a  
24 different 40 acres than what you have planned at this  
25 point?

1           A.     That would be no problem. We routinely run  
2 directional surveys while drilling to give us both  
3 angle and azimuth, so we'll know where the bottomhole  
4 location will be and, if required, we can dedicate a  
5 different 40-acre proration unit.

6           MR. STOVALL: Is the reason you haven't  
7 dedicated the northwest or the northeast because of the  
8 28-1? Was that what that proration unit was?

9           THE WITNESS: That is correct. The Federal  
10 28-1 was in the northwest of the northeast, and it was  
11 actually drilled at an unorthodox location.

12           And I basically chose the northeast of the  
13 northeast because of where we had located the surface,  
14 the stake for the well.

15           And I think it's probably the most  
16 conservative approach, because had we located the well  
17 in one of the other 40-acre -- say in the southwest of  
18 the northeast, we would not have been required to give  
19 notice to Ms. Zager.

20           Q.     (By Examiner Catanach) Mr. Dunn, there's  
21 only three wells producing from the pool at this point?

22           A.     There's only one well producing at this  
23 point. In Section 21 the two -- Well, the discovery  
24 well was the Federal 21-1. It has been plugged. The  
25 Federal 21-2 was the second producing well. It has

1 also been plugged.

2 Both of those wells were operated by Texaco.  
3 We purchased the field from Texaco, plugged the wells.  
4 And we drilled the Federal 21-4 in the south half of  
5 21, and that well is producing.

6 Q. Just to go over it one more time, can you  
7 explain to me why structure is so important in these  
8 wells?

9 A. Well, these -- the Entrada reservoir is  
10 basically a sand dune, and it's a water-drive  
11 reservoir.

12 So you've got water moving through it, and it  
13 tends to pump the oil into the top of the structure but  
14 off to one side. And so that's why the coloring, the  
15 oil-productive area doesn't necessarily coincide  
16 exactly with the structure. But it's fairly close.

17 So the higher you can get in the structure of  
18 that particular reservoir, the better chance you have  
19 of encountering a commercial accumulation of oil.

20 We thought we were doing that when we drilled  
21 the Oak Spring, and obviously we didn't succeed.

22 EXAMINER CATANACH: Okay, I have nothing  
23 further.

24 The witness may be excused.

25 MR. ROBERTS: I have no other matters to be

1 dealt with in this case.

2 EXAMINER CATANACH: Okay, there being nothing  
3 further in this case, Case 10,787 will be taken under  
4 advisement.

5 (Thereupon, these proceedings were concluded  
6 at 9:31 a.m.)

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 10787,  
heard by me on August 12 1993.  
David R. Catanach Examiner  
Oil Conservation Division

1 CERTIFICATE OF REPORTER

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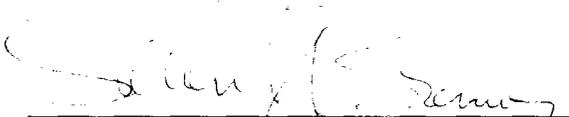
3 STATE OF NEW MEXICO )  
 4 COUNTY OF SANTA FE ) ss.

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 September 2, 1993.

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

20 My commission expires: October 14, 1994

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