

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. 11,912

APPLICATION OF MARALO, INC., FOR )  
AN UNORTHODOX OIL WELL LOCATION, )  
EDDY COUNTY, NEW MEXICO )

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

January 22nd, 1998

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, January 22nd, 1998, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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

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## FOR TEXACO EXPLORATION AND PRODUCTION, INC.:

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By: WILLIAM F. CARR

\* \* \*

1 WHEREUPON, the following proceedings were had at  
2 9:57 a.m.:

3 EXAMINER STOGNER: At this time we will call Case  
4 Number 11,912.

5 MR. CARROLL: Application of Maralo, Inc., for an  
6 unorthodox oil well location, Eddy County, New Mexico.

7 EXAMINER STOGNER: Call for appearances.

8 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,  
9 representing the Applicant, and I have two witnesses.

10 EXAMINER STOGNER: Other appearances?

11 MR. CARR: May it please the Examiner, my name is  
12 William F. Carr with the Santa Fe law firm Campbell, Carr,  
13 Berge and Sheridan. We represent Texaco Exploration and  
14 Production, Inc., and I have two witnesses.

15 EXAMINER STOGNER: Any other appearances?

16 Okay, I believe we have four witnesses. Will all  
17 four witnesses please stand to be sworn at this time?

18 (Thereupon, the witnesses were sworn.)

19 SHANE LOUGH,  
20 the witness herein, after having been first duly sworn upon  
21 his oath, was examined and testified as follows:

22 DIRECT EXAMINATION

23 BY MR. BRUCE:

24 Q. Would you please state your name for the record?

25 A. Shane Lough.

1 Q. Who do you work for and in what capacity?

2 A. I work for Maralo, Incorporated, in Midland,  
3 Texas. I'm a senior exploration geologist.

4 Q. Have you previously testified before the  
5 Division?

6 A. I have.

7 Q. And were your credentials as an expert petroleum  
8 geologist accepted as a matter of record?

9 A. Yes.

10 Q. And are you familiar with geological matters  
11 pertaining to this Application?

12 A. Yes.

13 MR. BRUCE: Mr. Examiner, I would tender Mr.  
14 Lough as an expert petroleum geologist.

15 MR. CARR: No objection.

16 EXAMINER STOGNER: Mr. Lough is so qualified.

17 Q. (By Mr. Bruce) Mr. Lough, could you identify  
18 Exhibit 1 for the Examiner and just briefly set forth the  
19 location that Maralo is seeking for this well?

20 A. Yes, this is just a regional locator map, showing  
21 that the well in question is located approximately 10 miles  
22 due east of Loving, New Mexico.

23 The black arrow toward the east part of the map  
24 delineates the subject well.

25 Q. What is the footage location on the well?

1           A.    The footage that we're here to seek approval for  
2    is 2310 feet from the south line and 2600 feet from the  
3    east line of Section 30.

4           Q.    Before we move on to any other exhibits, Mr.  
5    Lough, that's a pretty darn unorthodox location, isn't it?

6           A.    It is.

7           Q.    Why is Maralo seeking this location?

8           A.    Well, we attempted to drill a standard location.  
9    However, the BLM would not allow us to drill our preferred  
10   location. They're forcing us to drill at the location  
11   we're seeking approval for today.

12          Q.    So if Maralo had its druthers, it would rather be  
13   at an orthodox location?

14          A.    We would.

15          Q.    Let's move on to Exhibit 2. Would you identify  
16   that and discuss why the well has been moved?

17          A.    This is a top map of the area with the proration,  
18   the 40-acre proration unit outlined in the dashed line.  
19   The arrow, again, is pointing to the proposed location.

20                There are two small X's within the 40-acre  
21   outline. Those are two locations that Maralo had staked  
22   earlier and were denied by the BLM.

23                The topo map also delineates the Remuda Basin,  
24   which is a topographic feature that is basically causing  
25   our problems in attempting to get a standard location

1 drilled. The BLM does not want us drilling in the lower  
2 portion of the Remuda Basin, and therefore they have pushed  
3 us both to the north and to the west.

4 Q. What is Exhibit 3?

5 A. This is a letter from the BLM stating the reasons  
6 for our -- denial of the location we prefer to drill.

7 Q. And does the letter state that this is, in fact,  
8 the only location the BLM will approve?

9 A. It does.

10 Q. Let's move on from the topographic to the  
11 geologic. Would you identify your Exhibit 4 and discuss  
12 the main zone of interest in this area, please?

13 A. Yes, this is a structure map on the top of the  
14 Loving sand, which I'll identify -- We have another  
15 exhibit, cross-section, that will show this.

16 The Loving sand is the primary producing  
17 reservoir in the field that we are within, and that is the  
18 Nash Draw-Brushy Canyon field.

19 This exhibit shows that the nature of the sand  
20 and the nature of the trap is stratigraphic, that structure  
21 doesn't appear to play an overly important role in the  
22 trapping mechanism within this sand.

23 The exhibit also shows the proposed location at  
24 the red dot, and our cross-section that we will present  
25 later, A-A', the line of section is set out in red.



1 Q. Now, this Loving sand, let's clear up a couple of  
2 things. This is a lower Brushy Canyon sand?

3 A. That's correct.

4 Q. And the term "Loving", is that internal or is  
5 that a fairly generally used term out in this area?

6 A. It's a term that is generally accepted by  
7 industry.

8 Q. Before we move off this map, the Maralo acreage  
9 in the east half has been pretty well developed, it  
10 appears. Have you had problems with the BLM with respect  
11 to drilling other wells on Maralo's acreage?

12 A. Other -- We have had to move other locations, but  
13 we've been able to stay within standard locations on  
14 earlier wells that we drilled, and we did -- that we had to  
15 visit with the BLM on.

16 Q. But this isn't the first problem you've had?

17 A. This is not the first problem, no.

18 Q. Let's move on to your Exhibit 5 and discuss the  
19 geology of the main pay zone in a little more detail, Mr.  
20 Lough.

21 A. Exhibit 5 is an isopach map of the Loving sand,  
22 which is the primary pay in this field. Again, it's a  
23 lower Brushy Canyon sand. We believe it's a north-south  
24 channel deposit.

25 The sand illustrates net sand porosity within the

1 sand channel equal to 14 percent or greater. We feel like  
2 that's a reasonable, mappable, commercial cutoff for  
3 mapping this sand.

4 Again, it shows the proposed location, the  
5 proration unit and the line of section, all highlighted in  
6 red.

7 Q. Okay. Now, a couple of things on this map. From  
8 this map, Maralo would much rather be at an orthodox  
9 location, would it not?

10 A. We would. We feel like in an orthodox location  
11 or more of a standard location there would be less risk to  
12 drilling this well. We would likely encounter better --  
13 more commercial reservoir, and we could avoid the problems  
14 that we're faced with today.

15 Q. And the second thing is, the southwest quarter of  
16 Section 30, that's Texaco acreage, right?

17 A. That's correct.

18 Q. Now, there's a well -- I don't see the number on  
19 it, but it says "Lower Bell Canyon"?

20 A. That is correct, yes. That's Texaco's Remuda  
21 Basin Number 3 well.

22 Q. Now, that well was -- did that well -- Was that  
23 well drilled deep enough to test the Loving sand?

24 A. Yes, it penetrated the Loving sand, and I will  
25 show that on our cross-section exhibit. It penetrated the

1 Loving sand. There wasn't commercial reservoir present,  
2 and Texaco elected not to test the sand, but they elected  
3 to plug back to a lower Bell Canyon zone.

4 Q. So based on your map, at this point the  
5 offsetting 40-acre proration unit is probably not  
6 productive in the Loving sand?

7 A. The -- That's our interpretation, that the west  
8 offsetting proration unit to our proposed location is not  
9 productive in the lower -- in the Loving sand. And  
10 therefore, we feel like our well will not impact Texaco's  
11 acreage substantially in that sand.

12 Q. Okay. Now, let's look to the north northwest of  
13 your proposed well. There's a well, the Number -- It has  
14 the number "6" by it. What well is that?

15 A. That "6" is the net feet of Loving sand that we  
16 calculated in that. That's the Maralo GR State 30 Number  
17 2.

18 Q. And that was drilled by Maralo?

19 A. That's correct.

20 Q. Now, that offsetting unit -- Was that well  
21 commercial in the Loving sand?

22 A. No, that well drilled through the Loving sand  
23 into the top of the Bone Spring, as most of these do. We  
24 evaluated the Loving sand when we drilled it, and our  
25 interpretation is that it has six net feet of porosity

1 greater than or equal to 14 percent, and that that number  
2 of -- or that amount of porosity is not a commercial  
3 reservoir.

4 We elected to not complete the well in the Loving  
5 sand because of the thin nature of the reservoir, and we  
6 plugged that well back to a middle Brushy Canyon sand and  
7 completed it from that zone.

8 Q. So from a geologic standpoint, the primary  
9 effect, if any, of the unorthodox location for your  
10 proposed well is to the east and to the north; is that  
11 correct?

12 A. Yes, to the -- I would say to the east, the north  
13 and also to the south.

14 Q. Okay.

15 A. That's correct.

16 Q. So there's very little, if any, effect to the  
17 west, or northwest?

18 A. That's correct.

19 Q. One final thing off this map. Although it's not  
20 delineated, is it correct, Mr. Lough, that the southeast  
21 quarter, all of the southeast quarter of Section 30, and  
22 the south half of the northeast quarter, that is one  
23 federal lease; is that correct?

24 A. That's correct.

25 Q. Okay. Owned and operated by Maralo?

1           A.    That's correct.

2           Q.    Let's move on to your cross-section, your Exhibit  
3   6, and discuss those wells in a little more detail.

4           A.    Exhibit 6 is a cross-section east-west across the  
5   field. It delineates -- or it illustrates the depositional  
6   nature of the Loving sandstone.

7                   Going from east to west, we -- the well furthest  
8   east, electric log calculation has 30 feet of sand, Loving  
9   sand, with porosity greater than or equal to 14 percent.  
10   The well next to it, going one location to the west, has 22  
11   feet. Both of these wells we deem commercial. We've  
12   perforated and completed both wells in the Loving sand.

13                   The cross-section then moves to the north, to the  
14   proposed location, with the -- At the top of the cross-  
15   section, just below the heading for the proposed location,  
16   we've delineated the Texaco-Maralo lease line, illustrating  
17   that we are very close to that lease line at the proposed  
18   location.

19                   And the last log on the cross-section, on the  
20   left side, which is the westernmost log on the cross-  
21   section, is Texaco's well, illustrating that they did  
22   penetrate the Loving sand. With a 14-percent cutoff, this  
23   cross-section illustrates that that well has zero feet of  
24   potentially commercial Loving sand present.

25                   This cross-section serves to illustrate that

1 somewhere between our producing well illustrated on the --  
2 It's on the cross-section, which is the Gold Rush 30,  
3 Federal Number 2, and somewhere between that well and  
4 Texaco's well the Loving sand reservoir pinches out.

5 This cross-section also serves to illustrate that  
6 the further east our proposed location is moved -- I'm  
7 sorry, the further west our proposed location is moved, the  
8 riskier we feel like that -- the riskier situation we're in  
9 for drilling the well.

10 We can't --

11 EXAMINER STOGNER: Say that again? I'm sorry.

12 THE WITNESS: Okay. We feel like by virtue of  
13 the BLM forcing us to drill in a further west location than  
14 we would prefer to drill, that we are incurring  
15 significantly more risk that the sand will thin and be  
16 noncommercial.

17 Q. (By Mr. Bruce) Along that line, what thickness  
18 are you hoping you'll get at your proposed location?

19 A. At the proposed location that we're being forced  
20 to place the well at, we feel like we'll get somewhere  
21 between 10 feet and 15 feet of commercial sand.

22 Q. It could be less than that?

23 A. It could be less than that, yes.

24 Q. And you've already stated that up to the  
25 northwest, a well that had six feet was noncommercial in

1 this zone?

2 A. That's correct.

3 Q. Now, besides the Loving zone, is there secondary  
4 potential in this?

5 A. There is secondary potential. Texaco's well that  
6 is located on the cross-section was plugged back to the  
7 lower Bell Canyon and was completed in an interval from  
8 4068 feet to 4090 feet, and we recognize that as a  
9 potential secondary pay in this well.

10 Q. Mr. Lough, in your opinion is the granting of  
11 Maralo's Application in the interests of conservation and  
12 the prevention of waste?

13 A. It is.

14 Q. And were Exhibits 1 through 6 prepared by you or  
15 under your direction or compiled from company business  
16 records?

17 A. They were.

18 MR. BRUCE: Mr. Examiner, I'd tender the  
19 admission of Maralo Exhibits 1 through 6.

20 EXAMINER STOGNER: Exhibits 1 through 6 will be  
21 admitted into evidence. Thank you, Mr. Bruce.

22 Mr. Carr, your witness.

23 CROSS-EXAMINATION

24 BY MR. CARR:

25 Q. Mr. Lough, from your testimony I understand you

1 were involved in the negotiations with Bureau of Land  
2 Management to select the location for this proposed well;  
3 is that right?

4 A. That's correct.

5 Q. How many times did you -- or attempts were made  
6 by Maralo to stake a well on this tract? The two that are  
7 shown on your exhibit?

8 A. Yes, sir.

9 Q. Is that all of it?

10 A. That was the only two official locations that  
11 were staked by Maralo.

12 Q. Did you go out with the BLM and they conduct a  
13 visual survey at this location?

14 A. The BLM did conduct a -- I did not go out, but  
15 they did conduct a visual survey.

16 Q. And the locations you proposed were denied for  
17 archeological reasons or cave karst; is that right?

18 A. That's correct.

19 Q. In drilling other wells in this area, have you  
20 before encountered a problem with cave karst?

21 A. Yes, we have.

22 Q. Is that common throughout this area?

23 A. Locally in this area, it is common.

24 Q. Isn't it predominantly to the west of where this  
25 location is actually located?



1           A.    That's my understanding, yes, sir.

2           Q.    Now, you've stated that the BLM told you that  
3 this is the only location that was available; is that your  
4 testimony?

5           A.    Yes, sir.

6           Q.    If I read your letter, which is marked Exhibit  
7 Number 3, it says that "...this is the only location that  
8 we could come up with to accommodate Maralo..." If you  
9 look at the second sentence, it says, "As you are aware,  
10 the only location that we could come up with to accommodate  
11 Maralo is an unorthodox one."

12          A.    That's correct.

13          Q.    Okay?

14                It also says, "...the only alternative would be  
15 an unorthodox location thus requiring a hearing before the  
16 NMOCD."

17                Is the location you are proposing the only  
18 unorthodox location they would approve, or did they just  
19 say they couldn't find a standard location?

20          A.    From verbal communications with them, it's my  
21 understanding that this is the only location that the BLM  
22 would approve for Maralo.

23          Q.    Have you worked -- or discussed with the BLM  
24 whether or not there is any potential for mitigating any  
25 archeological site on the tract?

1           A.    That did come up, and I'm not -- I don't recall  
2    what those conversations were.  That issue did come up.

3           Q.    Have you ever attempted to work with them in  
4    terms of mitigating an archeological site?

5           A.    Personally, no.

6           Q.    Does Maralo, to your knowledge, have any  
7    experience with that?

8           A.    I believe Maralo does, yes.

9           Q.    You have worked in the past with archeological  
10   consultants to try and accommodate the BLM in obtaining  
11   approval to drill?

12          A.    That's correct.

13          Q.    And do you if any of that was discussed within --

14          A.    Any of those kind of --

15          Q.    Yes.

16          A.    -- conversations where -- Not by me personally.  
17   I think there may be other parties at Maralo that actually  
18   did talk to the BLM.

19          Q.    About mitigation?

20          A.    Yes.

21          Q.    Do you know that?

22          A.    I'm not absolutely sure.

23          Q.    Was attempt made in this area to form a working  
24   interest unit to enable you therefore to -- by vehicle of a  
25   working interest, avoid the problems that you have with a

1 well only 40 feet from your spacing unit boundary?

2 A. Well, I think -- It's my understanding that there  
3 were communications between Maralo and Texaco to that  
4 respect.

5 Q. Do you know what came of those? Obviously  
6 nothing, right?

7 A. That's right, correct.

8 Q. You are aware that we're also, in this area, in  
9 close proximity to the potash area --

10 A. Yes.

11 Q. -- isn't that right?

12 A. Yes.

13 Q. And you're aware that there are circumstances  
14 where you may have a federal lease, or a lease, and not be  
15 permitted to actually develop that because of other  
16 conditions, in that case, potash?

17 A. Yes.

18 Q. And that what we're looking at here is a  
19 situation when you say you have to be 40 feet off the lease  
20 line or, in fact, you can't develop your acreage?

21 A. Yes, sir. That's correct.

22 Q. You presented a structure map. Did I understand  
23 your testimony correctly that structure really isn't very  
24 important for picking a well site in this area?

25 A. At this location, structure doesn't appear to be

1 an overriding concern.

2 Q. If we look at the isopach map of the Loving sand,  
3 your Exhibit 5 -- Do you have that in front of you?

4 A. Yes, I do.

5 Q. If I look at this, what you've mapped is the  
6 lower Brushy Canyon sand. That's the primary objective in  
7 this well; isn't that right?

8 A. That's correct.

9 Q. And there are secondary objectives in the well,  
10 are there not?

11 A. Yes, sir, there are.

12 Q. Would the Bell Canyon C7 sand that's producing in  
13 the offsetting Texaco well be one of those secondary  
14 objectives?

15 A. We feel like it is likely to be a secondary  
16 objective in this well, yes, sir.

17 Q. And the well that Texaco is -- in which they are  
18 producing that sand is the dot in the southwest quarter of  
19 Section 30; is that right?

20 A. That is correct.

21 Q. Have you attempted to map that particular Bell  
22 Canyon interval to determine whether or not you are, in  
23 fact, gaining in terms of reservoir thickness in the Bell  
24 Canyon at this location?

25 A. At this point, we don't have maps that -- other

1     than in-house maps, on that sand.

2                 We've reviewed the sand in the surrounding  
3     wellbores, and we do believe that this -- it's highly  
4     likely this wellbore will encounter that sand, but --

5                 Q.   And you understand that that is a commercial sand  
6     in the Bell Canyon, do you not?

7                 A.   Yes.

8                 Q.   You're going to actually know what you encounter  
9     in that area, though, until you drill the well. Is that  
10    what you say?

11                A.   That's correct.

12                Q.   A well 40 feet off the lease line in that Bell  
13    Canyon interval, by moving to that unorthodox location you  
14    would be impacting the Bell Canyon production in the area,  
15    would you not?

16                A.   We do recognize that, yes.

17                Q.   If we look at -- if I look at this map -- Well,  
18    first of all, you indicated by moving to the west you were  
19    increasing your risk --

20                A.   That's correct.

21                Q.   -- is that correct?

22                A.   Yes --

23                Q.   That comment --

24                A.   -- for the Loving --

25                Q.   That comment was only directed at the sand which

1     you've mapped on Exhibit Number 5 --

2             A.     That comment was --

3             Q.     -- the Brushy Canyon?

4             A.     Yeah, that was pertaining to the Loving sand,  
5     that's correct.

6             Q.     Do you know whether or not you're gaining an  
7     advantage in the Bell Canyon?

8             A.     We -- No, I don't know that we're going to gain  
9     an advantage one way or another in the Bell Canyon.

10            Q.     And you don't know -- you haven't --

11            A.     That's correct, that's correct.

12            Q.     Maralo has a well in the northwest of the  
13     northwest of Section 32. I think you -- Or is that a Bass  
14     well? It has 8 feet shown by it.

15            A.     That's a Bass well, that's correct.

16            Q.     Is that a commercial well?

17            A.     Not in this sand.

18            Q.     Not in this sand?

19            A.     They're not completed in this sand. They're  
20     completed in a shallower sand.

21            Q.     Okay, and that 8 foot shows just the number of  
22     feet in this particular sand?

23            A.     That's correct.

24            Q.     If we look at the Texaco tract, the southwest  
25     quarter of Section 30 --

1 A. Uh-huh.

2 Q. You would agree with me that there are commercial  
3 reserves on that acreage, would you not?

4 A. From the Bell Canyon, I do agree.

5 Q. And what about as you've mapped it for the Brushy  
6 Canyon? There are reserves under that tract, are there  
7 not?

8 A. Based on this interpretation, it's questionable.

9 Q. Your 10-foot contour does run through that tract,  
10 does it not?

11 A. It does, it just skirts the east edge of that  
12 tract.

13 Q. So we could have as much, based on your  
14 interpretation, on the extreme eastern edge of a 13 feet in  
15 that sand?

16 A. That's correct.

17 Q. Now, when we look at the existing Texaco well in  
18 that acreage, that location is actually 790 feet from the  
19 east line of their spacing unit; is that not right?

20 A. That is correct.

21 Q. And if they were able to directionally drill to  
22 the east, they, in fact, might be able to encounter some  
23 commercial production in the Brushy Canyon?

24 A. At this -- With my interpretation, they would  
25 have to drill an unorthodox location to encounter

1 commercial reserves.

2 Q. Either straight hole or directional?

3 A. Either, yeah, either.

4 Q. But the fact of the matter is that there are  
5 reserves under the southwest quarter, that your well 40  
6 feet off the spacing unit line are, in fact, going to  
7 recover in this interval; isn't that correct?

8 A. Based on my interpretation, there are.

9 MR. CARR: That's all I have. Thank you.

10 EXAMINER STOGNER: Mr. Bruce?

11 MR. BRUCE: I don't have any follow-up.

12 EXAMINER STOGNER: Mr. Bruce, for the record,  
13 what's your next witness?

14 MR. BRUCE: An engineer, Mr. Gill.

15 EXAMINER STOGNER: Okay.

16 EXAMINATION

17 BY EXAMINER STOGNER:

18 Q. Mr. Lough, help me go through the federal process  
19 here.

20 When did Maralo go out and survey the area and  
21 start staking the well, or stake the two requested standard  
22 locations? When was that?

23 A. Mr. Examiner, I don't know the exact date, but it  
24 was -- It could have been as much as two years ago.

25 We've been working in this area for a number of



1 years, and we went through the staking process early on in  
2 our development plans for this field. And so over the past  
3 two to four years, we've been going through these  
4 processes.

5 Q. When did the BLM -- Did they deny those two  
6 standard locations or request you to move? And when was  
7 that?

8 A. They did deny those two standard locations. And  
9 to the best of my recollection, it was a year and a half,  
10 two years ago.

11 Q. Okay. Did they deny it in writing, or was that a  
12 decision made out in the field?

13 A. Out on location? I don't know.

14 Now, there is a chance that our engineering  
15 witness may have more. He was more involved with it at the  
16 time than I was.

17 Q. Okay, because you testified to -- Actually you  
18 made two exhibits, one a January letter notifying you there  
19 was an unorthodox location due to archeology and cave and  
20 karst --

21 A. That's correct.

22 Q. -- and also a November letter talking about  
23 Maralo's requested location as being acceptable. So when  
24 did this go from a mandatory move to a requested location,  
25 is what I'm trying to get at?

1           A.    I believe that Richard Gill, our engineering  
2 witness, will have more knowledge about that than I will.

3           Q.    Okay.  Now, Texaco's -- What is that?  The Basin  
4 State 30 Number 3?

5           A.    Yes, sir, that's correct.

6           Q.    Okay.  Now, that's presently producing; is that  
7 correct?

8           A.    That's correct, it is.

9           Q.    Do you know what pool that's designated to?

10          A.    We do...

11               MR. BRUCE:  Mr. Examiner, that Texaco well is in  
12 the southwest Forty-Niner Ridge --

13               THE WITNESS:  That's correct.

14               MR. BRUCE:  -- Delaware Pool.

15               THE WITNESS:  Yeah, that's right.

16          Q.    (By Examiner Stogner)  Okay, so it's a Delaware  
17 completion?

18          A.    It is a Delaware completion, yes, sir.

19          Q.    And your completion would also be considered the  
20 same type of completion, right, in the Delaware Pool?

21          A.    It is -- Yes, the Bell Canyon, Cherry Canyon and  
22 Brushy Canyon are all considered Delaware, within Delaware  
23 pools, that's correct.

24               Different reservoirs, but all in the same group  
25 of formations.

1 Q. Now, Mr. Carr had asked you about the formation  
2 of a working interest agreement.

3 A. Yes.

4 Q. But you had some knowledge that there was some  
5 negotiations about that?

6 A. Yes, sir. I wasn't directly involved in those  
7 negotiations, but I know that they did take place between  
8 Maralo and Texaco.

9 Q. Do you know who owns the royalty underneath the  
10 Texaco acreage?

11 A. The -- yes, sir, it's -- The Texaco acreage is  
12 state minerals.

13 Q. Okay.

14 A. And of course the acreage that we're concerned  
15 about, that our well be on, is federal.

16 Q. Okay, so in essence, due to topographic  
17 conditions, cave karst conditions and archeology, the BLM  
18 requests you to move 40 feet off of state royalties --

19 A. That's --

20 Q. -- acreage that they do not own?

21 A. That's correct.

22 Q. Did you bring that up to them?

23 A. Again, I wasn't directly in that part of the  
24 negotiations with the BLM. I don't know if that point was  
25 ever discussed pointedly with the BLM. At the time we were

1 just trying to find a location that we would be allowed to  
2 drill.

3 Q. And in essence, you still are?

4 A. In essence, we still are, yes, sir, that's  
5 correct.

6 Q. We want to make that clear.

7 A. Yes, sir. That's correct.

8 Q. Of course, the next obvious one with -- well, at  
9 geology -- forgetting -- at a less geological acceptable  
10 location, moving further west, why don't you just  
11 directionally drill from this location back to the east?

12 A. We will have testimony to that -- Our engineering  
13 witness will discuss that, yes, sir.

14 Q. Okay. So I guess the fourth option -- Well,  
15 there's a fifth option; that's not to drill it. But the  
16 fourth option would be to suffer a severe penalty; is  
17 that --

18 A. That's -- that's --

19 Q. And that's your understanding?

20 A. That is our understanding, yes.

21 EXAMINER STOGNER: Okay. Any other questions?

22 MR. CARR: No questions.

23 EXAMINER STOGNER: You may be excused.

24 Mr. Bruce?

25 MR. BRUCE: Call Mr. Gill to the stand.

1                                RICHARD GILL,  
2     the witness herein, after having been first duly sworn upon  
3     his oath, was examined and testified as follows:

4                                DIRECT EXAMINATION

5     BY MR. BRUCE:

6                Q.     Would you please state your full name and city of  
7     residence?

8                A.     My name is Richard Gill. I live in Midland,  
9     Texas.

10              Q.     Who do you work for?

11              A.     I work for Maralo, Incorporated.

12              Q.     What's your job with Maralo?

13              A.     I'm a petroleum engineer for them.

14              Q.     Have you previously testified before the Division  
15     as a petroleum engineer?

16              A.     Yes, I have.

17              Q.     And were your credentials accepted as an expert  
18     petroleum engineer?

19              A.     Yes, they were.

20              Q.     And are you familiar with the engineering matters  
21     related to this Application?

22              A.     Yes, I am.

23                      MR. BRUCE: Mr. Examiner, I would tender Mr. Gill  
24     as an expert petroleum engineer.

25                      EXAMINER STOGNER: Any objection?

1 MR. CARR: No objection.

2 EXAMINER STOGNER: Mr. Gill is so qualified.

3 Q. (By Mr. Bruce) Mr. Gill, would you refer to --  
4 identify Exhibit 7 and 8 for the Examiner and perhaps,  
5 while you're discussing those, tell the Examiner of your  
6 contacts with the BLM and maybe a little bit of the process  
7 of the denial of your orthodox locations.

8 A. Okay. Exhibit 7 and Exhibit 8 -- 7 is the  
9 approved permit to drill from the state pending approval  
10 for an unorthodox location that we filed. Filing date was  
11 October, 1997. And this is at the location that we're here  
12 talking about today.

13 EXAMINER STOGNER: Okay, this is a real touch  
14 issue. Who was it approved by, again?

15 THE WITNESS: Oh, I'm sorry, you're absolutely  
16 right. It's approved by the BLM, I guess.

17 EXAMINER STOGNER: Okay.

18 THE WITNESS: Yes, pending state approval.

19 And Exhibit 8 is just the location plat that  
20 accompanied this permit.

21 To go back a little bit in the history, the  
22 questions that were asked of Shane, we had originally  
23 staked a location, like he said, maybe a couple of years  
24 ago. We have a letter in our file that -- I did not bring  
25 a copy -- that basically states that the location would not

1 get approved by the BLM. It was at a standard location.  
2 So we knew from the beginning that we would have to go  
3 through the process with them to try to get a location  
4 approved.

5 Starting about -- I think it was about six months  
6 ago -- I'm not sure on that -- but we started trying to  
7 find a location that they would approve us to drill.

8 On Exhibit 2, the topo map, the two "Xs" there,  
9 the locations that were disapproved, are actually locations  
10 we do have disapproval letters in our files, that were  
11 actually staked and disapproved.

12 I talked to our agent, who was on location, with  
13 the BLM, about going further north. It looked to me that  
14 you could get further north from the Basin and get away  
15 from that part of the problem and not encroach on the --  
16 closer to Texaco. But he told me that the archeologist  
17 said that they wouldn't approve anything further north. I  
18 guess there must be archeological sites all the way up.

19 And then he -- at that time he asked the BLM to  
20 pick the location that they would approve, and that's the  
21 location that we have today.

22 The letter that they sent us dated January 5th,  
23 1998, was just our -- that we asked them to write us a  
24 letter to the effect. Reading their letter, I don't think  
25 it really says exactly what we wanted them to say, because

1 we wanted them to tell us if this was, in fact, the only  
2 location that they would approve.

3 And again, they staked the location. It wasn't  
4 -- We finally just told them to stake it where they'd let  
5 us drill, and this is the only place in that 40 acres that  
6 they would agree to.

7 Q. (By Mr. Bruce) Now, if you had been able to stay  
8 330 feet off of Texaco's lease line and just move further  
9 north, the only effect there would have been on the same  
10 Maralo federal lease --

11 A. That's correct, we would have been encroaching on  
12 ourselves, and that's --

13 Q. And it wouldn't have been --

14 A. It wouldn't have been a bad deal, right. We  
15 certainly would have preferred doing that.

16 Q. And so that subject was broached, and again the  
17 BLM said no?

18 A. That's right.

19 Q. Let's discuss production from wells in this area.  
20 Why don't you refer to your Exhibits 9 and 10 --

21 A. Okay.

22 Q. -- and identify those for the Examiner?

23 A. Exhibits 9 and 10 are just a couple of production  
24 curves on some of our older wells out there, to get a  
25 little production history, that are producing from that



1 Loving sand.

2 And you can see on both -- The curves are almost  
3 identical on the green line, the manner in which the oil  
4 production drops off on those wells. They come in pretty  
5 strong and drop pretty rapidly, which is very common for  
6 the area.

7 Q. So even though they come in at a good rate, they  
8 decline very rapidly.

9 A. That's correct.

10 Q. What does Exhibit 11 represent?

11 A. Exhibit 11 is just a projected production decline  
12 curve on the well in question that I had made up in order  
13 to run our economics for our -- to get in-house approval on  
14 our AFE to drill the well.

15 Q. What does the spike in the middle of it  
16 represent?

17 A. The spike in the middle of it represents a  
18 recompletion. It's our opinion that these wells probably  
19 are not economic out of just one zone, that that main  
20 Loving sand zone will produce, you know, something like,  
21 60,000, 75,000 barrels or some number, and then it will  
22 really require recompletion in some of these other zones to  
23 truly make the well economic.

24 Q. So the main pay zone, the Loving zone that Mr.  
25 Lough talked about, if you just got that in a well, the

1 well would probably not be economic?

2 A. Probably not.

3 Q. So you need the additional potential?

4 A. Right, the Bell Canyon, there are a couple of  
5 Middle Brushy zones that do produce a little bit.

6 Q. Okay. Well, let's discuss the economics a little  
7 bit.

8 A. Okay.

9 Q. What is Exhibit 12?

10 A. Exhibit 12 is just the economics that I ran for  
11 our in-house purposes to send to management to approve the  
12 well, based on the decline curve there in Exhibit 11. And  
13 I used a lease operating expense of about \$3000 a month,  
14 which seems to be fairly comparable to what we're spending  
15 right now on these wells.

16 You might notice, the oil price is \$18 a barrel,  
17 which shows that at today's prices this may not be too good  
18 a deal anyway. But hopefully, we can get the price of oil  
19 back up.

20 And in doing this we show that we get a return on  
21 our investment of about three to one on these wells.

22 Q. Now, three to one is acceptable for Maralo's  
23 internal economics?

24 A. Yes. Yeah, we'd drill for that.

25 Q. Okay. Now, you mentioned the price of oil.

1 Right now, oil is about two dollars a barrel lower than  
2 that; is that correct?

3 A. Yeah, or more, right.

4 Q. Now, was any effort made to look at directionally  
5 drilling this well to a standard location?

6 A. Yes, we did. Obviously, that was one of the  
7 options, was to do that. Exhibit 13 represents the  
8 economics based on what we feel it would cost us to  
9 directionally drill the well and pump it. These wells  
10 require artificial lift.

11 I looked at the possibility of running a sub pump  
12 to produce the wells, but based on the production from the  
13 older wells -- Initially, there's probably enough fluid for  
14 a sub pump, but pretty rapidly your fluid will drop to the  
15 point that you cannot use a sub pump. So thereby you're  
16 going to be stuck with having to rod-pump a deviated well.  
17 And our experience of rod-pumping deviated wells, you eat  
18 up tubing and rods very rapidly.

19 So the economics -- So what I did for the  
20 economics here was added -- I believe it was about \$60,000,  
21 I think, for the deviated part of the hole, which is not  
22 that big of a problem. But I also added about \$4500 a  
23 month in operating expenses, which should cover probably a  
24 set or rods and a set of tubing every year.

25 Q. Is that a reasonable estimate?

1           A.    That was our experience.  And in doing so, our  
2   return on investment drops down to 1.6 to 1.

3           Q.    Would Maralo drill the well at that rate of  
4   return?

5           A.    No, we would not.

6           Q.    So in effect, a deviated well just isn't an  
7   option for these Delaware wells?

8           A.    There's no economic way to produce it.

9           Q.    Now, from an engineering standpoint, in your  
10   opinion, will the Maralex well drain Texaco's acreage in  
11   the main pay zone?

12          A.    In the Loving sand, I don't think there will be  
13   much drainage at all.  These wells will not produce without  
14   a frac job.

15                   And the nature of the frac job will be, it will  
16   follow the path of least resistance, which will tend to  
17   want to make it go back to the east where the better  
18   reservoir is, for the better permeability and better  
19   porosities.

20          Q.    So the fracture goes toward the sweet part of the  
21   reservoir and not toward the dry part?

22          A.    Yeah, in theory, yes.

23          Q.    So that would go up to the north, south, east --

24          A.    North, south, east.

25          Q.    -- and away from the Texaco --

1 A. That's right.

2 Q. Mr. Gill, in your opinion is the granting of  
3 Maralo's Application in the interests of conservation and  
4 the prevention of waste?

5 A. Yes, it is.

6 Q. And were Exhibits 7 through 13 prepared by you or  
7 under your direction?

8 A. Or from company files, yes, they were.

9 MR. BRUCE: Mr. Examiner, I tender the admission  
10 of Maralo Exhibits 7 through 13.

11 EXAMINER STOGNER: Exhibits 7 through 13 will be  
12 admitted into evidence at this time.

13 MR. BRUCE: And we have one final exhibit, which  
14 is my affidavit of notice, which I would ask to be  
15 admitted. I'll ask Mr. Gill one question on Exhibit 14.

16 Q. (By Mr. Bruce) We notified Texaco, Mr. Gill. We  
17 also notified Bass. What is the reason for that?

18 A. It's my understanding that Texaco's interest in  
19 the southwest quarter of that section, there -- was  
20 obtained from the term assignment from Bass.

21 Q. Okay. So to be on the safe side, we also  
22 notified Bass?

23 A. (Nods)

24 Q. And those are the only offset working interest  
25 owners?

1           A.    Yes, sir.

2                   MR. BRUCE:  Tender the admission of Exhibit 14,  
3   Mr. Examiner.

4                   MR. CARR:  No objection.

5                   EXAMINER STOGNER:  To be on the safe side, why  
6   wasn't the State Land Office notified, using your words?

7                   THE WITNESS:  I guess I don't have an answer for  
8   that.  I'm not aware they were --

9                   EXAMINER STOGNER:  Is it mandatory?

10                  THE WITNESS:  I'm not aware that it is, sir, but  
11   I don't know.

12                  MR. BRUCE:  Mr. Examiner, in my opinion Texaco  
13   would also be protecting the interests of its lessor.  If  
14   necessary, we could notify the State Land Office.

15                  EXAMINER STOGNER:  Exhibit Number 14 will be  
16   admitted into evidence at this time.

17                  Mr. Carr, your witness.

18                  MR. CARR:  Thank you, Mr. Stogner.

19                               CROSS-EXAMINATION

20   BY MR. CARR:

21                  Q.   Mr. Gill, if I understood your testimony, the  
22   proposed location is not the location that Maralo would  
23   have preferred on this tract; is that right?

24                  A.   That is correct.

25                  Q.   And is it Maralo's testimony that a well at this

1 location does not gain an advantage or adversely impact the  
2 offsetting Texaco tract in the southwest of Section 30?

3 A. I think in the main pay, the Loving sand, I think  
4 that is correct.

5 Q. Is it that -- also your testimony as to the Bell  
6 Canyon sand that is producing in the offsetting Texaco  
7 well?

8 A. No, sir. I think it will impact the Texaco well  
9 to the Bell Canyon.

10 Q. Would you agree with me that you are gaining an  
11 advantage on that -- on the Texaco tract in that sand, with  
12 the well at this location?

13 A. To a degree, yes, sir.

14 Q. And you are proposing that -- if I understand  
15 it -- that this location be approved without a production  
16 penalty; is that your recommendation?

17 A. To the Loving sand, that is my recommendation.  
18 To the Bell Canyon I think that we would be willing to work  
19 our some agreement there.

20 Q. Are you asking the Division or making any  
21 recommendation to the Division as to a penalty for this  
22 well in any interval?

23 A. We're not asking that, no.

24 Q. You have run economics on the potential for a  
25 directional wellbore. That's what I think are --

1 A. Right.

2 Q. -- Exhibit 13; is that right?

3 A. That's correct.

4 Q. And if I look down at the bottom center portion  
5 of this, there is a -- In dark print it says, "Economics  
6 Information"?

7 A. That's correct.

8 Q. The second column down, second item below that,  
9 says "Rate of Return: 20.49%"; is that right?

10 A. That's correct.

11 Q. And that is your estimate of the rate of return  
12 you would receive for -- if you tried to develop the  
13 acreage with a deviated well. Is that what this shows?

14 A. It shows the rate of return on the unrecovered  
15 money, that's correct.

16 Q. That would be 20.49 percent?

17 A. Right.

18 Q. You would agree with me that wells in the  
19 Delaware in this area typically do drain 40 acres?

20 A. Yes, sir.

21 Q. And if you are able to drill and complete a well  
22 at the proposed location in either the Bell Canyon or the  
23 Brushy Canyon, you will, in fact, be draining reserves from  
24 the Texaco-operated tract to the west; isn't that right?

25 A. I believe that to be true in the Bell Canyon, but



1 probably not so much in the Brushy Canyon.

2 Q. You would agree with Mr. Lough's map that shows  
3 there are as much as 13 feet of pay on that border between  
4 the two tracts, would you not?

5 A. I would agree that there's probably -- probably  
6 to some degree there would be some pay in that section.  
7 Again, going back to my testimony before, I do believe that  
8 the frac job required to produce the well will  
9 preferentially head to the east and not to the west.

10 Q. You would agree with me, though, that to the  
11 extent there are reserves over there in the west, there was  
12 another well drilled, they will ultimately be recovered by  
13 a Maralo well at this location?

14 A. Yes, what little reserves there are.

15 Q. Your objective is, in fact, to produce what's  
16 under your tract; isn't that fair to say?

17 A. Absolutely.

18 Q. And you're not trying to drain acreage -- or  
19 production --

20 A. No, sir.

21 Q. -- from an offsetting property?

22 A. No, sir.

23 Q. Let's go to -- Well, Exhibits 9 and 10, I think  
24 you testified, are just decline curves that show a very  
25 rapid decline as a typical production characteristic for a

1 well in this area; is that right?

2 A. That's correct.

3 Q. Okay. And if we go to Exhibit Number 11, this is  
4 a graph showing what you are estimating the rate of  
5 production to be from the proposed well? Is that what this  
6 shows?

7 A. Yes, sir, this is the numbers I used to generate  
8 our in-house economics.

9 Q. Okay. You would agree with me, would you -- When  
10 we see the spike at, say, 2004 --

11 A. Uh-huh.

12 Q. -- to 2006, in that period, that's a proposed  
13 recompletion --

14 A. That's correct.

15 Q. -- on the well, right?

16 A. Yes.

17 Q. And you would be recompleting, at least  
18 initially, into the Bell Canyon; isn't that correct?

19 A. Possibly. There is some other Brushy Canyon  
20 zones that do produce, but our experience on those hasn't  
21 been too good, so the Bell Canyon probably is the most  
22 prospective recompletion zone.

23 Q. The most likely interval for the recompletion  
24 would be the zone that's now producing in the Texaco well  
25 to the west --

1 A. That's correct.

2 Q. -- isn't that right?

3 A. That's correct.

4 Q. And you would agree they would be in the same  
5 reservoir, if you actually --

6 A. Yes.

7 Q. -- recompleted in that Bell Canyon --

8 A. Yes.

9 Q. -- zone?

10 Your well would be 40 feet from the lease line,  
11 right?

12 A. That's correct.

13 Q. Or the spacing unit line.

14 The Texaco well is 790 feet from that common  
15 line --

16 A. That's correct.

17 Q. -- isn't that right?

18 So there would be an opportunity there to drain  
19 reserves in the Bell Canyon interval from the Texaco  
20 property; isn't that correct?

21 A. There would be an opportunity. You also would  
22 have to factor in the fact that the Texaco well has been  
23 producing for about two years now, and by the time this  
24 recompletion occurs they will have had ten years of  
25 production from that zone, which should adequately drain

1 what they're going to get.

2 Q. Is there anything that you're aware of today that  
3 denies you an opportunity when you drill this well, and as  
4 you look at the intervals and it looks like the C zone in  
5 the Bell Canyon is best, to complete right there today?

6 A. That's a possibility.

7 Q. You might wind up doing that? We won't --

8 A. You might --

9 Q. -- know till you drill?

10 A. -- that's correct.

11 Q. And you understand the concept of a no-flow  
12 boundary, do you not?

13 A. Yes.

14 Q. And at this point in time we really don't know  
15 what you're going to get at your location until you drill  
16 and complete there; isn't that right?

17 A. That's correct.

18 Q. And so for the purpose of just this question, you  
19 assume comparable reservoir in your wellbore at this  
20 location in the Bell Canyon to what Texaco has encountered  
21 in their well 790 feet from that common line.

22 And you have comparable wells. You would have a  
23 no-flow boundary that would extend a substantial distance  
24 onto their property; isn't that right?

25 A. That would be correct.

1 Q. And if they're 790 and you're 40, that no-flow  
2 boundary could be 300 feet or more onto their tract; isn't  
3 that fair to say?

4 A. Possibly.

5 Q. If they came back and offset you at the standard,  
6 you still would be on their acreage with that no-flow  
7 boundary; isn't that also fair?

8 A. That would be correct.

9 Q. To put that no-flow boundary right on that lease  
10 line, we'd have to drill 40 feet off that line on the other  
11 side; isn't that right?

12 A. Yes.

13 Q. Would you consider that an appropriate  
14 development pattern for this reservoir? Two wells 80 feet  
15 apart?

16 A. No, I would not.

17 MR. CARR: That's all I have, thank you.

18 EXAMINER STOGNER: Mr. Bruce?

19 MR. BRUCE: A couple of follow-up questions, just  
20 hit on something Mr. Carr brought up, Mr. Gill.

21 REDIRECT EXAMINATION

22 BY MR. BRUCE:

23 Q. If you do complete in the Loving zone, what time  
24 period do you typically produce those?

25 A. Well, we have not recompleted any of our wells

1 yet into that Bell Canyon zone. So we've been producing --  
2 I don't remember when we completed our first well out  
3 there, but we've been producing two or three years, so far,  
4 without moving uphole yet into that Bell Canyon zone, so --

5 Q. So if you hit the Bell -- or I mean, excuse me,  
6 the Loving sand, the lower Brushy Canyon sand in this well,  
7 you'd produce that for at least a couple of years before  
8 you'd consider completing uphole?

9 A. That's been our procedure so far, yes.

10 Q. And by that time could the Texaco well have  
11 produced the bulk of its reserves?

12 A. I think that's absolutely right. Again, the way  
13 these wells seem to produce, and even the Bell Can- -- I  
14 don't have a curve on that Bell Canyon well, but it's not  
15 too untypical that the bulk of the production will come in  
16 the first few years. After that it drops off to a lower  
17 rate.

18 Q. Okay. One other thing. In the Bell Canyon,  
19 assuming radial drainage from your location, wouldn't at  
20 least 50 percent of production in the Bell Canyon come from  
21 your federal lease?

22 A. Yes, based on the location of the well, it's  
23 almost up in the --

24 Q. The far --

25 A. -- corner of --

1 Q. -- northwest corner of --

2 A. Right.

3 Q. -- the southeast quarter?

4 A. That's right. So to draw a radial boundary  
5 around it, it would be affecting, you know, 50 percent on  
6 this federal lease and then 25 percent in the northwest  
7 quarter and 25 percent in the southwest quarter.

8 Q. So conceivably, assuming radial drainage and  
9 assuming a homogeneous reservoir, about 25 percent of  
10 production in the Bell Canyon could conceivably come off of  
11 the Texaco acreage?

12 A. That's correct.

13 MR. BRUCE: That's all I have, Mr. Stogner.

14 MR. CARR: Mr. Stogner, could I have one follow-  
15 up?

16 EXAMINER STOGNER: Sure, Mr. Carr, go ahead.

17 RECROSS-EXAMINATION

18 BY MR. CARR:

19 Q. Mr. Gill, you're not really going to know what  
20 intervals you're going to produce in this well till you  
21 drill it, are you?

22 A. That's correct.

23 Q. Can you tell Mr. Stogner today that you would not  
24 complete this well in the Bell Canyon after you take a look  
25 at it?

1 A. No, I cannot.

2 Q. Can you tell him that based on your exhibit --  
3 that is, the projected production curve for this well --  
4 that you wouldn't complete in the Bell Canyon until 2005?

5 A. No.

6 MR. CARR: Thank you.

7 EXAMINATION

8 BY EXAMINER STOGNER:

9 Q. I need to go back and ask about this mitigation  
10 process.

11 A. Okay.

12 Q. As I understand it -- and I was involved in that  
13 Lechuguilla Cave on Yates' well, on their mitigation --  
14 what would be the process to mitigate a standard location  
15 with the BLM?

16 A. I've never been involved with that. It's my  
17 understanding that -- There's two outstanding problems.  
18 One is the cost on the -- And again, from what I  
19 understand, you can certainly incur a cost in doing that.  
20 My belief, the economics on these wells are scratchy enough  
21 that you can incur just a whole lot of extra costs.

22 Secondly, we're tied up with a -- We have a time  
23 bind, part of the reason we're here today. We -- it's  
24 about -- I believe it's about 16 percent of our interest in  
25 that southwest -- or southeast quarter, is from a farmout



1 from Burlington that expires March the 15th. Now,  
2 obviously we wouldn't have time to mitigate prior to that  
3 without an exception from Burlington which, you know, we  
4 may or may not be able to get.

5 But my -- I think my -- I'm more concerned, I  
6 think, with the costs that would be involved in that. I  
7 guess if I'm not mistaken, you pay extra for the damages in  
8 order to do it, and I don't think this well can handle a  
9 whole lot of extra costs.

10 To make the well, in our opinion, truly economic  
11 does require recompletion in zones that -- on our acreage,  
12 at this point, are untested. Now, obviously Texaco has  
13 tested the Bell Canyon on theirs, and it looks pretty good.

14 Q. I'd like to explore some other options which  
15 Maralo, I'm assuming, has investigated on something like  
16 this, because I -- There again, I'm also assuming. Would  
17 you like somebody to drill 40 foot next to your lease?

18 A. Oh, no, sir.

19 Q. Okay. How old are the existing wells over in  
20 that east half of Section 30 that are producing? I'm  
21 assuming from the zone of interest, the Bell Canyon, that  
22 you're interested in.

23 A. In the Loving sand?

24 Q. Yes, Loving sand.

25 A. Loving sand. I don't remember the discovery date

1 on our first well. Most of them were drilled about mid-  
2 1995, from about that point forward. Probably about the  
3 first of 1995.

4 Q. Okay. What's the remaining life in that Loving  
5 sand for those wells?

6 A. Based on my projection for this well, I'm giving  
7 them about, you know, six, seven years total life. So  
8 another five years.

9 Q. Are there any offset Texaco wells that are  
10 affecting or, for that matter, anybody that's affecting  
11 that Loving sand in that quarter quarter section of  
12 interest today?

13 A. No, sir.

14 Q. Could one of the existing wells be horizontally  
15 drilled into that zone at a later date?

16 A. No, sir, it's our opinion that -- and Shane might  
17 could answer, but these are pretty laminated-type sands,  
18 and in order to connect the sands together requires a frac  
19 job, and I don't think we would be comfortable in trying to  
20 frac a horizontal leg.

21 Q. The way I understand it, what you're asking today  
22 is a no-penalty. Being 40 foot off that lease line, what  
23 measures is Maralo going to take whenever drilling this  
24 well to make sure that it is going vertical?

25 A. Obviously, the standard deviation survey is

1 required.

2 Q. Okay. If that's the only measure, then I'm  
3 assuming with what you're saying, should that well drift  
4 over to Texaco's lease --

5 A. Yeah.

6 Q. -- then if they actually compensate you for the  
7 drilling of that well and they take a business lease up on  
8 the surface with the BLM, then they can produce that well  
9 without any penalty. Is that what I'm hearing from you?

10 Assuming that the well drifts over into their  
11 lease. Because you don't have any --

12 A. Yeah.

13 Q. -- you don't have any business agreement with  
14 them or any kind of a working interest agreement. And it  
15 drifts over there, which it could; you're only 40 foot off;  
16 wells don't go vertical.

17 A. That's correct.

18 Q. So you wouldn't have a problem with giving a well  
19 to them, providing --

20 A. Yeah, I'd have a problem with that.

21 Q. You would?

22 A. Yeah.

23 Q. What kind of a penalty do you think they should  
24 have, should that occur?

25 A. I haven't thought about this. I'm really not

1 prepared to answer that.

2 Q. Should it have some sort of penalty?

3 A. In the Loving sand, yes, because they're suddenly  
4 -- again, the pay is -- According to the isopach map, the  
5 bulk of the pay is going to be on our acreage and not on  
6 theirs. They'll be impacting us more than I feel that  
7 we'll be impacting them.

8 EXAMINER STOGNER: Any other questions of this  
9 witness?

10 MR. CARR: No questions.

11 EXAMINER STOGNER: Mr. Carr, are you prepared at  
12 this time -- Or do you have anything further, Mr. Bruce?

13 MR. BRUCE: Just one thing.

14 FURTHER EXAMINATION

15 BY MR. BRUCE:

16 Q. Mr. Gill, I think you said that what you proposed  
17 was no penalty in the Loving sand.

18 A. That's correct.

19 Q. But that you would have an effect on Texaco in  
20 the Bell Canyon?

21 A. That's correct.

22 Q. So a penalty would be reasonable in that  
23 situation?

24 A. Yes, I think so.

25 MR. BRUCE: Thank you.

## FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. Well, okay, let's go back to that, because you just opened up a whole new issue.

Now, this is one Delaware pool; is that correct?

A. Well, no, sir, actually it's not. We're producing from the Nash Draw-Brushy Canyon Pool --

Q. Okay, so --

A. -- and they're producing from the Southeast --

MR. BRUCE: Southwest --

THE WITNESS: Southwest --

MR. BRUCE: -- They're in the Southwest Forty-Niner Ridge --

THE WITNESS: -- Forty-Niner Ridge.

MR. BRUCE: -- Delaware, and I believe the Loving sand is only in the Nash Draw-Brushy Canyon Pool.

THE WITNESS: That's correct. So they are separate pools.

EXAMINER STOGNER: Yeah, we've run into this problem before, sort of like the Morrow and the Penn.

Q. (By Examiner Stogner) Well, then, this particular quarter section, is that -- is the Bell Lake covered in any particular pool at this time?

A. The Bell Canyon?

Q. The Bell Canyon.

1           A.    I guess not. I would assume, you know, if we  
2 were to complete it we would place it in the same pool that  
3 the Texaco Bell was in. It would be the same pool.

4           MR. BRUCE: Mr. Examiner, I just looked at the  
5 nomenclature order today, and the Southwest Forty-Niner  
6 Ridge-Delaware Pool covers, I believe, just the southwest  
7 quarter of Section 30. So that would be the nearest Bell  
8 Canyon Pool --

9           EXAMINER STOGNER: Of course, following on that,  
10 you have one pool that has a segment of the Delaware  
11 abutting a full Delaware pool.

12          MR. BRUCE: Correct.

13          EXAMINER STOGNER: It would be more prudent to  
14 develop that in a different pool.

15          MR. BRUCE: I don't know how that happened,  
16 because -- I just don't know. I looked at the orders, and  
17 I couldn't determine that.

18          EXAMINER STOGNER: I'm sure the same way as a lot  
19 of things like that happen in the Pennsylvanian and Morrow  
20 and perhaps Pictured Cliffs and Fruitland.

21               (Laughter)

22          EXAMINER STOGNER: Just speculating, you  
23 understand.

24               Okay, you may be excused.

25          MR. BRUCE: That's all I have, Mr. Examiner.

1 EXAMINER STOGNER: Mr. Carr?

2 MR. CARR: May it please the Examiner, at this  
3 time we would call Mr. Uhl, U-h-l.

4 DAVID A. UHL,

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

7 DIRECT EXAMINATION

8 BY MR. CARR:

9 Q. Would you state your full name for the record,  
10 please?

11 A. David Uhl.

12 Q. Where do you reside?

13 A. I reside in Denver, Colorado.

14 Q. By whom are you employed?

15 A. With Texaco Exploration and Production.

16 Q. And what is your current position with Texaco?

17 A. I'm a geologist working southeast New Mexico,  
18 primarily Eddy County.

19 Q. Mr. Uhl, have you previously testified before  
20 this Division and had your credentials as an expert in  
21 petroleum geology accepted and made a matter of record?

22 A. Yes, I have.

23 Q. Are you familiar with the Application filed in  
24 this case on behalf of Maralo?

25 A. Yes, I am.

1 Q. Could you briefly state what is Texaco's interest  
2 in this case?

3 A. Well, number one, because of the proximity of the  
4 location to our leasehold, we're asking that location be  
5 denied.

6 In the alternative, we're asking that a  
7 significant production penalty be applied to that location  
8 if that well is allowed to be drilled.

9 Q. Does Texaco operate the direct west offset to the  
10 proposed Maralo unorthodox well location?

11 A. We do.

12 Q. Have you made a geological study of the area  
13 which is the subject of this Application?

14 A. I've been carrying on a geological study of this  
15 area for several years now.

16 Q. And are you prepared to share the results of that  
17 work with Mr. Stogner?

18 A. Yes, I am.

19 MR. CARR: Are the witness's qualifications  
20 acceptable?

21 EXAMINER STOGNER: Any objections?

22 MR. BRUCE: No, sir.

23 EXAMINER STOGNER: Mr. Uhl is so qualified.

24 Q. (By Mr. Carr) Mr. Uhl, have you prepared  
25 exhibits for presentation in this case?



1           A.    Yes.

2           Q.    Could you refer to what has been marked for  
3   identification as Texaco Exploration and Production Exhibit  
4   Number 1 and review that for the Examiner?

5           A.    That's a land map of the area.  Maralo presented  
6   a very similar-looking plat before.  Basically, it shows --  
7   Section 30 has been outlined.

8                   Texaco has interests in the west half of Section  
9   30, Maralo has interests in the east half, and Texaco and  
10   Maralo has formed a common unit in the north half of  
11   Section 30, of which Maralo operates.

12                   We have 25 percent interest in the northeast  
13   quarter and a little more interest than that in the  
14   northwest quarter.

15                   But in the south half basically Maralo operates,  
16   and we operate on the west -- on the south -- we operate  
17   the southwest quarter, Maralo operates the southeast  
18   quarter.

19           Q.    And you acquired that interest through a term  
20   assignment from Bass; is that correct?

21           A.    That's correct.

22           Q.    And you have the operating rights down to  
23   approximately 10,200 feet?

24           A.    That's correct, the top of the Wolfcamp.

25           Q.    And the proposed Maralo location is 40 feet from

1 your spacing unit line; is that right?

2 A. Forty feet away, that's correct.

3 Q. You were present for the testimony presented by  
4 Maralo, were you not?

5 A. Yes.

6 Q. You understand that the reason for this location,  
7 or this proposal, is based on archeological and other --

8 A. That was my understanding, and that's the primary  
9 reason behind the unorthodox location.

10 Q. Could you go to what has been marked for  
11 identification as Texaco Exhibit Number 2? Identify this  
12 for Mr. Stogner and review it, please.

13 A. That map is -- or that exhibit is essentially a  
14 compilation of an archeological study that we have  
15 conducted in the area as a result of us shooting a 3-D  
16 across the area.

17 If you look on the map, you've got a number of  
18 wells on there. All the purple wells or the fuchsia wells,  
19 pink, whatever you want to call them, are Brushy Canyon  
20 wells.

21 The green well there is almost the center, is our  
22 Texaco Remuda Basin State Number 3 well. Their proposed  
23 unorthodox location is at the end of the arrow, right in  
24 the center of Section 30.

25 Q. What are the red lines?

1           A.    The red lines on there are the seismic shot and  
2 receiver lines that we -- the shot and receiver lines,  
3 shooting our 3-D survey. The north-south lines are  
4 receiver lines where we laid out the cables. The east-west  
5 kind of jagged lines on there are our shot lines, where we  
6 had our vibrators going across the surface.

7                   Now, what we did on the survey is that the BLM  
8 required us to go out and make an archeological survey  
9 along our shot and receiver lines, going 50 feet on either  
10 side of those shot and receivers.

11                  If you look on the map then, those kind of purple  
12 outlines -- they look kind of like amoebas; they kind of  
13 come and go throughout the survey -- those are the sites  
14 that, based on our sampling, were determined to be  
15 archeological sites throughout the survey.

16                  Now, an archeological site, according to the  
17 BLM's definition here, would be something that has ten or  
18 more artifacts within that area. What we found out here,  
19 most of the time the artifacts were charred ground. We  
20 found maybe a dozen or so arrowheads out here, a little bit  
21 of pottery. But for the most part, charred ground.

22           Q.    Now, Mr. Uhl, admittedly there are obvious  
23 differences between shooting a seismic line and building  
24 location.

25           A.    That's correct, is that we only -- We surveyed

1 approximately a 100-foot swath, going on each one of those  
2 red lines, going throughout the survey.

3 Q. When you encountered archeological sites, were  
4 you able to mitigate those by working with the BLM?

5 A. Yes, we did. We worked with the archaeologists  
6 at the BLM, and I'm sorry, since I was not the geophysicist  
7 I can't mention who the names were.

8 But we worked with the archaeologists at the BLM,  
9 and there were a few sites that had a concentration of  
10 archeological artifacts that the BLM wanted to deny us  
11 shooting across. We were able to break those up into  
12 smaller sites and then shoot across the survey.

13 Q. So in fact, you, in your experience, have been  
14 able to work with the Bureau of Land Management on issues  
15 of this nature?

16 A. The BLM is difficult, but yes, we can work with  
17 them.

18 Q. What are the primary objectives in the wells in  
19 this area?

20 A. The primary objectives are the Delaware sands.

21 Q. When we look at your well in the southwest  
22 quarter of Section 30, when you drilled that well the  
23 primary objective initially was the Brushy Canyon that was  
24 mapped by Mr. Lough; is that not right?

25 A. Right, is that that was one of the first wells

1 drilled out there, and -- at that time, is that we were  
2 thinking about trying to extend a little further west than  
3 what is -- from the increased well control is proving to  
4 be.

5 Q. And at this time you have come up the hole and  
6 completed in the Bell Canyon C7 sand; is that right?

7 A. That's correct, we had an excellent show during  
8 drilling of that well. It flowed to our pits, and we  
9 completed there, and so far it's been one of the better  
10 wells in the field.

11 Q. In your opinion, are those the two principal  
12 objectives in the Delaware in this area?

13 A. There's also a middle Brushy Canyon zone out  
14 here, but it's spotty production. We think those are the  
15 two primary targets in this area.

16 Q. Would you agree with Mr. Lough that structure is  
17 really not very significant in determining whether or not  
18 you're having good location in this area?

19 A. Yes, sir, I would agree.

20 Q. Let's go to what has been marked Texaco Exhibit  
21 Number 3, and this is an isopach map and a log section on  
22 the lower Brushy Canyon --

23 A. Uh-huh.

24 Q. -- on the "D" sand as you call it. Could you  
25 refer to this and review it for the Examiner?

1           A.    Right, is that -- what -- It shows the Texaco  
2   acreage position in yellow.   Within Section 30, the north  
3   half of Section 30 has been outlined.   That's the unit that  
4   we have with Maralo, that Maralo operates.   We contributed  
5   our acreage in the west half of the section.

6                   It also shows an isopach of greater than 12-  
7   percent porosity of the Brushy Canyon "D" interval.   That  
8   "D" interval is there, that if you look on the log section  
9   off to the right -- that's the area that's in yellow, the  
10  lower Brushy Canyon "D" -- it's one of the principal pays  
11  in this portion of the Delaware Basin, produces in many  
12  fields in this area.   It produces in the Nash Unit up to  
13  the north.   And that trend, then, extends significantly to  
14  the south.

15                  What I've mapped here is the net feet of pay  
16  greater than 12-percent porosity, and that's highlighted in  
17  red.

18           Q.    Basically, this shows the presence of the Brushy  
19  Canyon "D" sand under the eastern half of the 40 acres that  
20  you operate in -- or the 160 acres that you operate in the  
21  southwest of Section 30, correct?

22           A.    That's correct.

23           Q.    Your well is how far from that common lease line?

24           A.    We're 790 feet to the west of that common lease  
25  line.

1 Q. Now, the Bell Canyon in this area, what pool is  
2 that in?

3 A. That is in the Forty-Niner Ridge Southwest --

4 Q. And --

5 A. Go ahead.

6 Q. And the Brushy Canyon is in which --

7 A. Is in the Nash --

8 Q. When we look at those --

9 A. -- Nash Draw.

10 Q. When we look at those two pools, what is the  
11 authorized producing rate for wells in the Bell Canyon?

12 A. In the Bell Canyon, we have a depth limitation of  
13 80 barrels per day.

14 Q. And in the lower Brushy Canyon, what is the  
15 allowable there?

16 A. It's a greater depth limitation. It's 142  
17 barrels a day.

18 Q. And is that because of special pool rules?

19 A. That's the pool rules of the Nash Draw field.

20 Q. Okay, and both of these pools, though, are spaced  
21 on 40-acre spacing; is that correct?

22 A. That's correct, they're both oil.

23 Q. Okay. Let's go to what has been marked Texaco  
24 Exhibit Number 4. Would you identify and review that?

25 A. That is a similar mapping technique as what we

1 had on the previous map. In this case we're moving uphole,  
2 up to the 4100-foot zone, the Bell Canyon -- what I'm  
3 calling the Bell Canyon C7 sand. It's the lowermost sand  
4 in the Bell Canyon, right on top of the Cherry Canyon.

5 What we're showing here is the net feet of  
6 porosity greater than 14 percent. As we move uphole within  
7 the Delaware Mountain Group, we start needing a little  
8 greater porosity in order to kind of reach our porosity  
9 cutoffs, what is productive and what isn't productive.

10 Now, when we drilled our Number 3 well, like Mr.  
11 Carr was alluding to, we tried -- we were going for the  
12 deeper objective. We had a very excellent show in that  
13 well uphole.

14 We decided that the deeper objectives were a  
15 little on the skinny side, so we were going to go up the  
16 hole and produce out of that zone for as long as possible  
17 to try to recoup the drilling costs of that well before we  
18 tried anything else.

19 So far, that well has been probably one of the  
20 best wells in the field. There are a few wells that are a  
21 little better than that, but this has been one of the  
22 better wells in that overall trend in there.

23 The isopach is basically showing -- If you look  
24 on the bold lines there, we have a 10-percent -- excuse me,  
25 10 feet of pay that kind of goes north-south in through



1     there.

2                 From the drilling of the wells in there -- I've  
3     also noted in there where sidewall cores have been cut to  
4     confirm the shows that have been gotten during drilling.  
5     And most of the wells are dealing with 50- to 60-percent  
6     sidewall water saturations and also oil saturations within  
7     those cores.

8                 It looks to me as if most of Section 30 within,  
9     oh, probably your eight-foot or so contour, is going to be  
10    productive.

11                Q.    If I look at this exhibit, there is a block kind  
12    of south and west or -- of the Texaco well that shows the  
13    production information on the well to date; is that right?

14                A.    That's correct.

15                Q.    And if we look at the proposed unorthodox  
16    location in this sand, which is the sand you're producing  
17    in your well, is the unorthodox location better than a  
18    standard location in this interval?

19                A.    It looks like that unorthodox location is going  
20    to hit a lot more net feet of pay than what we have  
21    encountered in our well.

22                Q.    By virtue of this unorthodox location, is it your  
23    opinion that Maralo is gaining an advantage on the Texaco  
24    property?

25                A.    I'd say a significant advantage.

1 Q. Is the log included just for reference on these  
2 exhibits?

3 A. That's for reference, what I had mapped on  
4 that -- to the left.

5 Q. What conclusions can you reach from your  
6 geological study of this area?

7 A. Well, that Maralo's location is going to  
8 significantly impact the production of our well.

9 Q. Do you believe it will be -- can be completed in  
10 common reservoirs with those that are present and  
11 producible under your acreage?

12 A. I believe that the reservoirs -- that both the  
13 lower Brushy Canyon and the Bell Canyon extend onto our  
14 acreage -- or, excuse -- are common throughout Maralo's  
15 acreage and our acreage.

16 I believe that a well drilled on -- practically  
17 on the lease line, like they're proposing, is going to  
18 essentially take reserves from our quarter.

19 That's about it.

20 Q. Will Texaco also call a witness to recommend a  
21 penalty for the well at this location?

22 A. Yes, we will.

23 Q. Were Texaco Exhibits 1 through 4 prepared by you?

24 A. Oh, excuse me?

25 Q. Were Exhibits 1 through 4 prepared by you?

1           A.    Yes.

2           MR. CARR:  Mr. Stogner, at this time I'd move the  
3 admission into evidence of Texaco Exhibits 1 through 4.

4           EXAMINER STOGNER:  Any objection?

5           MR. BRUCE:  No, sir.

6           EXAMINER STOGNER:  Exhibits 1 through 4 will be  
7 admitted into evidence.

8           THE WITNESS:  Excuse me I was sleeping for a  
9 minute.

10          EXAMINER STOGNER:  That happens sometimes.

11          Mr. Bruce, your witness.

12                           CROSS-EXAMINATION

13   BY MR. BRUCE:

14          Q.   Mr. Uhl, let's start off with your Exhibit 2.  I  
15 guess what you're saying is -- I'm not quite sure, but  
16 there are areas out here that do have archaeologic  
17 restrictions?

18          A.   There are areas out there that have been surveyed  
19 that appear to be some fairly significant archeological --  
20 I wouldn't say restrictions, but have been identified as  
21 having significant archeological remains.

22          Q.   There's several large areas out there.

23          A.   Yeah.  Of course, the BLM is fairly liberal on  
24 what they're determining that to be.

25          Q.   We understand that.  You haven't had any contact

1 with the BLM regarding Maralo's trouble in getting a well  
2 location in this --

3 A. No.

4 Q. -- quarter quarter section?

5 A. No, I believe that's Maralo's problem, and we  
6 have not contacted them on that.

7 Q. Let's go to your Exhibit 3, which is the lower  
8 Brushy -- You refer to it as the "D" sand, I believe?

9 A. Right, we recognize "A", "B", "C" and "D" sands.

10 Q. In the Brushy -- lower Brushy Canyon.

11 A. In the lower Brushy Canyon.

12 Q. Now, comparing this to Mr. Lough's Exhibit 5 --  
13 and I don't know if you have a copy of that in front of you  
14 -- Let me give you my copy. Really, the trend and -- Well,  
15 first of all, you used a 12-percent cutoff?

16 A. And -- That's right, and Mr. Lough used a 14-  
17 percent cutoff.

18 Q. But overall, if you used a 14-percent cutoff,  
19 would your map be just a little narrower?

20 A. It would probably be a little more constrained,  
21 that's correct.

22 Q. And so really, it doesn't look all that much  
23 different than Mr. Lough's map, other than the -- depending  
24 on the cutoff?

25 A. One difference is that my map has been

1     accentuated somewhat by -- From our 3-D survey we see a  
2     little bit of evidence of seismic reflection on the  
3     porosity at that interval. So we're pulling the contours a  
4     little further to the west.

5           Q.     Okay. Now, a couple of things on this. Now, the  
6     log you have to the right of your map is for a well in  
7     Section 19, right? It's not the offset well in Section 30?

8           A.     No, the only reason that I did that is that I  
9     already had that log digitized, and it was easy to put it  
10    on the cross-section.

11          Q.     Okay.

12          A.     It was not an intentional slight.

13          Q.     No, I just want to make sure that -- That's not a  
14    direct offset to Maralo's proposed location?

15          A.     No, that's in the southeast southeast -- or,  
16    excuse me, the southeast of the southwest of Section 19.

17          Q.     And that well had 22 feet?

18          A.     That's correct.

19          Q.     And hopefully that well will be a good commercial  
20    well?

21          A.     It has been so far.

22          Q.     Now, what about the Texaco -- I think it's -- Is  
23    it Remuda Basin State 3, the direct offset?

24          A.     Uh-huh.

25          Q.     Is that the correct --

1 A. Remuda Basin State Number 3, that's correct.

2 Q. State Number 3. In this "D" sand, you show that  
3 as having seven feet.

4 A. Correct.

5 Q. Now, is that going to be commercial?

6 A. Within the lower Brushy Canyon at that location,  
7 we determine it to be an edge well, and we would not have  
8 completed it in that interval.

9 Q. Just to the north there's a well with the number  
10 11 by it. That's a well that both Maralo and Texaco own,  
11 is it not?

12 A. Correct.

13 Q. That has 11 feet -- You project it to have 11  
14 feet in the "D" sand. Now, that well was not commercial  
15 either, was it not?

16 A. Maralo operated that well at -- and between a  
17 joint conference between Maralo and ourselves we determined  
18 not to complete in that interval, that it would probably  
19 not be economic and that we determined that there were  
20 better opportunities uphole.

21 Q. Okay. So Texaco agreed not to complete that well  
22 in the "D" sand either?

23 A. That's correct.

24 Q. Would Texaco consider drilling another well in  
25 the northeast quarter of the southwest quarter of Section

1 30 to test the "D" sand or the Loving sand?

2 A. What we are considering doing is drilling a  
3 horizontal leg or a slant-hole leg off of our existing  
4 borehole, our well number -- our borehole number -- or,  
5 excuse me, our Remuda Basin State Number 3, in the next few  
6 years. But right now the production in that well is so  
7 good, is that -- our area wouldn't let us do that.

8 Q. Which direction would you directionally drill?

9 A. We'd probably go to the southeast within that  
10 quarter, because we can go almost 500 feet to the southeast  
11 and still stay with a 330-foot setback, still a legal  
12 location.

13 Q. Okay. Now, the Remuda Basin State Number 3, did  
14 that have any commercial potential in the middle Brushy  
15 Canyon?

16 A. The middle Brushy Canyon? No, I don't believe  
17 that it did.

18 Q. Okay. And then -- I know I had this data  
19 somewhere, but the Remuda Basin State Number 3, when was  
20 that well completed in the Bell Canyon?

21 A. That was completed in the Bell Canyon -- We  
22 drilled that well in 1995, and I believe it was completed  
23 in the Bell Canyon in the first part of --

24 Q. Oh --

25 A. -- 1996.

1 Q. Okay, that's on Exhibit 4. I missed it. Okay.

2 A. Yeah.

3 Q. So that's been producing almost two years?

4 A. About two years.

5 Q. Does Texaco have any projections on how much  
6 longer it will produce?

7 A. Right now, it's been the flattest decline of any  
8 well in the field. It's going to outproduce most of your  
9 lower Brushy Canyon wells.

10 Q. Okay. Any estimates on ultimate?

11 A. On ultimate? Every year we've been upping the  
12 ultimate on it. Probably 150,000 barrels of oil, somewhere  
13 in that range.

14 Q. Okay. It's a good well?

15 A. It hasn't been offset so far. Or excuse me, it  
16 hasn't been -- it hasn't --

17 Q. So it's been producing about -- just looking --  
18 18,000 barrels a year? Let's say that.

19 A. Or maybe a little more.

20 Q. In the Bell -- One final question, Mr. Uhl. In  
21 the Bell Canyon, would it -- is it your -- From a  
22 geologist's standpoint, that drainage would be radial, more  
23 or less, in this area?

24 A. To the best of my understanding, it's probably a  
25 north-south trend. There's probably a little more of



1 elliptical drainage. But it should extend quite a ways out  
2 in other directions.

3 Q. More egg-shaped than circular?

4 A. Well, the overall porosity kind of extends a  
5 little more in the north-south trend. As long as you're in  
6 the center of the reservoir, somewhere in the center of the  
7 reservoir, the unit should have some radial drainage.

8 MR. BRUCE: That's all I have, Mr. Examiner.

9 EXAMINER STOGNER: Thank you, Mr. Bruce.

10 Mr. Carr, redirect?

11 MR. CARR: No redirect.

12 EXAMINATION

13 BY EXAMINER STOGNER:

14 Q. As I understand Mr. Bruce's cross-examination of  
15 you, Texaco has no plan on drilling another well as an  
16 infill to the Number 3 and Number 9 well; is that correct?

17 A. Probably what we'd do is that we would use  
18 existing wellbore and deviate off from there. Either a  
19 slant hole coming up the hole and deviating off, or else  
20 we'd go to a short-radius horizontal.

21 Q. And that would necessitate the utilization of one  
22 of those wellbores, as opposed to a new wellbore?

23 A. I believe we can do that for about \$100,000 drill  
24 costs, somewhere in that range, maybe a little more.

25 Q. Let's say there was two wells in that quarter

1 section.

2 A. Within the north -- Within that 40-acre?

3 Q. Yeah, within your 40-acre.

4 A. Uh-huh.

5 Q. And it was completed as a good well in the --  
6 what we're designating Loving sand?

7 A. The Loving sand is the same as our lower Brushy  
8 Canyon "D".

9 Q. Would you enjoy a double allowable, or would you  
10 have to share that allowable --

11 A. Excuse me?

12 Q. -- of those two wells? Because you're in that  
13 Delaware pool, should you choose to -- should Texaco choose  
14 to drill a well to protect that particular vertical section  
15 in which Maralo is interested in, would Texaco get to enjoy  
16 two allowables for the two wells, or would they have to  
17 share the same allowable with those two wells given to that  
18 proration unit?

19 A. Well, you're dealing with a complicated  
20 regulatory issue there. I think because the two wells are  
21 in different pools to start off with, it seems to me that  
22 one of the wells -- that our Number 3 well has actually  
23 been misplaced into a pool that they shouldn't have placed  
24 it in to start off with, and within that 40-acre unit -- or  
25 excuse me, the southwest quarter of the 40-acre unit,

1     whatever you want to call it, that it probably should be  
2     all under Nash Draw, and that it should probably limited to  
3     142 barrels a day within that 40-acre spacing unit.

4           Q.     Okay. So the present rules that you're having to  
5     live under, all that Delaware is considered one formation;  
6     is that correct? Or one pool?

7           A.     It is everywhere else except, for some reason,  
8     except for our southwest quarter.

9           Maybe I misunderstood your question.

10          Q.     Okay. What pool are you producing from?

11          A.     From -- In our Number 3 is from the Forty-Niner  
12     Ridge Southwest.

13          Q.     Keep going, the full name of it.

14          A.     Forty-Niner Ridge Southwest-Delaware.

15          Q.     Okay. And that Delaware designation is from the  
16     top of the Delaware to the base of the Delaware; is that  
17     correct?

18          A.     I guess it would be.

19          Q.     Okay. Now, if you were to drill another well in  
20     that proration unit, will both wells get an allowable, or  
21     is the proration unit given an allowable? Is your  
22     understanding.

23          A.     You know, I'm not -- I really can't answer that  
24     question. I'm not knowledgeable on that. It would seem  
25     like it should be an allowable, just based on that 40-acre

1 spacing unit, and it should not be two pools.

2 Q. You're right. You're right on that. A proration  
3 unit gets the allowable --

4 A. Uh-huh.

5 Q. -- and according to how many wells are drilled in  
6 that proration unit, they share the allowable.

7 In your instance you're allowed only four wells,  
8 based upon 104 -- I believe H. That's General Rules and  
9 Regulations.

10 A. No, I'm not trying to skirt the issue, I'm just  
11 not knowledgeable.

12 Q. Well, what I was trying to bring up, they would  
13 enjoy two allowables, based on what Maralo -- if they were  
14 to choose to drill one well in one of the intervals and  
15 another well in another interval. So there is somewhat of  
16 an inequity there, in that particular instance, which needs  
17 to be pointed out.

18 Also, there's another thing that I need to  
19 probably bring a Maralo witness on, to ask them about, to  
20 make sure that all possible avenues are at least understood  
21 and covered, should this go further.

22 That was the reason I was bringing up that  
23 particular question.

24 So in this particular instance, yes, the  
25 proration unit gets the allowable, and because of being a

1 Delaware they would have to share the allowable and produce  
2 proportionately.

3 Okay. Are there any other questions of this  
4 witness at this time?

5 MR. CARR: No, sir.

6 EXAMINER STOGNER: You may be excused.

7 Mr. Carr?

8 MR. CARR: At this time we call Mr. Bittel.

9 KEVIN BITTEL,

10 the witness herein, after having been first duly sworn upon  
11 his oath, was examined and testified as follows:

12 DIRECT EXAMINATION

13 BY MR. CARR:

14 Q. Would you state your name for the record, please?

15 A. My name is Kevin Bittel.

16 Q. How do you spell your last name?

17 A. B-i-t-t-e-l.

18 Q. Where do you reside?

19 A. Highlands Ranch, Colorado.

20 Q. By whom are you employed?

21 A. Texaco.

22 Q. And what is your position with Texaco?

23 A. I'm a petroleum engineer.

24 Q. Have you previously testified before this

25 Division and had your credentials as an expert in petroleum

1 engineering accepted and made a matter of record?

2 A. Yes, I have.

3 Q. Are you familiar with the Application filed in  
4 this case on behalf of Maralo?

5 A. Yes.

6 Q. Are you prepared to recommend a production  
7 penalty for any well drilled at the proposed unorthodox --

8 A. Yes.

9 Q. -- location?

10 MR. CARR: Are the witness's qualifications  
11 acceptable?

12 EXAMINER STOGNER: Any objections?

13 MR. BRUCE: No, sir.

14 EXAMINER STOGNER: Mr. Bittel is so qualified.

15 Q. (By Mr. Carr) Mr. Bittel, let's go to what's  
16 been marked Texaco Exhibit Number 5. Would you identify  
17 and review this for Mr. Stogner?

18 A. Okay, yes, we recommend an 88-percent penalty.  
19 The basis is variance from standard setback. More simply,  
20 they are 88-percent closer to the lease line.

21 Q. That's just a simple percentage encroachment from  
22 the nearest standard location?

23 A. Right, which was 330 feet. They -- both  
24 locations 40 feet. Simply, 330 minus 40, divided by 330,  
25 is 88 percent.

1 Q. Let's go to Exhibit Number 6. What is this?

2 A. Okay, this is how we recommend to administer the  
3 allowable to the well.

4 We recommend it to be done per -- days per month,  
5 days per month times the allowable, or one minus the  
6 penalty, or 12 percent, equals days allowed to produce the  
7 well in a standard month.

8 An example of that being, in a 30-day month,  
9 times 12 percent, this one minus 88 percent, equals 3.6  
10 days per month that it would be allowed to produce.

11 Q. Now, Texaco is recommending that instead of a  
12 depth bracket allowable, days per month be utilized; is  
13 that right?

14 A. Yes.

15 Q. And is the reason for that because whenever you  
16 are working with a depth bracket allowable in a reservoir  
17 like this where there are high decline rates --

18 A. Right.

19 Q. -- that often a penalty soon becomes no penalty  
20 at all because of the natural decline of the well?

21 A. Correct.

22 Q. And so that's the reason you're recommending the  
23 actual --

24 A. Yes.

25 Q. -- days per month?

1           Let's go to Exhibit Number 7. Would you explain  
2   that?

3           A.    Okay, this is the proposed production cap.  
4   Originally up front, a well will be held accountable to a  
5   production cap, like 142 for the Nash Draw field. So we  
6   feel that -- also they should be -- You know, they're only  
7   allowed to produce 3.6 days -- I didn't change that. 3.6  
8   days -- I'm sorry.

9           MR. CARR: We'd like, with your permission, sir,  
10   to *nunc pro tunc* Exhibit Number 7.

11           EXAMINER STOGNER: Is this a typo?

12           MR. CARR: This is a typo. I hate to tell you  
13   this, but --

14           EXAMINER STOGNER: Is 511 correct or --

15           THE WITNESS: Yeah, 3.6 times 142 is 511.

16           MR. CARR: Okay. And unlike -- and like --

17           THE WITNESS: I did change that.

18           MR. CARR: And like earlier things today, this  
19   was also done in my office. All right.

20           EXAMINER STOGNER: Understood.

21           Q.    (By Mr. Carr) In any event, Mr. Biddle, what is  
22   the actual production volume or cap per month?

23           A.    511 barrels per month, on a 30-month day [*sic*].  
24   That would be, you know, a little bit more on a 31, a  
25   little less on 28.



1 But basically, for the example, we used 30 days,  
2 times -- you know, came up with 3.2, our proposed penalty,  
3 times 142, 511 barrels a day production cap.

4 Q. All right, sir. Let me ask you this. You've  
5 used 142 barrels a day. That's the allowable rate for the  
6 Nash Draw, correct?

7 A. Correct.

8 Q. Do you agree that whatever the allowable is for  
9 the spacing unit, there should be one allowable?

10 A. I think there should be.

11 Q. And the penalty should be applied to that one  
12 allowable?

13 A. Yes.

14 Q. And you've elected to use the higher producing  
15 rate of the two pools, which seem to be identified as being  
16 in the southwest quarter of Section --

17 A. For this example, yes.

18 Q. If the well is approved, the location is  
19 approved, and this penalty is imposed, in your opinion will  
20 it effectively protect the Texaco acreage?

21 A. Yes, in my opinion it's the only one that can be  
22 applied to adequately protect Texaco and our royalty  
23 interest.

24 Q. In your opinion, would anyone drill a well with  
25 an 88-percent penalty?

1           A.    No, it would be awfully hard.  It would certainly  
2   be possible.

3           Q.    The well is, however, only 40 feet from our  
4   section line --

5           A.    Correct, almost -- on our -- on -- yeah, in our  
6   lease.

7           Q.    What is Texaco recommending here?

8           A.    We recommend, really, to almost deny the  
9   Application -- or we almost request Maralo try to drill a  
10  legal location.  We'd rather bypass this whole problem.

11          Q.    But you are recommending either that the  
12  Application either be denied or this penalty be imposed?

13          A.    Correct.

14          Q.    And were Exhibits 5 through 7 prepared by you?

15          A.    Yes, they were.

16               MR. CARR:  At this time I'd move the admission of  
17  Texaco Exhibits 5 through 7.

18               EXAMINER STOGNER:  Exhibits 5 through 7, with the  
19  correction, will be admitted into evidence at this time.

20               Mr. Bruce?

21                               CROSS-EXAMINATION

22   BY MR. BRUCE:

23          Q.    Just a few questions.  Mr. Bittel, you recognize  
24  that Maralo would rather be at an unorthodox location?

25          A.    Yes.

1 Q. Have you calculated how long it would take a well  
2 to pay out at 512 barrels of oil per month?

3 A. No, I have not.

4 Q. A century or two?

5 A. It might be that long. I don't know.

6 Q. Mr. Uhl talked about possibly doing some  
7 additional work on your Remuda Basin State Number 3 well,  
8 as far as either directionally drilling it or horizontally  
9 drilling it. Have you done any cost studies on that?

10 A. Not really in-depth studies. We just kind of  
11 kicked the idea around. In reality, I mean, if you had  
12 that well drilled 330 off our lease line, we didn't have  
13 the 3 drilled, we would probably move 330 from your lease  
14 line to protect ourselves. And then for -- the 88-percent  
15 penalty would -- definitely would apply.

16 Q. I didn't understand that. I mean, if Maralo is  
17 330 of their east line -- off their lease line, you would  
18 still ask for the 88-percent penalty? I didn't understand.

19 A. No, no, no, no, no, no, no. If -- Well, if they  
20 were 40 feet off our lease line, we'd ask for the 88-  
21 percent penalty no matter what.

22 Now, if -- Let's say Maralo drilled a legal  
23 location. We'd probably drill closer to that location  
24 ourselves.

25 Q. A vertical hole?

1           A.    A vertical hole, if we drilled the well today. I  
2   don't know. We have a well there today, so we probably  
3   would not drill another well.

4           Q.    Okay. You don't have any management approval to  
5   directionally drill that --

6           A.    Not right now, no.

7           Q.    Do you agree that directionally drilled Delaware  
8   wells have very high operating costs?

9           A.    I would have to estimate that they would have a  
10   higher operating cost than a vertical well. However, it  
11   isn't up to -- I mean it's still viable -- possible that  
12   they can be produced or -- and drilled.

13          Q.    Now, if the -- what Mr. Uhl refers to as the "D"  
14   sand, Brushy Canyon "D" sand, is not productive on Texaco's  
15   acreage, is a penalty on the Maralo location justified?

16          A.    You're still 88 percent closer to our lease line.  
17   Therefore, I feel the penalty still applies.

18          Q.    Even if you couldn't drill a productive well on  
19   Texaco's acreage?

20          A.    We don't know if we could or could not, right  
21   now, until we drill a well up in that corner.

22          Q.    Now, if that -- Now, Maralo's well is pretty far  
23   up in the northwest corner of that quarter section,  
24   correct?

25          A.    Uh-huh.

1 Q. Would you agree that, assuming radial drainage,  
2 at least 50 percent of production from that well would come  
3 from Maralo acreage?

4 A. However, you would still be getting a significant  
5 advantage on our acreage, because we're not being protected  
6 by a penalty.

7 Q. About 25 percent of that drainage would come off  
8 of Texaco acreage?

9 A. Until we know the exact extent of the reservoir,  
10 you don't know what penalty. Our penalty is simple.  
11 You're 88 percent closer to our lease line. Therefore,  
12 we're asking for an 88-percent penalty.

13 Q. Do you agree with Mr. Uhl that in the Bell Canyon  
14 drainage is probably north-south rather than radial?

15 A. I don't know.

16 Q. You don't dispute him?

17 A. I don't dispute him, but I don't know how anybody  
18 would truly know, unless there would be a very detailed  
19 study.

20 MR. BRUCE: That's all I have, Mr. Examiner.

21 EXAMINER STOGNER: Mr. Carr, redirect?

22 MR. CARR: No.

23 EXAMINATION

24 BY EXAMINER STOGNER:

25 Q. The penalty you're showing on Exhibits 5, 6 and

1 7 --

2 A. Yes.

3 Q. -- is essentially a straightforward footage  
4 against the line --

5 A. Correct.

6 Q. -- with a well on the lease line getting -- being  
7 zero, and a well at a 330 location being 100.

8 142 barrels of oil per day, was that -- does that  
9 indicate anything in particular, or was that just utilized  
10 as an example?

11 A. It was utilized as an example, and that is  
12 currently the allowable from the Nash Draw --

13 Q. Okay.

14 A. -- the higher of the two.

15 Q. And this well is prorated, there is an  
16 assigned --

17 A. Maximum allowable cap.

18 Q. But all oil wells are prorated; is that correct?

19 A. Yes. In this case a hundred and forty --

20 Q. At least at this time?

21 MR. CARR: At this time.

22 EXAMINER STOGNER: I don't have any other  
23 questions of this witness. You may be excused.

24 Mr. Bruce -- I'm sorry, Mr. Carr?

25 MR. CARR: That concludes our presentation in

1 this case. I would like to give a brief closing.

2 EXAMINER STOGNER: Mr. Bruce?

3 MR. BRUCE: I don't have any further testimony.

4 EXAMINER STOGNER: I do have one question, and  
5 you can stay seated there, gentlemen, and answer, but I  
6 just want one answer.

7 When Maralo took this lease, I'm assuming that  
8 they were aware that there are certain constraints when you  
9 accept a federal lease, surface constraints being one,  
10 archaeology, and in this particular instance the cave karst  
11 area. Was Maralo -- Were they aware of that when they took  
12 the lease?

13 MR. GILL: Yes, sir.

14 EXAMINER STOGNER: Okay. And also, is this an  
15 area in the potash?

16 MR. BRUCE: Sorry about that, Mr. Examiner.

17 EXAMINER STOGNER: Okay. Isn't there some potash  
18 restrictions also on federal lands involved in this area?

19 MR. LOUGH: To the north there are. And I don't  
20 believe --

21 EXAMINER STOGNER: Not on these, okay. I didn't  
22 know if it was in the R-111-P area or not. But that's  
23 essentially the danger one accepts whenever they take a  
24 lease from the federal government, that there are other  
25 constraints due to surface, and Maralo was aware of that?

1 MR. GILL: Yes, sir.

2 EXAMINER STOGNER: Okay. At this time I believe  
3 we're ready for closing arguments.

4 Mr. Carr, I'll allow you to go first, and then  
5 Mr. Bruce, if you'd like to be the last to say something.

6 MR. BRUCE: That's fine.

7 MR. CARR: Mr. Stogner, as we know, Maralo is  
8 proposing to drill a Delaware well 40 feet from the common  
9 spacing line from a tract operated by Texaco. They have a  
10 right to produce, under our regulatory system, their fair  
11 share, and that is what is under their tract, not what's  
12 under their neighbor's land.

13 And what they're being -- what they're here  
14 asking for is an exception to the rules that govern  
15 development of the Delaware. These rules provide for 330-  
16 foot setbacks.

17 I would submit there is a reason we have rules,  
18 and there is a reason for 330-foot setbacks, and those  
19 reasons are rooted in considerations of drainage. And when  
20 we look at these spacing and well-location requirements, I  
21 think we go right to the heart of our whole regulatory  
22 system, and they involve questions of correlative rights,  
23 they also involve waste issues.

24 Maralo says it doesn't like the 40-foot setback.  
25 It's really a BLM-dictated location. But that doesn't



1 change the fact that being 40 feet off the lease line and  
2 not even seeking a penalty really, in the final analysis,  
3 makes a mockery of the rules.

4 Like it or not -- It is a better location in the  
5 zone in which Texaco is producing a very good well on the  
6 offsetting tract, and we think the location should be  
7 denied.

8 Now, they can say, The BLM made me do it. And  
9 the BLM may have said, You can't really develop the  
10 reserves under this tract unless you get right off the  
11 edge.

12 But we've learned a very painful lesson in the  
13 potash area. We've learned that you can take a federal  
14 lease, and then because of other constraints you can't  
15 develop it at all. Perhaps they're now expanding that to  
16 encompass archaeological matters or caves.

17 But the problem is, when the BLM says that these  
18 are federal minerals but you can't develop them except from  
19 unique, extremely unorthodox positions the solution really  
20 isn't that you run to the OCD and get permission to drain  
21 Texaco or to drain the State of New Mexico.

22 The BLM decision doesn't mean you forget  
23 correlative rights. The BLM's position doesn't mean this  
24 agency forgets its duty to prevent waste. There's still a  
25 pact to protect correlative rights, to prevent waste.

1           And in so doing, just because of what the BLM may  
2     have done, you're really not, I submit, required or even  
3     authorized to guarantee someone a bizarre location where  
4     they will drain the reserves from their neighbor.

5           So you're not required to approve development  
6     plans, because there may be the -- the directional drilling  
7     or other alternatives are not as economically attractive,  
8     just because of what the BLM has done. We still look at  
9     waste and correlative-rights issues, no matter what the  
10    federal government tells us.

11           It's interesting, Mr. Bruce has said, Well, heck,  
12    you know, we can be right on the lease line, and 50 percent  
13    of the reserves will come from our tract.

14           I submit that a system of well locations, spacing  
15    pattern, really isn't that simple. You could drill on  
16    Texaco. They couldn't get 49 percent of the production off  
17    their own acreage.

18           But it also involves an ability to protect your  
19    own property when somebody's moving toward it. And when  
20    they get so close -- albeit 50 percent is still coming from  
21    them -- that you have to drill right on top of them, you're  
22    marching into imprudent development practices and economic  
23    waste.

24           And so it's not just this simple question that we  
25    can drill anyplace and we get 50 percent off our tract.

1 Well, heck, we should get 50 percent. It's just not that  
2 simple a situation.

3 Mr. Gill admits that in the zone that we're  
4 producing from that you gain an advantage, but they  
5 recommend no penalty. You are authorized by statute to  
6 impose a penalty to offset the advantage gained. Maralo  
7 proposes no penalty.

8 We seek a penalty we admit is extremely  
9 burdensome, 88 percent. We ask that it be applied to the  
10 number of days in a producing month, because we have found  
11 that penalties based on the prorationing of oil, the depth  
12 bracket allowable often doesn't work in reservoirs like  
13 this where there's a very sharp decline in producing rates.  
14 So the penalties that are meaningful when the well is  
15 completed become no penalty at all because of the natural  
16 performance of the well.

17 The penalty is tantamount to denial, so I guess  
18 we're here seeking denial.

19 And I think if you do that, they have to go back  
20 to the Bureau of Land Management. If they want federal  
21 minerals developed, perhaps they can work out a way with  
22 the BLM to mitigate a surface location.

23 Or perhaps they'll have to go back and decide to  
24 directionally drill the well and only get a 20-percent  
25 return on their investment.

1           Or perhaps they'll have to go and meet with  
2 others to try and form a working interest unit and some way  
3 to allocate production on a unitwide basis so that, in  
4 fact, the way the area is being developed is more  
5 consistent with the geology.

6           Or, as you noted earlier, they not be produced at  
7 all.

8           But because of the current location, they will  
9 drain Texaco. The location outright ignores our spacing  
10 rules. And unless the location is either denied or  
11 penalized, the correlative rights of Texaco will be  
12 impaired.

13           EXAMINER STOGNER: Thank you, Mr. Carr.

14           Mr. Bruce?

15           MR. BRUCE: Mr. Examiner, I've said it many times  
16 today. Maralo would rather not be here today. However,  
17 it's not asking for any guarantees.

18           We're here because the BLM's surface-use  
19 requirements mandate that we come before the Division. We  
20 don't like it, but that's why we're here.

21           Maralo is entitled to produce reserves under its  
22 tract. Now, let's look at it.

23           The main zone, the Loving sand, or what Texaco  
24 calls Brushy Canyon "D" sand is dry or noncommercial in the  
25 offsetting well units, the northeast quarter of the

1 southwest quarter of Section 30 and the southeast quarter  
2 of the northwest quarter of Section 30. Therefore, no  
3 penalty is necessary in the Nash Draw-Brushy Canyon Pool.

4 Then we come to the upper zones. Texaco has a  
5 good well over there. We don't deny that. They've  
6 produced, according to their exhibit, about 38,000 barrels  
7 of oil. They hope to produce it another six, seven years,  
8 maybe, produce 150,000 barrels of oil.

9 If Maralo is successful in the Loving sand, it  
10 won't come back up to that Bell Canyon for about six years.  
11 By then, Texaco will have produced the vast bulk of the  
12 reserves under its tract, and thus the effect will be  
13 minimal.

14 We know we're close to the lease line. We don't  
15 like it. But if you assume radial drainage, only 25  
16 percent of the drainage in the Bell Canyon from the Maralo  
17 well will come from the Texaco tract.

18 I know these cases are difficult for the  
19 Division. And maybe the radial drainage thing that I  
20 assert is simple-minded. But this footage penalty is just  
21 as simple.

22 Furthermore, in the Bell Canyon, Mr. Uhl stated,  
23 drainage is probably oblong. Drainage is more from the  
24 south and from the north. It's not coming from the Maralo  
25 acreage. Again, that mitigates the effect of drainage from

1 the Maralo well on the Texaco acreage.

2 We would request that the well be approved, and  
3 if there is a penalty, assess it in the nature of, as Mr.  
4 Gill stated, somewhere, 25 to 50 percent. That's how we  
5 would be affecting Texaco. Without approving the well,  
6 Maralo won't be able to produce any reserves under its  
7 tract at all. Sometimes that happens, but we don't think  
8 it's fair.

9 Maralo has tried to work with Texaco on this, but  
10 they couldn't come to an agreement, so we're here in front  
11 of you today.

12 We ask you to approve the well with a reasonable  
13 penalty.

14 Thank you.

15 EXAMINER STOGNER: Thank you, Mr. Bruce.

16 I'm going to request a rough draft order from  
17 each of you in this matter.

18 If there's nothing further in Case Number 11,912,  
19 then I will take this matter under advisement.

20 (Thereupon, these proceedings were concluded at  
21 11:55 a.m.)

22 \* \* \*

23 I do hereby certify that this is a true and correct copy of the  
24 record of the proceedings on 22 January 1998.  
25 *Michael E. Stogner* Examiner

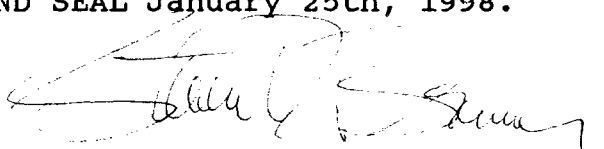
## CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL January 25th, 1998.

  
\_\_\_\_\_  
STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 1998