

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. 12,743  
)  
APPLICATION OF TEXACO EXPLORATION AND )  
PRODUCTION, INC., FOR AN UNORTHODOX )  
SUBSURFACE GAS WELL LOCATION AND AN )  
EXCEPTION TO DIVISION RULE 104.D (3), )  
LEA COUNTY, NEW MEXICO )

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

November 1st, 2001

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, November 11th, 2001, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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OIL CONSERVATION DIV.  
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November 1st, 2001  
Examiner Hearing  
CASE NO. 12,743

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\* \* \*

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

## FOR THE DIVISION:

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## FOR THE APPLICANT:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR  
 110 N. Guadalupe, Suite 1  
 P.O. Box 2208  
 Santa Fe, New Mexico 87504-2208  
 By: WILLIAM F. CARR

\* \* \*

1 WHEREUPON, the following proceedings were had at  
2 10:22 a.m.:

3 EXAMINER CATANACH: At this time we'll call Case  
4 12,743, which is the Application of Texaco Exploration and  
5 Production, Incorporated, for an unorthodox subsurface gas  
6 well location and an exception to Division Rule 104.D (3),  
7 Lea County, New Mexico.

8 Call for appearances.

9 MR. CARR: May it please the Examiner, my name is  
10 William F. Carr with the Santa Fe law firm Holland and  
11 Hart, L.L.P. We represent Texaco Exploration and  
12 Production, Inc., and I have two witnesses.

13 EXAMINER CATANACH: Any additional appearances?  
14 Will the two witnesses please stand to be sworn  
15 in?

16 (Thereupon, the witnesses were sworn.)

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

20 DIRECT EXAMINATION

21 BY MR. CARR:

22 Q. Will you state your name for the record, please?

23 A. Charles R. Wolle, W-o-l-l-e.

24 Q. Where do you reside?

25 A. Midland, Texas.

1 Q. By whom are you employed?

2 A. I'm employed by Texaco Exploration and  
3 Production, Inc.

4 Q. Mr. Wolle, have you previously testified before  
5 this Division?

6 A. Yes, I have.

7 Q. At the time of that testimony were your  
8 credentials as a petroleum engineer accepted and made a  
9 matter of record?

10 A. Yes, they were.

11 Q. Are you familiar with the Application filed on  
12 behalf of Texaco in this case?

13 A. I am.

14 Q. Are you familiar with Texaco's proposal to  
15 simultaneously dedicate two Abo gas wells in a 160-acre  
16 spacing unit in Section 12?

17 A. Yes, I am.

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

20 EXAMINER CATANACH: They are.

21 Q. (By Mr. Carr) Would you initially summarize for  
22 Mr. Catanach what it is that Texaco seeks with this  
23 Application?

24 A. We seek authorization to recomplete our C.H. Weir  
25 "A" Well Number 7, which is located 1985 feet from the

1 south line and 660 feet from the west line of Section 12,  
2 Township 20 South, Range 37 East, in Lea County, into the  
3 Skaggs-Abo Gas Pool by kicking off in a northern direction  
4 and drilling horizontally an approximate distance of 1645  
5 feet within an existing nonstandard 160-acre gas spacing  
6 unit, such that the resulting producing area extends to  
7 within 330 feet from the northern boundary of this unit.

8 We also seek authorization to simultaneously  
9 dedicate this nonstandard spacing unit in the Skaggs-Abo  
10 pool to the C.H. Weir "A" Well Number 7 and to the existing  
11 C.H. Weir "A" Well Number 14, which is located at a  
12 standard gas well location 1980 feet from the south line  
13 and 1815 feet from the west line of Section 12.

14 Q. Mr. Wolle, what rules govern the development of  
15 the Abo formation in this area?

16 A. They're governed by the General Rules of the  
17 Division, Rule 104.C These wells provide for a 160-acre  
18 spacing unit with wells located 660 feet from the outer  
19 boundary of the dedicated unit.

20 Q. Now, you indicated there was previously approved  
21 a nonstandard spacing unit in the Abo formation?

22 A. Yes, sir.

23 Q. And could you provide information on that,  
24 please?

25 A. The nonstandard spacing unit, comprised of the

1 south half of the northwest quarter and the north half of  
2 the southwest quarter, was approved by Division Order  
3 Number R-7179, Case Number 7761, in January 5th, 1983.

4 Q. You have prepared exhibits for presentation here  
5 today?

6 A. Yes, I have.

7 Q. Let's go to what has been marked for  
8 identification as Texaco Exhibit Number 1. Would you  
9 identify this and review it, please?

10 A. This is an orientation map of the area that we're  
11 looking at. The Texaco-operated acreage is highlighted in  
12 yellow. The proration unit that I just spoke of has the  
13 dark boundary around it.

14 The wells that are shown on this map are only the  
15 wells that were drilled to a depth of 6800 feet and below.  
16 The six wells that have large circles around them are wells  
17 that are now producing or have in the past produced from  
18 the Abo formation.

19 Q. If we look at this map, first of all, what is  
20 shaded in yellow?

21 A. That is the Texaco-operated acreage.

22 Q. And there are also contours on this; it's a  
23 structure map. Will those be reviewed by a later witness?

24 A. They will be reviewed by a geological witness,  
25 yes, sir.

1           Q.    If we look at the section in question, we have  
2 how many spacing units in that section?

3           A.    There are four spacing units.

4           Q.    And would you identify them, please?

5           A.    Yes, sir, the spacing unit that I've previously  
6 referenced, and immediately to the east of that is another  
7 160-acre spacing unit. The north half of the north half of  
8 the section is a 160-acre spacing unit that Conoco had an  
9 Abo well on, and the south half of the south half of the  
10 section is a 160-acre spacing unit that is operated by  
11 Texaco where we have an active Abo producing well.

12          Q.    That's 100-percent Texaco?

13          A.    That's correct.

14          Q.    If we go to the north half of the north half,  
15 that is the Conoco unit

16          A.    That's correct.

17          Q.    You're seeking for the bottomhole location to be  
18 330 feet from the north line of your spacing unit,  
19 encroaching on Conoco; is that right?

20          A.    Yes, sir.

21          Q.    Their Abo well in the north half, north half,  
22 produced from a location 330 feet off that common boundary  
23 with the Texaco property to the south; is that correct?

24          A.    Yes, sir, their well was located 990 feet from  
25 the north line of the section.

1 Q. Is Exhibit Number 2 a copy of the administrative  
2 application that was filed in this case?

3 A. Yes, it is.

4 Q. And attached to that are copies of the notice  
5 letters that were provided of this hearing, and return  
6 receipts?

7 A. That is correct.

8 Q. The original notification to the parties provided  
9 information on the location and the bottomhole location of  
10 the well, did they not?

11 A. Yes, that is correct.

12 Q. Now, if we look at Exhibit Number 1, is the  
13 ownership in the 160 spacing unit to the east of the  
14 subject spacing unit common with the ownership in the  
15 spacing unit that's the subject of this hearing?

16 A. That is correct.

17 Q. If we go south you've got 100 percent Texaco?

18 A. That is correct.

19 Q. If we go to the west you have a spacing unit. Is  
20 the ownership common in that Texaco-operated spacing unit?

21 A. There's a difference in ownership in the east  
22 half of Section 11.

23 Q. And who is the additional interest owner in that  
24 property, who are they?

25 A. Geodyne has an interest in that which, as it

1 turns out, is the same interest that Geodyne has in the  
2 proration unit that we're discussing. And also in the east  
3 half of Section 11, OXY has an interest in that.

4 Q. As to Geodyne, have they agreed to participate in  
5 the re-entry and horizontal drilling of this well?

6 A. Yes, sir, they have.

7 Q. OXY has the interest in the east half of Section  
8 11. Have they been notified of this hearing and the  
9 proposal?

10 A. Yes, they have been notified.

11 Q. And the wellbore that we're talking about re-  
12 entering is a standard setback from the east half of  
13 Section 11, is it not?

14 A. That's correct.

15 Q. So in terms of the notice requirements, we have  
16 provided notice as required by the Division Rules to the  
17 affected working interest owners in those Texaco-operated  
18 spacing units that offset the property where the ownership  
19 is different?

20 A. That's correct, we have.

21 Q. is Exhibit -- And then that notice is set forth  
22 in Exhibit Number 2; is that correct?

23 A. That's correct.

24 Q. Let's go now to the engineering portion of this  
25 case, and I would ask you to refer to what has been marked

1 as Exhibit Number 3, identify that and review it for Mr.  
2 Catanach.

3 A. Exhibit Number 3 shows information on the six  
4 wells that show up on the map as having produced in the  
5 Skaggs-Abo Gas Pool in the vicinity of the C.H. Weir "A"  
6 Number 7. The tabulation gives the location, the operator,  
7 the date of first and last production, cumulative  
8 production and the current producing rate.

9 As you will see, there are only two wells that  
10 are currently still producing, the C.H. Weir "A" Number 14,  
11 which is in the proration unit that we're discussing, and  
12 also the M.B. Weir "B" Number 11, which is in the proration  
13 unit to the south. Each of those is on Texaco-operated  
14 acreage.

15 Q. All right. The next exhibit is a group of  
16 production plots. Would you identify that exhibit and  
17 review the information on those plots for Mr. Catanach?

18 A. Yes, these are our production plots for the six  
19 Abo wells that have produced. The first one is the C.H.  
20 Weir "A" Number 14. It was completed in 1983, currently  
21 producing about 300 MCF a day. A very small amount of oil  
22 is associated with that. It has a cumulative production of  
23 about 2.7 BCF, and over the past ten years or so it's got a  
24 decline rate of about 5 percent per year. And at that  
25 decline rate it will reach an economic limit in about the

1 year 2040.

2 Q. And this is the current producing well on the  
3 spacing unit which is the subject of this hearing?

4 A. That's correct.

5 Q. All right, let's go to the next production plot.

6 A. The next plot is the M.B. Weir "B" Number 11,  
7 which again is in the spacing unit to the south. It was  
8 drilled in 1986.

9 It's currently producing about 180 MCF a day,  
10 with a decline rate of about 10 percent over the past 10  
11 years. And it will reach its economic limit somewhere in  
12 the range of year 2020.

13 Q. And what are the other plots included in the  
14 exhibit?

15 A. The other plots are the wells that have  
16 previously produced in the Skaggs-Abo Pool in this area,  
17 and showing their cumulative production.

18 Conoco's Skaggs "B" Com Number 7 had a cum of  
19 just over a billion cubic feet.

20 The C.H. Weir "B" Number 10, it's also currently  
21 inactive and it has a cum of about just under 200 million  
22 cubic feet.

23 The C.H. Weir "A" Number 12, which is to the east  
24 of the proration unit, is shut in. It had a cum of about  
25 half a billion cubic feet.

1           And there's a well to the south, the L.R. Kershaw  
2       Number 12 that produced for a very short period of time and  
3       had a cum of about 169 million cubic feet of gas.

4           All of these wells either have or had during  
5       their producing lives similar decline rates. There's  
6       nothing significantly different. And again, the only two  
7       that are still currently producing are the C.H. Weir "A"  
8       Number 14 and the M.B. Weir "B" Number 11, both of which  
9       are Texaco wells.

10           Q.    When was the Number 14 well drilled?

11           A.    The Number 14 was drilled in 1983.

12           Q.    And the Number 11?

13           A.    1986.

14           Q.    And how far apart are those wells?

15           A.    Those are abut 1320 feet apart.

16           Q.    Is there any evidence of any interference between  
17       these two wells?

18           A.    No, sir, the initial productions were similar,  
19       the decline rates are a little bit different but they've  
20       both been very consistent.

21                    We don't see any indication of interference being  
22       noted in either of these wells.

23           Q.    And the information you have on this reservoir,  
24       in the wells in this area, do you see any evidence of any  
25       interference having occurred between any of these wells?

1 A. No, sir, we do not.

2 Q. If we go now to the well, the Number 7 well that  
3 you're requesting authorization to re-enter and  
4 horizontally drill, what is the current status of that  
5 well?

6 A. That well was a Drinkard producer. It's  
7 currently shut in.

8 Q. Any chance that it would ever be returned to  
9 production in the Drinkard?

10 A. It was just a marginal producer. It became  
11 uneconomic, so I would not anticipate that being the case.

12 Q. If we look at this information on the two wells  
13 that you hope to have producing from the Abo on this  
14 spacing unit, do you have an opinion on whether or not the  
15 Well Number 14 can effectively drain the Abo on the east  
16 half of this spacing unit?

17 A. On the east half or the west half of the spacing  
18 unit?

19 Q. I'm sorry, on the west half.

20 A. I don't believe it will. I think by virtue of  
21 the fact that we're not seeing any indication of  
22 interference between the Number 14 well and the Number 11  
23 well to the south, and with their spacing, I think that  
24 indicates that we're not effectively draining that entire  
25 proration unit.

1           Q.    Could you summarize for Mr. Catanach the  
2 conclusions you've reached and the reasons that Texaco is  
3 seeking authorization to put this second well on this  
4 spacing unit?

5           A.    There are several reasons for this.  One, we have  
6 a viable wellbore that we can utilize.  We have to wait  
7 until the existing well that's producing on that proration  
8 unit reaches its economic limit.  We're talking about a  
9 plus or minus 30-year remaining life.

10                If we want to use the Number 7 well at some time  
11 in the future, we'd have to keep this well in a temporarily  
12 abandoned status longer than is normally permitted.  We  
13 don't feel the reserves in the west half of the proration  
14 unit are being drained by the existing producer there, so  
15 we think we can recover additional reserves from this  
16 proration unit by the drilling of the additional horizontal  
17 well in Number 7.

18           Q.    If you're not allowed to drill the horizontal  
19 well in the west half of this spacing unit, in your opinion  
20 will reserves be left in the ground that will never be  
21 recovered?

22           A.    They'll either be left in the ground or deferred  
23 to some date well into the future.

24           Q.    In your opinion would denial of the Application  
25 result in the waste of hydrocarbons?

1 A. Yes, sir.

2 Q. Will approval of the Application otherwise be in  
3 the best interest of conservation and the protection of  
4 correlative rights?

5 A. Yes, it will.

6 Q. Will Texaco call a geological witness to review  
7 that technical portion of this Application?

8 A. Yes, sir.

9 Q. Were Exhibits 1 through 4 prepared by you --

10 A. Yes, they were.

11 Q. -- or compiled at your direction?

12 A. Yes, they were.

13 MR. CARR: At this time, Mr. Catanach, we'd move  
14 the admission into evidence of Texaco Exhibits 1 through 4.

15 EXAMINER CATANACH: Exhibits 1 through 4 will be  
16 admitted as evidence.

17 MR. CARR: And that concludes my direct  
18 examination of Mr. Wolle.

19 EXAMINATION

20 BY EXAMINER CATANACH:

21 Q. Mr. Wolle, the Number 14 well --

22 A. Yes, sir.

23 Q. -- is one of the better producing wells in terms  
24 of, I guess, current production, obviously, and cumulative  
25 production?

1           A.    Yes, it has the highest cumulative production.

2           Q.    Have you done any drainage calculations for that  
3 well?

4           A.    No, I have not.  The Abo out here is a series of  
5 thin intervals of varying quality, and it's difficult to  
6 determine what is effective pay and what is not effective  
7 pay.  So that makes it pretty difficult to determine a  
8 drainage area.

9                   The fact that we have wells that are about 1320  
10 feet apart, our Well Number 14, Well Number 11, and the  
11 wells to the northeast and then Conoco's well to the north  
12 at a spacing of 1320 feet indicate that we do have, I  
13 guess, continuity, but it's difficult to tell how much is  
14 equivalent pay.

15          Q.    Now, when you say you haven't seen any  
16 interference between these wells, what exactly are you  
17 talking about, Mr. Wolle?

18          A.    Looking at the performance of particularly Well  
19 Number 14, which was drilled in 1983, and when Well Number  
20 11, immediately to the south of it, came on, there was not  
21 any significant change in its producing characteristics,  
22 indicating that -- we have not seen any indication of  
23 interference since that time.

24                   Both of the wells initially produced half a  
25 million to a million cubic feet a day, and we did not see

1 anything to indicate that other wells came on, there is a  
2 reduction in production from other wells.

3 Q. Okay, besides the Number 14 and 11, have you  
4 looked at other wells to see if there was any interference?

5 A. Yes, nothing seems to show up to indicate that.

6 Q. Now, the Number 7 well has never been tested in  
7 the Abo formation, right?

8 A. That's correct.

9 Q. But you've probably looked at the logs for that  
10 well and determined that it's potentially productive?

11 A. It's not deep enough.

12 Q. Oh, okay.

13 A. It just goes to the Drinkard.

14 Q. Got you. So you're going to have to drill  
15 deeper. And what's the reason for the horizontal drilling?

16 A. We've had some success in other places in Lea  
17 County drilling horizontal wells in the Abo to contact more  
18 of the reservoir and connect fractures that may be present,  
19 so we think we can do a better job with a horizontal well  
20 by contacting more of the reservoir, than we can with  
21 simply another vertical well.

22 Also, we will get into the northern part of that  
23 proration unit, if you would, and better drain the reserves  
24 that are in that area of the unit.

25 Q. The well in Section 11 is no longer producing; is

1 that correct?

2 A. That's correct, yes, sir.

3 Q. And the well, the Conoco well, in the north half  
4 of Section 12 is no longer producing?

5 A. That's correct.

6 Q. Are those wells essentially depleted, in your  
7 opinion?

8 A. Yes, sir. The Conoco well was shut in back in  
9 1996, and the well in Section 11 was shut in last year.

10 Q. Okay, the Conoco well was shut in in 1996?

11 A. 1996, yes, sir.

12 Q. The well in 11 was shut in last year?

13 A. Yes, sir.

14 Q. Aside from the area you've shown here, is there a  
15 larger area that encompasses the Skaggs-Abo Gas Pool?

16 A. There are other wells in that pool, and I don't  
17 have any information on those. I was focusing on the area  
18 in question, yes, sir.

19 Q. Where is this in relation to the pool, to the  
20 larger pool?

21 A. I think those wells are to the southwest, but I'm  
22 not certain of that.

23 Q. Okay. Do you have any idea how much you might be  
24 able to recover by recompleting the Number 7 well?

25 A. Based on the performance of the other wells that

1 have produced or are producing, I'd anticipate in the --  
2 half a billion cubic feet up.

3 There's quite a variance in the cumulative  
4 production from those wells, but I think that is a  
5 reasonable expectation.

6 Q. Now, that's based on what, the Number 10 well?  
7 What it recovered, or -- or what are you basing that on?

8 A. Okay. Looking at Number 14, the Number 11, the  
9 Number 12 well and the Conoco well up to the north, Number  
10 11 is a relatively low rate -- or, excuse me, a low cum.  
11 The others are much higher.

12 Q. That's considerably lower than -- Well, that's  
13 about half of what some of these wells recovered? Some of  
14 these wells are around the 1 BCF recovery?

15 A. Conoco's well was about a BCF. Our Number 14 is  
16 about 2.7 BCF, and our M.B. Weir "B" Number 11 to the south  
17 is 1.8 BCF, and our Weir "A" Number 12 is right at half a  
18 billion.

19 Q. Okay. And it's your opinion that those reserves  
20 are probably not going to be recovered by the 14 well?

21 A. That's correct.

22 EXAMINER CATANACH: Okay, I have no further  
23 questions.

24 MR. CARR: At this time, Mr. Catanach, we call  
25 Mr. Villalobos.

JOE VILLALOBOS,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. My name is Joe Villalobos.

Q. Mr. Villalobos, where do you reside?

A. I reside in Midland, Texas.

Q. By whom are you employed?

A. I'm employed by Texaco Exploration and Production, Incorporated.

Q. And what is your position with Texaco?

A. I'm a geologist with Texaco in Midland, working the New Mexico portion of the Central Basin Platform.

Q. Have you previously testified before the New Mexico Oil Conservation Division?

A. No, sir, I have not.

Q. Could you review your educational background for Mr. Catanach?

A. Yes, sir. I have a bachelor's of science from the University of Texas at El Paso.

Q. And when did you receive your degree?

A. I received my degree in geology in 1981.

Q. And since that time for whom have you worked?

1           A.    I started working with Getty Production back in  
2   1981.  1984 we merged with Texaco, and I've been working  
3   the Permian Basin mid-continent for the last 20 years.

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

6           A.    Yes, sir, I am.

7           Q.    And are you familiar with the area which is the  
8   subject of this Application?

9           A.    Yes, sir, I am.

10          Q.    Have you made a geological study of the area  
11   which is involved in this case?

12          A.    Yes, sir, I have.

13          Q.    And are you prepared to share the results of that  
14   work with the Examiner?

15          A.    Yes, I am.

16               MR. CARR:  Are the witness's qualifications  
17   acceptable?

18               EXAMINER CATANACH:  They are.

19          Q.    (By Mr. Carr)  Let's refer initially back to  
20   Exhibit Number 1, the structure map, and I would ask you to  
21   review the geological information that is shown on this  
22   exhibit.

23          A.    Yes, sir.  What we have here is a structural map  
24   on the top of the Abo, which is found at approximately 6900  
25   feet in this area.  This is the Skaggs-Abo Pool, located

1 about five miles southeast of Monument, New Mexico.

2 And basically what this structure on top of the  
3 Abo shows is an anticlinal feature with about 90 feet of  
4 structural closure. And our strategy, basically, with  
5 going after the Abo is to complete with an open-hole type  
6 of method which we think is more beneficial, as well as to  
7 apply horizontal technology to intersect as many fractures  
8 within the Abo formation as possible. We think that on the  
9 crest of this structure, we think we'll have fracturing  
10 involved with our Abo formation.

11 Q. And when you do your horizontal drilling, you're  
12 using an open-hole completion?

13 A. That's correct, yes, sir.

14 Q. Let's go to Exhibit Number 5, the A-A' cross-  
15 section. There's a trace for the cross-sections on Exhibit  
16 Number 1, is there not?

17 A. Yes, sir, there is, it's A-A', labeled right on  
18 the map. It's south to north.

19 Q. Okay, let's go to that cross-section. I'd ask  
20 you to review the information on that exhibit for the  
21 Examiner.

22 A. Yes, sir. Basically what we have here is a  
23 structural cross-section with a minus 3500 feet subsea  
24 datum. The top of the Abo is roughly between 6900 and 6950  
25 here. Basically what I'm trying to show with this cross-

1 section is the continuity of the Abo formation.

2 I'm also trying to show the heterogeneity that is  
3 involved with the Abo formation, a lot of clean dolomitic  
4 stringers with 6- to 10-percent porosity, as well as a lot  
5 of tight, organic-rich siltstones and shales interbedded  
6 throughout the 600 to 700 foot of Abo formation.

7 Another thing that I want to point out on this  
8 map is the caliper. You can see in just about all of the  
9 wells the erratic nature of the caliper, just going back  
10 and forth. While drilling in some of the wells close by  
11 we've seen a lot of torque in our bit. And other wells,  
12 the sonic indicates what we think is fracturing.

13 And in this cross-section specifically, we think  
14 this caliper is indicating fracturing on the crest of this  
15 Skaggs-Abo Pool.

16 Q. With that fracturing you, in fact, have a very  
17 good candidate for using the technology you've been  
18 employing in the Abo, and that is with the open-hole  
19 horizontal wellbore to intersect as much of the reservoir  
20 as possible?

21 A. That's correct, this will be the fifth time we  
22 apply this technology in the Central Basin Platform in New  
23 Mexico, and we think this horizontal lateral will intersect  
24 a lot of heterogeneity, a lot of different type of pay, as  
25 well as encounter more fracturing.

1           Q.    Mr. Villalobos, let's go now to Exhibit Number 6,  
2 cross-section B-B', the east-west cross-section.  What does  
3 this show you?

4           A.    Basically all I wanted to show here was -- This  
5 is B-B', and it's basically a west-to-east cross-section.  
6 And basically all I'm trying to show here is the continuity  
7 of the Abo formation across the area of interest.

8           Q.    What is Exhibit Number 7?

9           A.    Exhibit Number 7 is a well path provided by our  
10 directional driller, and it basically shows what we intend  
11 to do.  We'll drill about ten feet below the Drinkard and  
12 encounter the Abo, and then we're just going to kick off a  
13 lateral and hopefully intersect as much pay as possible, as  
14 well as get into some nice fractured intervals.

15                   True vertical depth is about 7600 feet, which is  
16 the lowermost part of the pay within the Abo.

17           Q.    And you'll kick off in a northerly direction and  
18 go about how far, do you think?

19           A.    Our target is to go approximately 1645 feet in a  
20 northerly direction.

21           Q.    What conclusions can you reach from your  
22 geological study of this area?

23           A.    The conclusions that I've reached based on my  
24 geological study is that the Abo formation is continuous,  
25 it's a heterogeneous reservoir, we believe there will be

1 fracturing on the crest of the structure, and it's a  
2 continuous zone across the area where we think our  
3 horizontal technology as well as our open-hole completion  
4 method will allow us to make a commercial well here.

5 Q. In your opinion, is the additional well necessary  
6 to effectively produce the Abo reserves under this spacing  
7 unit in the west half of Section 12?

8 A. Yes.

9 Q. In your opinion, will approval of the Application  
10 and the drilling of this well result in the recovery of  
11 additional reserves?

12 A. Yes, it will.

13 Q. Would use of this wellbore void the need for  
14 drilling an additional or an unnecessary well at a later  
15 time?

16 A. Yes, I think it will, yes.

17 Q. And otherwise will the approval of the  
18 Application be in the best interest of conservation, the  
19 prevention of waste and the protection of correlative  
20 rights?

21 A. Yes, sir, I think it will.

22 Q. Were Exhibits 5 through 7 prepared by you?

23 A. Yes, sir, they were.

24 MR. CARR: Mr. Catanach, at this time we move the  
25 admission into evidence of Texaco Exhibits 5 through 7.

1 EXAMINER CATANACH: Exhibits 5 through 7 will be  
2 admitted as evidence.

3 MR. CARR: And that concludes my direct  
4 examination of Mr. Villalobos.

5 EXAMINATION

6 BY EXAMINER CATANACH:

7 Q. Mr. Villalobos, the Abo in this area -- the  
8 produced intervals within the Abo, there are several  
9 different producing intervals?

10 A. Yes, sir, that is my thinking. I think in the  
11 past people have focused on the clean dolomitic part within  
12 the top 200 feet. I believe the lowermost 400 feet have  
13 pay as well, based on -- This will be the eighth well where  
14 we've targeted the Abo in this area that I've been involved  
15 with.

16 We've run FMIs, we've run sonic logs, and I  
17 believe that the lowermost part of the Abo has thin -- and  
18 I'm talking one- to two-feet-thick intervals that have oil,  
19 based on this FMI, these FMIs -- we've run a couple -- as  
20 well as the mudlogs that we've had in these eight wells  
21 we've drilled here.

22 Q. Well, was the Number 14 well --

23 A. Yes, sir.

24 Q. -- was it just perforated in the upper portion of  
25 the Abo?

1           A.    For the most part, yes, sir.  If you look on  
2 cross-section A-A', that darkened interval, maybe seven,  
3 eight feet thick, high-porosity stringer, that's what the  
4 focus was in the 1970s, 1980s when they were going after  
5 the Abo, early 1980s.

6           Q.    So that well was never perforated in the lower  
7 portion of the Abo?

8           A.    Yes, it was --

9           Q.    Oh, it was?

10          A.    -- it was, it was.

11          Q.    So eventually they came back in and tried to --

12          A.    And commingled with this -- I don't think  
13 commingled is the right word, but added this upper Abo pay.  
14 The difficulty with the Abo is, when we run cement through  
15 it we just have done a very poor job.  We've run several  
16 cement bond logs.  The cement is always in the porous  
17 intervals, and then the shaly, organic siltstones don't  
18 have nothing behind it.  So trying to frac, we don't know  
19 where those fracs are going.

20                So the thinking here is to drill to the top of  
21 the -- drill through the Abo, run gravel, run sand, protect  
22 our formation from cement and just try acid and keep the  
23 fractures and the pay relatively pure.

24          Q.    Why is it necessary to take the horizontal  
25 portion of that wellbore all the way as far north as you

1 plan to take it? That's only going to be 330 feet, I  
2 understand, from the boundary of that spacing unit?

3 A. Yes, sir.

4 Q. Why is that necessary? Why couldn't you go to a  
5 legal 660 setback?

6 A. We have a wellbore design path in place to just  
7 go 660, if that's all we are required. What I did when I  
8 did my studies, I noticed several wells closer than 660 to  
9 those lease lines, and I thought it was something that we  
10 could also do. I knew we would be at the Commission for a  
11 simultaneous dedication hearing, so we thought we'd attempt  
12 it.

13 Also when we design, or when we propose our  
14 wellbore designs, I give myself some leeway, even though  
15 the technology has come a long way. Sometimes we encounter  
16 problems and we don't get all the way where we should,  
17 things get expensive. I like to design a little bit longer  
18 than what I think for cost purposes, and I also like to  
19 give myself some leeway -- If we've encountered a lot of  
20 pay as we get to wellbore number four, and I think there's  
21 additional risk going deeper, I will stop it short.

22 So I give myself leeway. We were going to be at  
23 the Commission, so I thought I'd go 330, based on the  
24 Conoco well and the Number 10 well. But --

25 Q. So there's not really a real geologic reason why

1 you need to take it that far?

2 A. That's correct, and we're prepared to not go as  
3 far.

4 EXAMINER CATANACH: Okay, I think that's all I  
5 have, Mr. Carr.

6 MR. CARR: That concludes our presentation in  
7 this case.

8 EXAMINER CATANACH: Okay, there being nothing  
9 further in this case, Case 12,743 will be taken under  
10 advisement.

11 (Thereupon, these proceedings were concluded at  
12 10:57 a.m.)

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Daniel R. Catanach, Examiner  
CC Conservation Division

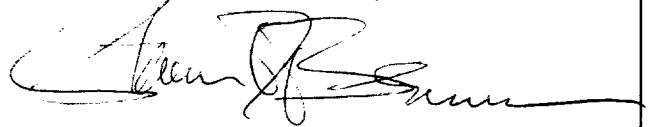
## CERTIFICATE OF REPORTER

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 November 6th, 2001.



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STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 14, 2002