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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
CASE 10,714, 10,715

EXAMINER HEARING

IN THE MATTER OF:

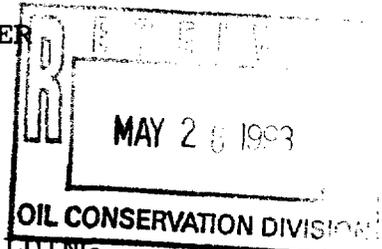
Application of Gary-Williams Company for a unit agreement and for special operating rules for drilling and producing horizontal/high-angle wellbores in the Rio Puerco-Mancos Oil Pool, within said unit area, Sandoval County, New Mexico

Application of Gary-Williams Company for two non-standard oil proration units, an unorthodox oil well location, a horizontal/high-angle directional drilling pilot project, special operating rules therefor, and a special temporary oil allowable, Sandoval County, New Mexico

**ORIGINAL**

TRANSCRIPT OF PROCEEDINGS

BEFORE: MICHAEL E. STOGNER, EXAMINER



STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

May 6, 1993

A P P E A R A N C E S

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FOR THE DIVISION:

ROBERT G. STOVALL  
Attorney at Law  
Legal Counsel to the Division  
State Land Office Building  
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

HINKLE, COX, EATON, COFFIELD & HENSLEY  
Attorneys at Law  
By: JAMES G. BRUCE  
218 Montezuma  
P.O. Box 2068  
Santa Fe, New Mexico 87504-2068

\* \* \*

1           WHEREUPON, the following proceedings were had  
2           at 10:00 a.m.:

3           EXAMINER STOGNER: You'll notice there has  
4           been a change of Examiners. I'm Michael E. Stogner.

5           At this time I'll call Cases 10,714 and  
6           10,715.

7           MR. STOVALL: 10,714 is the Application of  
8           Gary-Williams Company for a unit agreement and for  
9           special operating rules for drilling and producing  
10          horizontal/high-angle wellbores in the Rio Puerco-  
11          Mancos Oil Pool, within said unit area, Sandoval  
12          County, New Mexico.

13          10,715 is the Application of Gary-Williams  
14          Company for two non-standard oil proration units, an  
15          unorthodox oil well location, a horizontal/high-angle  
16          directional drilling pilot project, special operating  
17          rules therefor, and a special temporary oil allowable,  
18          Sandoval County, New Mexico.

19          EXAMINER STOGNER: This case was originally  
20          -- or, I'm sorry, this case began on -- Both of these  
21          cases began on April 22nd, 1993. They were continued  
22          to today's date.

23          I'll call for any additional testimony or any  
24          other items.

25          MR. BRUCE: Mr. Examiner, Jim Bruce of the

1 Hinkle Law Firm in Santa Fe for the Applicant.

2 I don't have any witnesses today.

3 I'd just like to -- As to Case 10,715,  
4 although that was continued, I don't think we need to  
5 continue it again. I believe all notices were given  
6 and we put on our land and engineering and geological  
7 testimony for that case, and I would like to ask that  
8 that one be taken under advisement.

9 EXAMINER STOGNER: That's 10,715?

10 MR. BRUCE: That's the initial pilot well for  
11 the unit which was involved in Case 10,714.

12 EXAMINER STOGNER: Before I do that, do you  
13 have anything further on 10,714?

14 MR. BRUCE: Yes, and I would like to continue  
15 this case for an additional two weeks until I can get  
16 all the proper data before you. But let me -- I'd like  
17 to inform you of what has happened.

18 There were two issues at the prior hearing.  
19 One was a tract in the proposed unit, Case 10,714.  
20 There was one State of New Mexico tract, Tract 39,  
21 which is all of Section 36, 21 North, 4 West. At the  
22 time, we did not have word from the Commissioner of  
23 Public Lands what they preferred to do with that tract.

24 I was informed yesterday by Pete Martinez of  
25 the Oil and Gas Division of the Commissioner's Office,

1 that the State would not commit its interest to the  
2 unit, and he is supposed to get a letter out in a day  
3 or two, and we will submit that at the next hearing.

4 The second issue concerned Tract 40, which is  
5 the only fee tract in the unit. It's the south half,  
6 northwest quarter, and the southwest quarter of Section  
7 33, less and except Tract 27, located in Township 21  
8 North, 3 West.

9 In going back through their files, I've  
10 handed you what's marked Exhibit A for reference  
11 purposes, and I will have someone either testify or  
12 obtain certified copies to submit to the Examiner at  
13 the next hearing.

14 But Exhibit A is an oil and gas lease in  
15 favor of Gary-Williams Oil Producer, Inc., which is now  
16 the Gary-Williams Company, covering the south 53.33  
17 acres of the northwest quarter of Section 33.

18 So that -- Together with Tract 27, that  
19 covers the south half, northwest quarter of Section 33.  
20 So that land is under lease. So notice did not have to  
21 be given to any fee mineral owner.

22 And if you'll notice in paragraph 12, there  
23 is a unitization clause in this lease.

24 Secondly, marked Exhibit B, there's another  
25 lease. I will be submitting an original or certified

1 copy of this -- it was just recently signed -- from  
2 Reynaldo Lovato and his wife to the Gary-Williams  
3 Company, and it covers three tracts of lands or three  
4 parcels.

5 Parcel number one is the south 106.33 acres  
6 of the southwest quarter of Section 33.

7 And parcel number three would be the  
8 remaining 54 acres in the southwest quarter of Section  
9 33.

10 And therefore, all of that land will be  
11 leased as of next year.

12 MR. STOVALL: That appears to be Sandoval  
13 County land descriptions; is that correct?

14 MR. BRUCE: Yes, bounded by --

15 MR. STOVALL: Bounded by somebody else's  
16 land, yes.

17 MR. BRUCE: Bounded by somebody else's land.  
18 Again, that lease does have a unitization clause and  
19 will be committed to the unit.

20 And so in essence, what -- The land that we  
21 thought was unleased at the original hearing is leased,  
22 and I will present more evidence, but I wanted to fill  
23 you in on what was going on.

24 EXAMINER STOGNER: So 10,714 needs to be  
25 continued to the --

1 MR. BRUCE: -- 20th.

2 EXAMINER STOGNER: That's the next hearing in  
3 May; is that correct?

4 MR. BRUCE: Yes.

5 And I would like to ask that the other case,  
6 10,715 be taken under advisement.

7 As it was pointed out at the last hearing,  
8 there are certain time constraints because of some  
9 changes in BLM policy, and the well needs to be spudded  
10 fairly quickly.

11 EXAMINER STOGNER: If I remember right, Mr.  
12 Bruce, there was also a mention that the well would not  
13 be drilled unless unitization occurred. That kind of  
14 runs counter to what you're requesting today.

15 MR. BRUCE: Well, I just -- Correct, that is  
16 correct. But I just see no need to continue Case  
17 10,715 to the next hearing.

18 I mean, if you want to, that's fine, and you  
19 did ask for orders to be submitted, and they will --  
20 proposed orders, and they will be submitted within the  
21 next two or three business days.

22 MR. STOVALL: Mr. Bruce, is there going to be  
23 any other evidence submitted in 10,714, or is it  
24 strictly just this -- the fee lease and the state land  
25 lease?

1 MR. BRUCE: Well, I will either bring a  
2 witness or have appropriate evidence submitted to back  
3 this up. I just wanted to fill the Examiner in on what  
4 was going on.

5 MR. STOVALL: And the only issue, really, to  
6 be resolved is whether those particular lands -- the  
7 notice issue on those lands and whether those people  
8 were properly brought in?

9 MR. BRUCE: Yes.

10 MR. STOVALL: And if I remember correctly,  
11 the BLM has indicated --

12 MR. BRUCE: They have given preliminary  
13 approval of the unit. And that was submitted, I  
14 believe.

15 MR. STOVALL: Mr. Examiner, I think that it  
16 may be possible that we'll have to review the -- go  
17 ahead and take the case under advisement, and we can  
18 review the -- again on that basis, we can review 10,715  
19 and see if language could be placed in an order,  
20 assuming an approval were given, that placed a  
21 condition upon that approval, of approval of the  
22 unitization --

23 MR. BRUCE: I really just --

24 MR. STOVALL: -- and give them some planning  
25 ability, I think.

1 MR. BRUCE: I would just like to give the  
2 Examiner as much time as possible, considering the time  
3 deadlines.

4 MR. STOVALL: And if I'm not mistaken, the  
5 BLM is not going to approve this well unless there's  
6 unitization; is that correct?

7 MR. BRUCE: No, I think what the Examiner  
8 said is correct, that Gary-Williams would not drill the  
9 well unless unitization was approved.

10 MR. STOVALL: Okay.

11 MR. BRUCE: The BLM has approved the well.

12 MR. STOVALL: The point is, there's no point  
13 in leaving the record open. It may or may not be a  
14 question of issuing the Order, but the record can be  
15 closed in 10,715.

16 MR. BRUCE: That's all.

17 EXAMINER STOGNER: Did I hear you say that  
18 the well has been approved by the BLM?

19 MR. BRUCE: They have -- Well, I mean, the --  
20 Maybe I misspoke, Mr. Examiner.

21 They have approved this unit with the  
22 horizontal well in mind, and the APD was filed with the  
23 BLM.

24 And in checking, personally checking the BLM  
25 records, I note that on approximately the 20th of May,

1 the APD was filed with the BLM, so --

2 MR. STOVALL: 20th of April, you mean?

3 MR. BRUCE: 20th of April.

4 So approximately the 20th of May because of  
5 the BLM's 30-day waiting period, if they will approve  
6 it, it should be approved by then.

7 EXAMINER STOGNER: Which kind of brings all  
8 the time limits coming to a head at one time.

9 MR. BRUCE: Yes.

10 EXAMINER STOGNER: Since you are going to  
11 submit a rough draft, perhaps you can add some language  
12 about the approval of this -- of the well in its  
13 relationship to approval of the unit agreement.

14 With that, I'll take 10,715 under advisement,  
15 and Case 10,714 will be continued to the May 20th  
16 hearing.

17 And if there's nothing further in either of  
18 these cases, then let's take a half-hour recess at this  
19 point.

20 (Thereupon, these proceedings were concluded  
21 at 10:10 a.m.)

22 I do hereby <sup>\*</sup>certify <sup>\*</sup>that the foregoing is  
23 a complete record of the proceedings in  
24 the Examiner hearing of Case Nos. 10714 & 10715  
25 heard by me on 6 May 1993.  
Michael E. Stogner, Examiner  
Oil Conservation Division

1 CERTIFICATE OF REPORTER

2

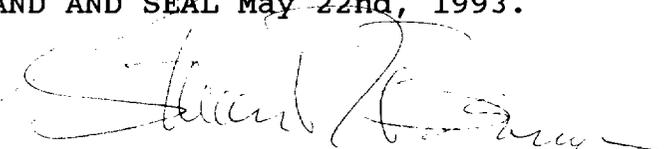
3 STATE OF NEW MEXICO )  
 4 COUNTY OF SANTA FE ) ss.

5

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

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

16 WITNESS MY HAND AND SEAL May 22nd, 1993.

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

21 My commission expires: October 14, 1994

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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 NOS. 10714,  
10715

APPLICATION OF GARY-WILLIAMS COMPANY  
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REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

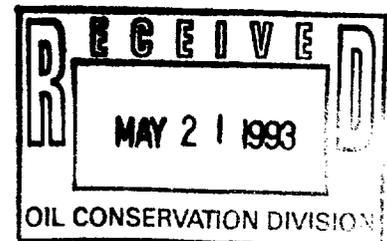
BEFORE: Michael E. Stogner, Hearing Examiner

April 22, 1993

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on April 22, 1993, at the Oil Conservation Division Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Deborah O'Bine, RPR, Certified Court Reporter No. 63, for the State of New Mexico.

**ORIGINAL**



## I N D E X

1  
2  
3 April 22, 1993  
4 Examiner Hearing  
CASE NOS. 10714, 10715

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

FOR THE APPLICANT: HINKLE, COX, EATON, COFFIELD  
& HENSLEY  
P.O. Box 2068  
Santa Fe, New Mexico 87504  
BY: JAMES BRUCE, ESQ.

1 EXAMINER STOGNER: At this time I'll call  
2 next case, No. 10714.

3 MR. STOVALL: Application of Gary-Williams  
4 Company for a unit agreement and special operating  
5 rules for drilling and producing horizontal/high angle  
6 wellbores in the Rio Puerco-Mancos Oil Pool, within  
7 said unit area, Sandoval County, New Mexico.

8 EXAMINER STOGNER: Call for appearances.

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

10 MR. STOVALL: We did call Gary-Williams if  
11 that's who you're here for, Mr. Bruce.

12 MR. BRUCE: Yes.

13 EXAMINER STOGNER: Again, I'm calling for  
14 appearances in the 10714.

15 MR. BRUCE: Mr. Examiner, Jim Bruce from  
16 the Hinkle Law Firm in Santa Fe representing the  
17 applicant. I have three witnesses to be sworn.

18 EXAMINER STOGNER: Are there any other  
19 appearances in this matter? Will the witnesses please  
20 stand at this time to be sworn?

21 (Witnesses sworn.)

22 EXAMINER STOGNER: Mr. Bruce?

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

## EXAMINATION

1  
2 BY MR. BRUCE:

3 Q. Would you please state your full name for  
4 the record.

5 A. Craig Ambler.

6 Q. And where do you reside?

7 A. In Denver, Colorado.

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

9 A. I work for Samuel Gary, Jr. & Associates,  
10 Inc., as a land manager.

11 Q. And what is the relationship of Samuel  
12 Gary, Jr. & Associates to the Gary-Williams Company?

13 A. We act as agent for their properties in New  
14 Mexico.

15 Q. And are you familiar with the land matters  
16 involved in Case 10714?

17 A. Yes, I am.

18 MR. BRUCE: Mr. Examiner, I forgot. With  
19 your permission, could we combine this first case with  
20 the next case on the docket, since they involve  
21 basically the same testimony?

22 EXAMINER STOGNER: At this time I'll call  
23 Case 10715.

24 MR. STOVALL: Application of Gary-Williams  
25 Company for two nonstandard oil proration units, an

1 unorthodox oil well location, a horizontal/high angle  
2 directional drilling pilot project, special operating  
3 rules therefor, and a special temporary oil allowable,  
4 Sandoval County, New Mexico.

5 EXAMINER STOGNER: Other than Mr. Bruce,  
6 are there any other appearances in this matter? I  
7 assume, Mr. Bruce, that the same witnesses --

8 MR. BRUCE: The same three witnesses will  
9 testify.

10 EXAMINER STOGNER: With that, you may  
11 proceed.

12 Q. (BY MR. BRUCE) Mr. Ambler, are you also  
13 familiar with the land matters involved in Case 10715?

14 A. Yes, I am.

15 MR. BRUCE: Mr. Examiner, at this time I  
16 tender Mr. Ambler -- excuse me.

17 Q. And you have testified before the Division  
18 as a landman, have you not?

19 A. Yes, I have.

20 MR. BRUCE: Mr. Examiner, I tender Mr.  
21 Ambler as an expert petroleum landman.

22 EXAMINER STOGNER: So qualified.

23 Q. (BY MR. BRUCE) Briefly, Mr. Ambler, what  
24 does Gary-Williams seek in Case 10714, the unit case?

25 A. Well, I guess we have broken them out into

1 two separate cases, but, as a practical matter, we  
2 have proposed and submitted to the Bureau of Land  
3 Management our application for formation of what we  
4 call the Ceja Pelon unit area. And we have an  
5 exhibit, which is Exhibit 1, which gives the physical  
6 description of this and has a plat showing the lands  
7 that are involved in that unit.

8           The purpose of the unit that we applied for  
9 with the Bureau of Land Management is to develop the  
10 Mancos reserves that we see in this area through  
11 horizontal drilling. And because of the nature of  
12 horizontal wellbores and the long reach and distances  
13 that they go, we will be, probably through the history  
14 of this unit, crossing lease lines and having other  
15 irregular shape sized spacing areas. And because we  
16 are in a unit area, we'd like permission from the  
17 Commission to receive administrative approval to drill  
18 high angle wells within the unit area.

19           The application, I believe, is styled much  
20 like the San Isidro unit, which we formed here a  
21 couple years ago and caused several wells to be  
22 drilled in that area also.

23           Q.     And Case 10715 involves the initial  
24 horizontal well for the unit; is that correct?

25           A.     That's correct.

1 Q. If you would, could you identify Exhibit 1  
2 for the examiner?

3 A. Exhibit 1 is a land plat. Let me just open  
4 it up. It shows the unit area. In relationship, the  
5 San Isidro unit is located to the south, which we had  
6 formed, like I said, I believe a couple of years ago.  
7 And this is the next unit immediately north as you  
8 head into the basin area.

9 Q. And what is the land ownership in the unit  
10 area?

11 A. The land ownership is predominantly  
12 federal. There is one fee tract and one state tract.

13 Q. And they are indicated on that plat?

14 A. And they are indicated on the plat. The  
15 state represents 2.5 percent of the unit area, and the  
16 patented fee represents .8 of 1 percent.

17 Q. And is Exhibit 2 just a description of the  
18 lands contained in the unit?

19 A. Yes.

20 Q. The advertisement said and our initial  
21 calculation was 25,445 acres of lands. What is the  
22 exact acreage that you have at this time?

23 A. Yeah. We have some irregular lot shapes  
24 out there that we've had to go and factor. And the  
25 area according to BLM patent records we believe is

1 24,975 acres.

2 Q. There hasn't been a change in the legal  
3 description, has there?

4 A. No.

5 Q. It's just the accurate acreage  
6 calculation. Has the BLM preliminarily approved the  
7 unit?

8 A. Yes. I have Exhibit 3, which gives area  
9 and depth approval for the unit.

10 Q. And what is the status of the commitment of  
11 the working interest to the unit?

12 A. The procedure and guidelines that the BLM  
13 sets is that you make an application for area and  
14 depth approval. And upon receipt of approval, you  
15 submit united joinders to the respective owners that  
16 are described by the unit.

17 And we have verbally spoken with the owners  
18 in the unit and believe we have sufficient interest to  
19 have approval to have the unit validated. We have  
20 mailed out our joinders and are receiving them back in  
21 the mail. We do not have them all in. And we expect  
22 to have them in prior to commencement of our drilling  
23 operation.

24 Q. What are Exhibits 4 and 5?

25 A. Exhibit 4 is a copy of the Unit Agreement.

1 This is a standard form agreement on BLM form. It's  
2 been revised as of November of '92. This is the Unit  
3 Agreement that will be used and operative for  
4 operations within the Ceja Pelon Unit.

5 Attached to that is a schedule which shows  
6 the percentage of working interest and royalty  
7 interest ownership -- excuse me -- override ownership  
8 within the unit area.

9 Q. And this is a voluntary unit, is it not?

10 A. This is a voluntary unit.

11 Q. And have you discussed the proposed  
12 horizontal drilling program with the BLM?

13 A. Yes, we have.

14 Q. As to the initial well, you will have a  
15 geologist and engineer testifying, will you not?

16 A. Yes, we do.

17 Q. But, briefly, what formation will be  
18 tested?

19 A. What our intention is is to actually drill  
20 a pilot well down to the Semilla, which is the  
21 lowermost member of the Mancos formation. We are  
22 going to run what we call a mechanical properties log  
23 to identify the area that we want to kick off into.  
24 We'll come back uphole and kick off the well in the  
25 most prospective Mancos zone as identified by the

1 pilot log.

2 So the answer to your question is we're  
3 testing the Mancos.

4 Q. And there is an unorthodox surface location  
5 for the well; is that correct?

6 A. That's correct.

7 Q. And the location of the well, again, will  
8 be further discussed by the geologist and the  
9 engineer?

10 A. That's correct.

11 Q. Why do you request, with respect to the  
12 initial well, Case 10715, what we may call an odd  
13 shape, unusual shape for the unit for that well?

14 A. We are -- it would probably be best to talk  
15 about geologically why we're placing the well where we  
16 are again and maybe come back to that question. But,  
17 in summary, because of the plan of the wellbore that  
18 we've laid out to have a 660 setback and be able to  
19 comply with the 320-acre spacing for the Mancos in  
20 this area, that's the configuration that the map ends  
21 up looking like.

22 Q. Okay. Now, the northeast quarter-northeast  
23 quarter of Section 28 is within the unit for the  
24 existing Taylor 28 No. 4 well; is that correct?

25 A. That's correct.

1 Q. And do you request that the unit for that  
2 well be changed to a 280-acre nonstandard unit?

3 A. Yes, we do.

4 Q. Would that affect any interest owners in  
5 the Taylor 28 well?

6 A. No, it would not.

7 Q. Why is that?

8 A. The common ownership in the north half of  
9 Section 28.

10 Q. All of Section 28 is in fact one federal  
11 lease, is it not?

12 A. Yes, it is.

13 Q. Now, with respect to special rules for  
14 wells drilled to the Mancos, essentially what  
15 Gary-Williams is requesting are special operating  
16 rules that were approved for the San Isidro shallow  
17 unit?

18 A. Yes, we are.

19 Q. And there's one difference, isn't there?

20 A. Yes.

21 Q. And could you explain that difference?

22 A. Well, the difference has to do with the  
23 configuration of the -- what do we call them here --  
24 the basin unit outline.

25 Q. Yes.

1           A.     And I believe in the San Isidro unit, we've  
2 held to standard 320-acre quarter section unit areas.  
3 And in this unit we're asking to stay with the  
4 320-acre size but to draw the configuration that fits  
5 around the wellbore to maintain a 660 setback.

6           Q.     And initially, you request that these  
7 special operating rules apply only to wells drilled  
8 within or within a mile of the Rio Puerco-Mancos Oil  
9 Pool; is that correct?

10          A.     That's correct.

11          Q.     Does that pool cover the entire proposed  
12 Ceja Pelon Unit?

13          A.     No, it does not.

14          Q.     Let's go into a little bit of the history,  
15 Mr. Ambler. You mentioned the San Isidro Unit, and  
16 there have been several hearings on that before the  
17 Division and several wells have been drilled. Has  
18 Samuel Gary, Jr., or the Gary-Williams Company any  
19 other experience in drilling horizontal wells in this  
20 area?

21          A.     Yes. Of course, we're an active  
22 participant in the formation of the San Isidro Unit,  
23 and through our partner, Veteran Exploration, either  
24 caused to be drilled or actually participated in the  
25 drilling of, I believe we've drilled five wells so far

1 in the unit area. And we've also come before the  
2 Commission on an application outside the unit, which  
3 was the Orquidea well, which we did about last  
4 December or a year ago December, and we've drilled  
5 that well since then ourselves.

6 So, yeah, we've been in six horizontal  
7 wells out there.

8 Q. Now, getting back to the unit  
9 configuration, if the Division would not approve the  
10 configuration of the initial well as drilled, do you  
11 have any other options that you would propose?

12 A. Well, yeah. We want to leave the wellbore  
13 where it is. The other options we would be more than  
14 happy to consider, if they would like to square off  
15 the area so it's more rectangular and doesn't have  
16 open gaps, we'd be happy to do that.

17 And as an alternative, as we form  
18 subsequent units around wells, we would be happy to  
19 fill in the gaps and allocate acreage so that there  
20 are no gaps between wellbores with respect to drilling  
21 blocks.

22 Our Unit Operating Agreement, Unit  
23 Agreement allows us to do this. The procedure under a  
24 unit agreement of this type is you have a 640-acre  
25 drilling block which you're allowed to propose to the

1 propose to the working interest owners, and the  
2 configuration of the drilling block can take whatever  
3 shape or form is reasonable as long as it's  
4 contiguous, and we can work within that 640-acre area  
5 and draw whatever outline makes sense.

6 Q. So as an alternative, you would propose  
7 that there be no gaps between spacing and proration  
8 units?

9 A. Right. Two options: one would be no gaps  
10 between the spacing and proration units; and the  
11 second would be, in particular on this first  
12 application on 10715, is that we include an extra 40  
13 to make it a complete rectangle.

14 Q. Or a square?

15 A. Square, yeah.

16 Q. Okay. The special operating rules which  
17 you propose, which are, as we said, like San Isidro  
18 shallow units, in your opinion, are those reasonable  
19 operating rules?

20 A. Yes.

21 Q. And they've worked fairly well in the San  
22 Isidro Unit, have they not?

23 A. Yes, they have. We've been able to drill,  
24 like I said, five wells out there. And I believe  
25 there's a company, Energy Development Corporation,

1 that has taken over the operation of that unit, and  
2 they intend to embark on what I understand is a  
3 nine-well program. We met with the BLM yesterday and  
4 we were informed that was their intention.

5 Q. Now, do you have a deadline as far as  
6 commencing your first well?

7 A. Yes, we do. We would like to commence by  
8 May 31. And the reason for that is we have expiring  
9 acreage in the unit area. And by commencing a well  
10 before that date, the acreage will be maintained.

11 Q. With respect to Case 10715, which is for  
12 the initial well, was notice given to the offset  
13 operators -- excuse me. Before we do that, Exhibit 5,  
14 would you identify that for the examiner?

15 A. Yes. Exhibit 5 is a copy of the Unit  
16 Operating Agreement, which is the operative document  
17 with respect to operations between the working  
18 interest owners and the unit area.

19 Q. And once again, this is a standard form?

20 A. Standard form.

21 Q. And it's similar to the one that was  
22 approved for the -- or that was maybe not approved but  
23 for the one that was put in place for the San Isidro  
24 Unit?

25 A. In fact, it's the same, yes.

1 Q. Now, as to Case 10715, was notice given by  
2 certified mail to the offset operators of the initial  
3 proposed well?

4 A. Yes, it was.

5 Q. And is Exhibit 6 your affidavit of notice  
6 with respect to that case?

7 A. Yes, it is.

8 Q. And was notice given to the working  
9 interest owners within the unit of the unit  
10 application?

11 A. Yes.

12 Q. And are those letters Exhibit 7?

13 A. Yes.

14 Q. Mr. Ambler, in your opinion, is the  
15 granting of this application in the interest of  
16 conservation and the prevention of waste?

17 A. Yes, it is.

18 Q. And were Exhibits 1 through 7 prepared by  
19 you or under your direction and control?

20 A. Yes, they were.

21 MR. BRUCE: Mr. Examiner, I'd move the  
22 admission of Gary-Williams Exhibits 1 through 7.

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

25 EXAMINATION

1 BY EXAMINER STOGNER:

2 Q. Is there like a preliminary approval from  
3 the State Land Office in this matter?

4 A. No, there's not.

5 Q. Have you set up a meeting with them?

6 A. Yes.

7 Q. When do you propose that will be?

8 A. We have set up a meeting, and I don't have  
9 an exact date, but we're trying to get in front of  
10 them in the next two weeks.

11 Q. Now, the only piece of state acreage in  
12 looking at your Exhibit No. 1 is --

13 A. Section 36.

14 Q. What township and range?

15 A. 21 North, 4 West.

16 Q. Other than that, they have not been  
17 notified of this except for -- have they been notified  
18 of this unit at all?

19 A. Yes, they've been notified of our unit.  
20 Yes.

21 Q. You laugh. I'm sorry, was something funny?

22 A. No. I'm just saying that's part of the  
23 process. You have to notify the state land board and  
24 the BLM.

25 Q. Well, part of the process, too, you should

1 have preliminary approval before you come here, and  
2 I'm trying to find out why you don't have preliminary  
3 approval before you're here today?

4 A. The state land board, it was unclear to us  
5 whether a hearing was going to be required since they  
6 only owned one section in the unit area. And  
7 apparently they have decided that, yes, in fact, they  
8 now do want a hearing, which will require us to come  
9 down here again for another hearing for the state land  
10 board.

11 EXAMINATION

12 BY MR. STOVALL:

13 Q. A hearing before the state land board.  
14 You're talking about the state land board, you're  
15 talking about the Commissioner of Public Lands?

16 A. Yes.

17 Q. When you say a hearing, what do you mean?

18 A. Well, I'm not exactly sure. We've never  
19 had to do this before for having a state lease in a  
20 federal unit, but I presume it will be much like I'm  
21 doing here today.

22 Q. This is normally the hearing that they  
23 have. They usually send out an approval letter ahead  
24 of time saying subject to approval of the Division.  
25 They don't conduct their own hearings on these that

1 I'm aware of?

2 A. That's the confusion on my part. As far as  
3 I was aware, they've never required to have a separate  
4 hearing or a separate application, whatever the  
5 vernacular is, and apparently they want one; so we're  
6 intending to have one.

7 Q. What is the extent of your conversations  
8 you have had with the State Land Office?

9 A. That it is our intention to form the unit,  
10 to have one state tract that is in the unit, and that  
11 we have asked them to approve the unit with respect to  
12 the form of the unit agreement, the unit operating  
13 agreement that we are using.

14 Q. But you haven't sat down then with them, in  
15 other words, with your geology and unit maps and  
16 explained to them what you're planning to do?

17 A. No, we have not.

18 Q. When did you first contact the State Land  
19 Office?

20 A. We contacted them shortly after we had our  
21 meeting with the BLM. We had our BLM meeting in  
22 April. So we had it about two weeks ago, I believe,  
23 three weeks ago, maybe. Excuse me, March 30 of '93,  
24 we had our BLM area and depth application meeting.

25 Q. And you didn't give the State Land Office

1 notice of this hearing; is that correct?

2 A. Of this hearing here today?

3 Q. Correct, yes.

4 A. They knew we were having a hearing here  
5 today. I don't understand what you mean by --

6 Q. I'm talking about formal notice. Did you  
7 give them any sort of notice?

8 A. A certified letter? No, we did not.

9 MR. BRUCE: If we could, to cure this,  
10 leave this matter open or continue it for the  
11 requisite period to --

12 MR. STOVALL: Well, yes, I think we've got  
13 a little bit of the cart in front of one of the  
14 horses. I recommend what we do is leave the record  
15 open and perhaps you go downstairs and visit with Mr.  
16 Prando or Ms. Bailey.

17 THE WITNESS: Okay.

18 MR. STOVALL: And familiarize yourself with  
19 what they are going to require and make sure you're  
20 talking on the same terms. You've talked about a  
21 hearing, and they don't normally conduct hearings.

22 THE WITNESS: Right. That's why we were  
23 surprised.

24 MR. STOVALL: And make sure that they  
25 weren't -- whether or not they were referring to this

1 hearing or --

2 THE WITNESS: Maybe they were. I don't  
3 know.

4 MR. STOVALL: Maybe they're doing something  
5 that we're not aware of. Their tract is at the far  
6 end of the unit. I don't know how they're going to  
7 respond to it. They're going to have to look at the  
8 geology and make a determination, of course, but --  
9 then if you could advise us after you've had at least  
10 a chance to have a preliminary discussion with them.  
11 I think leave the record open to do that and see where  
12 they -- what are they going to do, what is their  
13 request, what is their desire at this point.

14 The San Isidro Unit, as I remember, the  
15 working interest was pretty much -- well, it's kind of  
16 changed hands from time to time, or the operatorship  
17 of that has, but that was a pretty uniform working  
18 interest if I remember.

19 Q. Is that correct, or is that incorrect?

20 A. No, that would be incorrect. There was  
21 quite a diversity of ownership in the San Isidro  
22 Unit. I don't know the exact number of owners, but I  
23 would guess there were probably a dozen owners in that  
24 unit.

25 Q. Okay.

1           A.     The majority of ownership was initially the  
2 Gary-Williams Company, and that is also the case in  
3 the new Ceja Pelon Unit. In fact the ownership  
4 between the two units is very similar, the same  
5 parties, the same players are involved with maybe one  
6 or two exceptions.

7           Q.     I'm looking at the specific well over in  
8 the corner of the four sections there. I guess that's  
9 the application for 10715. Did I understand you  
10 correctly, there is a well in the east half of 28?

11          A.     In the west half, northwest-northwest of  
12 28.

13          Q.     What's the proration unit for that?

14          A.     Three hundred and twenty acres north half  
15 of 28.

16          Q.     What you're proposing to do is withdraw the  
17 northeast-northeast from that and put it into this new  
18 well?

19          A.     Yes.

20          Q.     And your testimony was that the ownership  
21 throughout the north half of 28 is uniform?

22          A.     Yes, it is.

23          Q.     What kind of well is that? Is that a  
24 producing well? Commercial well?

25          A.     Yes, it's a shut-in well. It's been shut

1 in for about five years.

2 Q. But if you take that 40-acre tract out of  
3 that well and put it in this well, the working  
4 interest owners in that well now get to pay for  
5 another well. I'm assuming it's shut in because it's  
6 not commercial?

7 A. That's correct.

8 Q. And they could conceivably end up having to  
9 pay for two noncommercial wells; is that correct?

10 A. I don't understand the question.

11 Q. I'm assuming that the owners paid for --  
12 obviously, they did since they own the entire north  
13 half -- paid for the well in Section 28; correct?

14 A. That's correct.

15 Q. And now you take them out of the Section 28  
16 proration unit, the north-half proration unit, put  
17 them in a new proration unit to a new well, and those  
18 owners get to pay for this well?

19 A. That's correct.

20 Q. If this well is successful, obviously, that  
21 may be to their benefit --

22 A. That's correct.

23 Q. -- since they currently don't have a well  
24 that's returning any money on their investment?

25 A. That's right.

1 Q. But if it's not successful, they will have  
2 paid for two wells to not produce from the same land  
3 area; is that correct?

4 A. Yes. That's always true.

5 Q. I guess that raises a little bit of concern  
6 about taking them out of one proration unit, putting  
7 them in another, and letting them buy a second well to  
8 try again. Wherever there's a potential of reward,  
9 there's a potential of risk but -- who is that  
10 interest owner? Is that Gary-Williams?

11 A. Yes.

12 Q. I guess that alleviates a lot of the  
13 concern if Gary-Williams is willing to pay that  
14 price.

15 MR. BRUCE: Mr. Stovall, as one of our  
16 subsequent exhibits, we'll show the wellbore does  
17 actually traverse the small portion of Section 28.

18 MR. STOVALL: Well, I'm not so concerned  
19 about that. If it's Gary-Williams, the operator, who  
20 is doing that, then at least the party who's doing it  
21 has control over it and understands the risk. It's  
22 not being done to somebody else.

23 THE WITNESS: No, it's all Gary-Williams in  
24 those two sections.

25 MR. STOVALL: Okay. I think that will

1 probably alleviate some of that concern.

2 Q. Which leases are expiring that you're  
3 concerned with with the May 31st expiration?

4 A. We have a series of shut-in wells that are  
5 on the west side of the unit that the Department of  
6 Interior has withdrawn the approval to leave the wells  
7 shut in effective May 31. And we have to, in order to  
8 maintain those leases, either prove the commerciality  
9 of the area or plug out the wells.

10 And it would be our intention -- we  
11 believe, that historical vertical wells out here have  
12 been predominantly noncommercial, and we're trying to  
13 bring the application of horizontal drilling  
14 technology into this northern area to demonstrate that  
15 there is potential for commercial recovery of  
16 reserves.

17 If we're successful with this pilot well,  
18 then several of the shut-in wells are open hole  
19 completions with seven-inch casing, and they're  
20 candidates for actually going in those wellbores and  
21 directionally kicking them out and making them into  
22 horizontal wells.

23 So we don't want to plug a well with  
24 seven-inch casing down to the top of the Mancos if we  
25 can potentially use that and recover that resource at

1 a later time.

2 Q. Your original statement was, and you  
3 followed up in response to my question, that there are  
4 some leases which essentially unless you drill another  
5 well or recomplete a well, those leases are going to  
6 expire?

7 A. Yes, that's correct.

8 Q. Because the BLM has made a determination  
9 that they're not capable of production in commercial  
10 quantities; is that -- or paying quantities; is that  
11 what their new definition is?

12 A. The new Department of Interior Secretary  
13 has changed the rules, and they are no longer allowing  
14 shut-in status on wells, which has been the historic  
15 record for the last seven years.

16 Q. We could get into a discussion about  
17 whether it's a change of rules or not. That's not  
18 particularly the issue. The question is, which leases  
19 are specifically affected by that?

20 A. Oh, I can tell you that. Just hang on.  
21 The Taylor 28-4 well in the northwest-northwest of  
22 Section 28, which is affected by this application, is  
23 one of the wells that is holding that Section 28  
24 lease.

25 Q. Which is what, 29-169?

1 A. Yes, 29-169.

2 Q. That looks like almost a three-section  
3 lease there; is that correct?

4 A. That's correct. That would be the key  
5 lease that we're obviously interested in preserving.  
6 I can go through all the leases in the unit, if it  
7 would be helpful to you.

8 Q. Well, I'm mostly interested in the ones --  
9 obviously, if you get the unit approved by the BLM and  
10 start the drilling, you hold all the leases in the  
11 unit; correct?

12 A. You hold them until you establish  
13 commercial production.

14 Q. Correct, okay. If you don't get the unit  
15 approved, you will still attempt to hold the leases by  
16 leasehold wells; is that correct? Let's assume that  
17 the BLM, for some reason, did not approve the unit.

18 A. The BLM has approved the unit. The only  
19 way the unit would not come together is if we don't  
20 get sufficient joinders from the working interest  
21 owners in the unit.

22 I guess there's two different approvals.  
23 There's an area and depth approval, which they've  
24 granted. And then there's a formalized approval when  
25 you submit all of your joinders from the working

1 interest owners.

2 Q. Okay. Which leases would this proposed  
3 well hold, if you're successful in drilling that,  
4 assuming no unitization?

5 A. Assuming no unitization --

6 Q. There appear to be three leases which are  
7 affected by this wellbore --

8 A. We wouldn't drill a well without  
9 unitization.

10 Q. You would not drill this well without unit  
11 approval?

12 A. That's correct.

13 Q. How soon do you expect that to happen then?

14 A. Well, we have verbal indications already  
15 from the owners. We're the majority owner already; so  
16 it's not -- we expect it in the next few weeks, next  
17 two to three weeks.

18 Q. In other words, our getting out an order in  
19 time to permit you to commence the well before May 31,  
20 it doesn't sound to me like it's the critical factor.  
21 It sounds to me like you've got to get your stuff  
22 together with the owners?

23 A. That's correct. We'd like to have both.

24 Q. Well, you have to have ours, but often ours  
25 is the last piece of a puzzle to fit together. In

1 together. In this case, it doesn't sound like it is.

2 A. Right. And you mentioned, in all fairness,  
3 that maybe the cart is ahead of the horse here, and we  
4 certainly recognize that we're moving rather rapidly,  
5 but we wanted to come before the Commission to give  
6 you plenty of time to examine what our intentions  
7 are. And I know that in the past, it has -- maybe  
8 somewhat unconventional, the horizontal drilling we've  
9 done out here, and we wanted to give enough lead time  
10 for everybody concerned to be able to look at it.

11 Q. Yeah. I think, if there's several  
12 machinations, we got through the San Isidro Unit and  
13 came up with apparently some working rules. It sounds  
14 to me like there are some geological questions which  
15 will come up, but I think the land questions are as  
16 much of a -- but I don't think I've got any more at  
17 this time.

18 Oh, yeah. What's the status of the patent  
19 land? Have you got that, the fee land tract?

20 A. Yeah. The fee land tract is currently  
21 unleased.

22 Q. It is unleased? What is the status of  
23 discussion with the owners of those minerals?

24 A. We've had no discussion with the owners of  
25 those minerals.

1 Q. When do you intend to do that?

2 A. Well, the land is available to lease to  
3 whomever or whatever party wants to acquire the  
4 lease. We have not acquired the lease at this time.

5 Q. Or the alternative is the fee owner could  
6 join the unit?

7 A. Yes, that's correct.

8 Q. Become a working interest owner of the  
9 unit?

10 A. Yes, that's correct, he will be invited to  
11 join the unit.

12 Q. But he has not been invited at this time?

13 A. He's part of the package of joinders that  
14 are sent out.

15 Q. It was sent out?

16 A. Oh, yes.

17 Q. He has been invited to join? For all  
18 practical purposes, I mean that owner is the owner of  
19 all the minerals which includes working interest and  
20 the royalty interest however it might be agreed upon  
21 to allocate that?

22 A. That's correct.

23 Q. And you have had communication with that  
24 owner?

25 A. No, I have not talked other than just to

1 mail the joinder.

2 Q. I mean mailing the --

3 A. Yes.

4 Q. Did they get the notice letter? Are they  
5 one of the parties who received the notice letter?

6 A. They're not theoretically -- I guess that  
7 they're not an operator of record on --

8 Q. They sure as heck are. They own the  
9 minerals. What do you mean, they're not an operator?  
10 I mean, they're a working interest owner. There's  
11 nothing to operate, but they own the minerals. They  
12 darn right have a working interest.

13 A. Is that defined as an operator in the  
14 unit?

15 Q. Operator or working interest owner. Is it  
16 a developed tract? They have the right to operate.  
17 If there's no well -- I mean, you could get into  
18 semantics as to whether there's a well or not. They  
19 have a right to operate a well on that tract, do they  
20 not?

21 Mr. Bruce, I think we definitely need to  
22 continue this case and get notice to -- I think we  
23 need to review the notice thing. Certainly, the fee  
24 owner of the minerals has as much right as anybody to  
25 develop the minerals in his tract which he owns

1 outright. So he is a working interest owner and  
2 entitled to notice, not just somebody floating out  
3 there that happens to be in the way of a unit  
4 agreement. With that, I have no other questions.

5 EXAMINER STOGNER: Mr. Bruce?

6 MR. BRUCE: Just a couple of follow-up  
7 questions.

8 FURTHER EXAMINATION

9 BY MR. BRUCE:

10 Q. Mr. Ambler, this is a voluntary unit?

11 A. Yes, it is.

12 Q. So anybody who doesn't join wouldn't be  
13 bound by the unit agreement?

14 A. That's correct.

15 Q. Would you still request approval of the  
16 unit if the state tract and the fee tract did not join  
17 in?

18 A. Yes, we would.

19 Q. And you mentioned -- well, the BLM recently  
20 sent many operators a letter, did it not, regarding  
21 the status of shut-in wells in this area?

22 A. Yes, they did.

23 Q. Was that fairly recently?

24 A. Yeah, March 10, '93.

25 Q. So that is prompting Gary-Williams together

1 with a number of operators to take action, is it not?

2 A. Yes, it is.

3 Q. And probably on less notice than you would  
4 probably have preferred?

5 A. Yes, much less notice.

6 MR. BRUCE: I have nothing further with  
7 this witness, Mr. Examiner, but we don't have any  
8 problem with continuing the case in order to continue  
9 the discussions with the two landowners that Mr.  
10 Stovall referred to, if that is acceptable with the  
11 examiner.

12 EXAMINER STOGNER: To which date?

13 MR. STOVALL: You almost have to go to four  
14 weeks to give notice. I'm particularly concerned  
15 about that fee owner.

16 MR. BRUCE: No. I don't have any problem  
17 with that, Mr. Stovall. The problem, I guess -- the  
18 problem is, since it's voluntary, I really don't even  
19 know if notice of the unit is necessary as long as  
20 they ratify.

21 EXAMINER STOGNER: There's another factor,  
22 if I may. You're proposing special operating rules.  
23 Those rules are definitely going to affect the forming  
24 of these oddball proration units, if you will. That's  
25 what makes this very unique, very different, also.

1 MR. BRUCE: If we can continue it to May  
2 20th, that's fine.

3 EXAMINER STOGNER: How this is developed is  
4 necessarily going to affect those parties.

5 MR. STOVALL: Just a general question, Mr.  
6 Ambler. Has your primary land experience been working  
7 with federal lands?

8 THE WITNESS: Yes.

9 MR. STOVALL: And, incidentally, I mean,  
10 just for information, I understand what you're saying  
11 about the federal land. Would you mind providing me  
12 with a copy of the BLM letter to you regarding those  
13 wells?

14 THE WITNESS: Yeah, I have it right here.

15 MR. STOVALL: As I say, it really isn't  
16 because of this case so much as it is to give us a  
17 chance to be aware of a shift in the application of  
18 regulations by the new administration.

19 MR. BRUCE: We'll make a copy of it and  
20 submit it to you today.

21 MR. STOVALL: Yeah. It doesn't have to be  
22 part of the record. I'm just asking for it for my own  
23 informational purposes. That part doesn't  
24 particularly concern me. I understand what's going on  
25 there.

1 THE WITNESS: We're moving as quickly as we  
2 can. It affects, in our instance, a dozen leases, and  
3 most of them are included in this unit. It was  
4 burdensome for us to have to move that quickly, but  
5 we're willing to do it and risk the capital to do it.

6 MR. STOVALL: My big concern at this point  
7 is the state and the fee tracts.

8 THE WITNESS: Maybe it's not appropriate  
9 for me to ask a question.

10 MR. BRUCE: No. And, Mr. Stovall, I was  
11 informed by Energy Development Corporation that they  
12 received the same letter.

13 MR. STOVALL: Again, I understand what the  
14 situation is with the BLM tracts, and I'm not -- don't  
15 interpret any of the questions as being critical of  
16 Gary-Williams' response to whatever the BLM has done.

17 I'm not aware of -- I understand enough  
18 about federal leasing to know kind of what the rules  
19 are, and I understand enough about politics to know  
20 that there may be some changes in how those rules are  
21 interpreted and applied. That's more of an interest  
22 question. I'm not specifically concerned about how  
23 Williams has dealt with that. I think that's a  
24 reasonable response to that.

25 As I say, my greatest concern, obviously,

1 is with that fee tract because that person does have  
2 an interest and is entitled to every bit of the  
3 protection of every other tract owner.

4 EXAMINER STOGNER: Are there any other  
5 questions of this witness at this time? There might  
6 perhaps be some once we hear the geological and  
7 technical witnesses.

8 You may proceed, Mr. Bruce.

9 MR. BRUCE: Okay.

10 MR. BRUCE: Before I begin, Mr. Examiner,  
11 just for your convenience, I'll give you a set of the  
12 San Isidro Unit pool rules.

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

16 EXAMINATION

17 BY MR. BRUCE:

18 Q. Would you please state your name and city  
19 of residence for the record.

20 A. David Masse, Boulder, Colorado.

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

22 A. I work for Samuel Gary, Jr. & Associates,  
23 Inc., and I'm a geologist.

24 Q. Have you previously testified before the  
25 Division as a geologist?

1 A. No, I have not.

2 Q. Would you please outline your educational  
3 and work background?

4 A. I attended the University of Calgary,  
5 Alberta. I graduated in May of 1982 with a Bachelor  
6 of Science Degree. After that, I went to work for a  
7 company called Warpet Exploration in Denver, Colorado,  
8 and I remained with the company for approximately  
9 three years, at which time I was self-employed, doing  
10 predominantly well site work as well as some contract  
11 positions, both in Colorado and in Alberta.

12 After that I was an employee of Bird Oil  
13 Corporation in Denver, Colorado, up till the close of  
14 1991. And since that time, I've been employed by  
15 Samuel Gary, Jr. & Associates.

16 Q. And your bachelor's degree was in geology?

17 A. Yes, it was.

18 Q. Does your area of responsibility at  
19 Gary-Williams or at Sam Gary, Jr., include this area  
20 of New Mexico?

21 A. Yes, it does.

22 Q. Are you familiar with the geological  
23 matters involved in the formation of this unit and in  
24 the drilling of the initial test well?

25 A. Yes, I am.

1 MR. BRUCE: Mr. Examiner, I tender the  
2 witness as an expert geologist.

3 EXAMINER STOGNER: He is.

4 Q. (BY MR. BRUCE) Would you please identify  
5 Exhibits 8 and 8A for the examiner and inform the  
6 examiner of their contents.

7 A. Exhibit 8 is a large map at a scale of  
8 1:25,000 that shows the entire unit area. It also  
9 shows the unit area to the south of the San Isidro  
10 Unit, as well as two smaller units to the east, the  
11 Cuba Mesa Unit and the Tosino Unit.

12 Within the Ceja Pelon Unit, it shows  
13 several things. There are very dark lines on the map  
14 that represent basement faults. These are the widest  
15 solid lines in the map, and there are triangle teeth  
16 on one side of that that represents the upthrown side  
17 of a fault at basement level.

18 There is a smaller set of contours that  
19 represent the structure at what's referred to as the  
20 Galob B sandstone, which is basically in the middle of  
21 the lower Mancos formation.

22 There are also very fine lines on the map  
23 that represent the second derivative of that structure  
24 of the Galob B.

25 Exhibit 8A is a smaller scale color version

1 -- I'm sorry, the same scale but a smaller sized  
2 color version representing the same thing. It also  
3 has the proposed location and the nearby wells on it.

4 Q. Could you expand upon what you're trying to  
5 do, how you're trying to drill these wells, and your  
6 experience with the Orquidea well, which I believe was  
7 in Section 4, 20 North, 2 West?

8 A. That's correct. The lower Mancos formation  
9 has been draped over the basement fault in such a way  
10 that there are two flexural zones, one which would be  
11 concave down, which would be on the upthrown side of  
12 the deeper fault, and one which would be concave up on  
13 the downthrown side of the basement fault.

14 These areas represent places where the  
15 lower Mancos formation has been fractured by virtue of  
16 having been flexed over this deeper structural  
17 feature.

18 Q. Okay. Can you tell us about what happened  
19 at the Orquidea well, or would that be better for the  
20 next witness to testify about that?

21 A. Geologically, I can talk about it.

22 Q. Yes. Why don't you?

23 A. The Orquidea well, we tested a similar  
24 flexure. It's also shown on the map in Section 4,  
25 Township 20 North, Range 2 West. It's shown on

1 Exhibit 8 rather than 8A.

2 We drilled the Orquidea well about 500 feet  
3 south of the Johnson 4-14 well. Our position for that  
4 well, for the Orquidea well, was aided by having the  
5 Johnson 4-14 well located. We could use it as a pilot  
6 hole in that it would give us a control point for  
7 which we could aim toward with the high angle Orquidea  
8 well.

9 We drilled down to the upper Mancos, set  
10 pipe, and then kicked off and drilled past the 4-14  
11 well, becoming horizontal just about at the time we  
12 passed the 4-14 well in the target that we had  
13 selected from a log sweep that I had run in the 4-14  
14 well to help identify a target zone.

15 We entered the zone, and the zone was 10  
16 feet thick, and we were able to stay in the zone for  
17 approximately 775 feet before we encountered a shallow  
18 fault, shallow being within the Mancos formation as  
19 opposed to the deeper basement fault.

20 At that point we had to sidetrack the well  
21 in order to go down to encounter the same target in  
22 the downthrown position. It took us approximately  
23 1,000 feet of drilling in order to do so, and we  
24 encountered the target zone and drilled it for another  
25 200 feet before deciding to sidetrack again and test

1 another potential target approximately 100 feet deeper  
2 within what's termed the Galob B zone which this map  
3 is on.

4 We stayed in that -- we went back to the  
5 original curved portion and sidetracked down into the  
6 B zone, encountered it, I believe approximately 100  
7 feet to the north of the surface location and stayed  
8 in the zone for approximately 260 feet before we  
9 finished the well.

10 Q. There's also some seismic lines on this  
11 map. Has that been important in choosing the location  
12 for the initial well within the unit?

13 A. Yes. They have been very important. The  
14 fault that we encountered in the Orquidea well, the  
15 location that we encountered it at was somewhat  
16 unexpected. We have mapped the fault on the seismic  
17 line that is shown there, line LENC 10, but we  
18 encountered it in the wellbore in a different position  
19 than we had projected from the seismic line. For that  
20 reason, the proposed well for the Ceja Pelon Unit, we  
21 feel it's vital that we drill right along the seismic  
22 line so that we won't encounter similar surprises and  
23 end up drilling at a zone for what could have been  
24 1,000 feet.

25 Q. And substantially raising the cost of the

1 well?

2 A. Substantially.

3 Q. And so looking at Exhibit 8A, you want to  
4 remain along the seismic line LENC 13 for the drilling  
5 of the initial well; is that correct?

6 A. That's correct.

7 Q. And ideally you remain more or less  
8 perpendicular to the underlying basement fault?

9 A. The orientation of line LENC 13 is roughly  
10 perpendicular to the structural features we have to  
11 test. For that reason, it seems equally prudent that  
12 we would stay on that exact azimuth as we had proposed  
13 in order to get the most data that we can get and  
14 benefit from the position of the seismic line.

15 Q. And so the shape of the well unit for the  
16 initial proposed well is really dictated by your  
17 geology more than anything else?

18 A. Yes. I drew the proposed location and the  
19 proposed well path based on the position of the  
20 seismic line, and it is the strongest flexural feature  
21 associated with this basement fault in the unit area,  
22 and the spacing unit was drawn around the well path  
23 that I have selected.

24 Q. So this location is optimum based upon your  
25 seismic and based upon your experience with the

1 Orquidea well?

2 A. That's correct.

3 Q. And based upon your exhibits, there are  
4 potentially a number of other horizontal well  
5 locations within the proposed unit, are there not?

6 A. Yes, there are. We, depending on the  
7 results of this proposed well, the 27-4 well, we would  
8 like to continue developing the unit by drilling wells  
9 sequentially along this basement flexure, gathering  
10 data as we progress, from side to side.

11 Q. And were Exhibits 8 and 8A prepared by you  
12 or under your direction?

13 A. Yes, they were.

14 Q. And, in your opinion, is the granting of  
15 these two applications in the interest of conservation  
16 and the prevention of waste?

17 A. Yes, it is.

18 MR. BRUCE: Mr. Examiner, I move the  
19 admission of Exhibits 8 and 8A.

20 EXAMINER STOGNER: Exhibits 8 and 8A will  
21 be admitted into evidence.

22 EXAMINATION

23 BY EXAMINER STOGNER:

24 Q. (BY EXAMINER STOGNER) In referring to  
25 Exhibit No. 8A, let's take a look at your structures

1 that you have marked in pink. And I'm assuming that  
2 -- well, exactly what are they?

3 A. Shown in pink and then orange and yellow,  
4 the pink represents the areas of maximum flexure. The  
5 units used in these contours, it's a second derivative  
6 value, and each number, for instance, with the pink  
7 contour. Represents 8 times 2 times 10 to the minus 6  
8 per foot. It's a derivative value.

9 It represents a tighter flexure than does  
10 the orange or the yellow, but based on a qualitative  
11 understanding of the fractures present in the rocks in  
12 the area, I've identified the areas in yellow, orange,  
13 and pink as being particularly prospective for  
14 fractured reservoirs. The pink areas would be more  
15 prospective than would be the yellow areas, and the  
16 white areas would be less prospective still at this.

17 Q. You show a smaller one, when I look at the  
18 proposed proration unit, a smaller one to the north  
19 end, and then you have the main one, which essentially  
20 covers the main portion of the proposed proration  
21 unit. You did not propose to probe that smaller pink-  
22 shaded area with this horizontal wedge?

23 A. No, I didn't. The one that we're going to  
24 be testing with this location represents the flexure  
25 that is concave down, that is being on the upthrown

1 side of the basement fault. The one to the north is  
2 concave up where the flexure has died out and you've  
3 gone back to just the regional situation.

4 The path of the proposed location, the path  
5 of the wellbore represents approximately 2,100 feet.  
6 It's my feeling that after you've gone 2,100 feet in a  
7 horizontal wellbore, you'd lose the ability to steer  
8 the wellbore, and your costs rise dramatically, while  
9 the return for staying in zone and being able to  
10 evaluate what you're doing has diminished to the point  
11 that I think that that would be best evaluated by a  
12 different well.

13 Q. In looking at your main body that you're  
14 trying to go through then, it appears to be -- it  
15 appears -- you appear to be off center in going or  
16 projecting your horizontal well through this area of  
17 high flexure. Wouldn't it be easier, or could you  
18 maybe maximize your ability to hit that if you moved  
19 back up to the north and east or east-northeast and  
20 hit it perpendicular toward the middle part of the  
21 body?

22 A. I don't know at this time because I don't  
23 have a seismic line right there. I feel it's much  
24 more important to evaluate the data that went into  
25 producing this map, which is primarily the seismic

1 data, and then the areas in between the seismic lines  
2 have been extrapolated from that data. So the  
3 possibility of error is greater off the seismic  
4 control than on it.

5 MR. STOVALL: In other words, you think  
6 you're going to hit the flexure that you're talking  
7 about with the line you're on, and that pink area  
8 could be as much shifted to the left as it is to the  
9 right? Is that kind of what you're saying when you  
10 say extrapolated? Conceivably, it could be, but you  
11 know what it is with the seismic line; is that a  
12 point?

13 THE WITNESS: Yes. Other things being  
14 equal, you will have a flexure similar to the one that  
15 we propose testing all along the length of the  
16 basement fault. However, we only have quality data  
17 that I am using to position this well at this  
18 particular location that shows the amount of flexuring  
19 in the lower Mancos that I think will be prospective.

20 Q. (BY EXAMINER STOGNER) Also, you would be,  
21 I'm assuming, from what you're telling me, get your  
22 horizontal well data, whether it be core or cuttings  
23 or whatever the case may be, to prove up what you're  
24 trying to show on the seismic line?

25 A. Oh, yes, very much so. There's several

1 ways that you can interpret seismic data. One of them  
2 in particular would be the seismic inversion process  
3 where you would do modeling that would reflect the  
4 interval velocities of the various horizons that I  
5 think are perspective. And changes in the velocities  
6 of those intervals are often indicative of  
7 fracturing.

8           It's difficult to evaluate it pragmatically  
9 without having the well data itself to decide how many  
10 fractures were found, the extent of the fracturing,  
11 the density of the fractures, and the width of the  
12 target. These all figure prominently in any further  
13 exploration with shooting more seismic data and the  
14 processing of said data.

15           Q. Has this proving of seismic data with  
16 horizontal wells been done prior, down in your San  
17 Isidro Unit?

18           A. No, unfortunately, it has not. None of  
19 the wells have been drilled exactly on a seismic line,  
20 and we are seeing variations on the seismic lines that  
21 are much smaller than we would expect to have  
22 encountered with the wells where they went off  
23 control.

24           If you have an anomaly on a seismic line,  
25 it's not an extensive anomaly. It would commonly

1 extend for less than 600 feet. And in all cases, the  
2 horizontal wells have gone further than 600 feet off  
3 the seismic control.

4 Q. And in looking at your large exhibit, I'm  
5 looking through LENC 7 and LENC 8, what appears you  
6 have San Isidro 12-10 and is that Renegade 1?

7 A. Yes, sir. They came very close, although  
8 the results of the No. 1 Renegade well were rather  
9 poor, the results of the San Isidro 12-10, that well  
10 was drilled by Veteran Exploration as operator, and I  
11 was not party to any processing they would have done  
12 on seismic line LENC 8.

13 Q. Now, when I look at the seismic lines shown  
14 here, when I look at LENC 8 and LENC 9, was the data  
15 obtained from those two different than the LENC 13,  
16 were they essentially the same, or were there some  
17 other differences, perhaps?

18 A. The data is primarily the same. Any  
19 differences would be topographic differences instead  
20 of velocity corrections for the datum elevations.

21 Q. Do you know if proving up a seismic  
22 information through a horizontal well has been done  
23 anywhere else in the country that you know of?

24 A. I do not know of any specific examples,  
25 although I know of several people who have used an

1 inversion process as a method of positioning their  
2 wells. The substance of the other horizontal plays  
3 throughout the rest of the country is somewhat  
4 different than this one, given the depth of the rocks  
5 involved and the quality of the rocks involved.

6 Q. Were you the one that determined which  
7 seismic lines were run and where?

8 A. No, I was not.

9 Q. So you really have no idea -- I'm talking  
10 more of the north- and south-trending seismic lines,  
11 why they were situated as they were throughout this  
12 area?

13 A. No, I don't. I would assume that they were  
14 shot, as is rather conventional in the history, that  
15 they would be both at some angle that would  
16 approximate parallel to the strike of the formation  
17 and then perpendicular to the strike of the formation  
18 or parallel to the dip of the formation. That's the  
19 general pattern.

20 EXAMINATION

21 BY MR. STOVALL:

22 Q. How familiar are you with the operations,  
23 the geologic decision making that occurred in the San  
24 Isidro Unit?

25 A. I was not with Samuel Gary & Associates

1 when the San Isidro Unit was formed, nor have I  
2 operated or been party to any wells that have been  
3 drilled within the unit since my employ.

4 Q. Have you had any discussion with anybody  
5 who was?

6 A. Yes, I have. I've had extensive  
7 discussions with a gentleman named Tracy Chancellor,  
8 who was the geologist who worked for Veteran when the  
9 horizontal wells were drilled.

10 MR. BRUCE: And he testified at those  
11 hearings.

12 MR. STOVALL: Right. And I'm asking these  
13 questions mostly to find out what your background is  
14 because the question wouldn't make sense if you didn't  
15 have that.

16 Q. My recollection of those San Isidro  
17 geologic analyses was that you tried to kind of drill  
18 across that fault or right near that basement fault?

19 A. That's correct.

20 Q. Is that correct?

21 A. That's correct.

22 Q. And it appears to me that now what you're  
23 saying is you actually want to be a little offset from  
24 the fault and try to get more into the flexure which  
25 is the result of the faulting rather than the faulting

1 itself? Is that a fair analysis or comparison of the  
2 two programs?

3 A. That's correct. It's kind of a subtle  
4 distinction. Without the basement fault, there would  
5 be no flexuring. So the two are intimately related.  
6 Where the actual flexure is located depends on several  
7 things when it comes to the position of the fault or  
8 the flexure's position with respect to the fault. It  
9 would be dependent on how shallow the basement fault  
10 has come. It would depend on the amount of throw on  
11 the basement fault, be it -- if it was very large, you  
12 would expect a much broader flexural area. If it was  
13 small, you would expect a much narrower flexural  
14 area.

15 This just happens to be, in this particular  
16 location on line LENC 13, the configuration of the  
17 flexures in the Mancos as they were draped over the  
18 basement faulted area.

19 FURTHER EXAMINATION

20 BY EXAMINER STOGNER.

21 Q. Once the horizontal well is drilled, what  
22 type of geological data -- is it going to be cored?

23 A. No, it is not.

24 Q. But it will be logged, I assume?

25 A. Yes. I've been working on the logging

1 program. We'll be running a dual induction lateral  
2 log, spontaneous potential log, a gamma ray log, a  
3 digital sonic log, which is -- just collects a lot  
4 more data than does a conventional sonic log. And  
5 I'll also be running a conventional microscanner log  
6 in the vertical pilot hole. I have no plans of  
7 logging the horizontal portion with wire line logs,  
8 although we will be using a Geo Services gamma ray  
9 measurement well drilling tool while we are drilling  
10 it.

11 Q. Is Gary-Williams proposing, once this  
12 horizontal well gets kicked off and starts going  
13 horizontal or the direction, what type of deviation  
14 would be tolerated off that seismic line?

15 A. I have not discussed this specifically with  
16 our engineer. We are typically working with, I  
17 believe it's a 3 percent error. I would not want to  
18 get farther than 100 feet from the line.

19 Actually, I should restate that, 200 to 250  
20 feet would be about the limit that I would be  
21 comfortable with.

22 Q. When the well is being drilled, do you have  
23 the authority to change the direction if you see that  
24 it's going off?

25 A. Yes, I do.

1 Q. For the scientific data collected, you're  
2 very interested in keeping this wellbore as much along  
3 the seismic line as possible?

4 A. At this point for being the first test of  
5 this concept within the unit in the Ceja Pelon Unit  
6 that we've proposed, I think it's absolutely  
7 imperative.

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

10 FURTHER EXAMINATION

11 BY MR. STOVALL:

12 Q. Yes, just one in terms of the rule under --  
13 Rule 3 of the San Isidro Unit provides that wells be  
14 located no nearer than 660 feet to the outer boundary  
15 of the spacing proration unit and 1800 feet to any  
16 other well outside the unit completed or drilling in  
17 the pool. Do you have an opinion as to whether that's  
18 a reasonable distance to require that horizontal  
19 wellbore to be from the proration unit? If you think  
20 that's the engineer's question, let me know, but it's  
21 -- from a geologic standpoint?

22 A. For this proposed well in this proposed  
23 unit, it would be inappropriate. I don't have an  
24 opinion for all the other areas.

25 Q. It would be appropriate did you say?

1 A. Inappropriate.

2 Q. Inappropriate?

3 A. That's right.

4 Q. In other words, you make it closer to the  
5 edge of the proration unit; is that what you're  
6 saying?

7 A. Oh I'm sorry, I misunderstood you, with  
8 320-acre spacing?

9 Q. I'm talking about the distance of the  
10 wellbore from the edge of the proration unit, whatever  
11 size the proration unit may be?

12 A. Oh, no.

13 Q. The San Isidro rules require the wells to  
14 be 660 feet from the proration unit boundary. Is that  
15 a reasonable distance?

16 A. That seems reasonable to me. I have no  
17 reason to question it.

18 Q. As Mr. Ambler says, what you do is you  
19 design the wellbore; then construct the proration unit  
20 around it, rather than vice versa, it sounds like what  
21 you're really looking for the flexibility to do; is  
22 that correct?

23 A. That's correct.

24 EXAMINER STOGNER: This being the  
25 cornerstone of how the unit will be developed on 320

1 acres?

2 THE WITNESS: Yes.

3 EXAMINER STOGNER: This is somewhat of a  
4 unique concept. Those of us here at the Commission  
5 are very familiar with a couple of pools down in  
6 southeast New Mexico that's in a jigsaw type of a  
7 configuration. I always like to say they got the  
8 right way the wrong way in the Jalmat-Eumont way in  
9 that order.

10 MR. STOVALL: Now the Gary-Williams way.

11 EXAMINER STOGNER: So we have somewhat of  
12 the same type of configuration being proposed in this  
13 area, granted, it being in the unit area. There's  
14 still some other things to overcome.

15 MR. STOVALL: I will say, and it's to  
16 Williams' credit, Williams and all the various other  
17 folks that have been involved with Williams over time  
18 is that they are as innovative and technically it's a  
19 very interesting approach. Obviously, it generates  
20 some detail problems.

21 THE WITNESS: Yes, it does. And I think  
22 this being the best location within the unit that we  
23 recognize at this time, it's unfortunate it would lie  
24 where it does. Throughout, as the unit is developed,  
25 most of the locations, while they would fit up next

1 against it, will not necessarily go across lease  
2 lines.

3 MR. STOVALL: Isn't it unfortunate that  
4 nature didn't lay down rocks in accordance with  
5 government surveys.

6 THE WITNESS: Yeah. Mother Nature is not a  
7 surveyor.

8 MR. STOVALL: Mr. Ambler, am I correct that  
9 this is a divided unit, and there will be  
10 participating areas established based upon the  
11 development of commercial wells?

12 MR. AMBLER: Yes, that's correct.

13 EXAMINER STOGNER: I have no other  
14 questions of this geological witness at this time.

15 MR. STOVALL: I don't either.

16 MR. BRUCE: The engineering witness will be  
17 relatively brief. Also, with respect to some of the  
18 questions you asked before, Mr. Ambler might have some  
19 further information. We could either put it on now or  
20 wait until the 20th.

21 MR. STOVALL: He went down to the Land  
22 Office and talked to them?

23 MR. BRUCE: I would guess so. It will  
24 still have to be continued, but if you would like that  
25 information --

1 MR. STOVALL: Let me say, I think one thing  
2 we can do, and I'll say this is, if you get the fee  
3 landowners' joinder in the unit, that could alleviate  
4 the notice problems. So let's do whatever you've got  
5 today today.

6 MR. AMBLER: I've got information about  
7 that, too.

8 MR. BRUCE: Okay. Craig?

9 EXAMINER STOGNER: In what order are you  
10 going to call your witnesses?

11 MR. BRUCE: Why don't we put Mr. Ambler  
12 back on, and then we can have the engineer testify  
13 about the drilling.

14 EXAMINER STOGNER: If you feel comfortable  
15 with that.

16 MR. STOVALL: I think that's fine, as long  
17 as only one person is talking at a time, the court  
18 reporter can probably handle it.

19 CRAIG AMBLER,  
20 the witness herein, after having been previously sworn  
21 upon his oath, was examined and testified further as  
22 follows:

23 FURTHER EXAMINATION

24 BY MR. BRUCE:

25 Q. Mr. Ambler, could you tell what further

1 information you found out?

2 A. Yes. First of all, I'd like to apologize  
3 to the Commission for maybe some hazy information that  
4 I have with respect to two questions that were asked  
5 earlier this morning. Maybe a quick explanation would  
6 be appropriate.

7 We retained a company unit source to  
8 prepare our units and put our units together. An  
9 individual by the name of Paul Connor is the  
10 proprietor. And he, for all practical purposes,  
11 assembles 90 percent of all the units in the Rocky  
12 Mountain area. And I had not talked to Paul in  
13 particular about the two questions that you asked me,  
14 and I have since called him and gotten two pieces of  
15 information which I think will be helpful.

16 First of all, with respect to the state  
17 tract that is in the unit, Paul had spoken with a Mr.  
18 Pete Martinez, and the state has elected not to give  
19 us a letter approving the unit until after this  
20 Commission hearing. And that's the procedure under  
21 which I understand that they will follow. So we're  
22 waiting for the results of this hearing prior to them  
23 issuing a letter.

24 The second question had to do with the fee  
25 owners. And the tract in Section, I believe it's 33,

1 the tract that's in the northwest quarter are leases  
2 that are maintained by the Gary-Williams Company. The  
3 leases in the southwest quarter, to my knowledge and  
4 understanding, are unlocatable and have been for some  
5 15 years. I don't know if you're familiar with the  
6 records and ownership in Cuba, but there's some big  
7 gaps on the fee tracts out there.

8           And that's the information we have on it.  
9 We'll make the diligent effort again to try to find  
10 those owners who own that property, but if the  
11 property had been available for lease at any time in  
12 its past history, it would have been, and we have been  
13 unable to either lease it or locate the owners.

14           MR. BRUCE: We'll double-check that.

15           THE WITNESS: We have this problem, as you  
16 go further east and get closer to town, there are  
17 deeds that have never been recorded, and it's an  
18 absolute nightmare.

19           MR. STOVALL: You mean title transfer in  
20 Sandoval County is not complete and thorough; is that  
21 what you're saying?

22           THE WITNESS: That's what I'm saying.

23           EXAMINER STOGNER: You run into quite a few  
24 old deeds; is that correct?

25           THE WITNESS: That's correct.

1 EXAMINER STOGNER: When I mean old, what,  
2 mid-1800's?

3 THE WITNESS: Yes, that's correct, and no  
4 subsequent file records.

5 EXAMINER STOGNER: And it probably wasn't  
6 even Sandoval County at that time.

7 MR. STOVALL: It wasn't even New Mexico at  
8 that time.

9 EXAMINER STOGNER: True.

10 THE WITNESS: I would also note that the  
11 tract concerned is within the buffer zone within the  
12 one-mile area, and maybe that would have effect; I  
13 don't know.

14 EXAMINER STOGNER: When you say the one-  
15 mile area buffer zone, you're talking about the one-  
16 mile buffer of the pool; is that correct?

17 THE WITNESS: Yes.

18 MR. STOVALL: An extension area of the pool  
19 or --

20 THE WITNESS: No. I believe the special  
21 rules would apply within a certain distance of the  
22 unit boundary; is that correct?

23 MR. BRUCE: I think he's talking about it's  
24 on the exterior of the unit.

25 MR. STOVALL: Yeah, I understand what he's

1 saying. I don't think it's a mile, actually, but I  
2 know what you mean by --

3 THE WITNESS: Right.

4 MR. STOVALL: It alleviates some of my  
5 concern about not bothering to -- not making an effort  
6 to talk to those people. If you don't know who they  
7 are --

8 THE WITNESS: I was unfamiliar with the  
9 circumstances, and I've since familiarized myself with  
10 that, and I apologize. That's all I have to say.

11 MR. STOVALL: That may change things, Mr.  
12 Bruce, in that, I guess if you can't notify those  
13 people, it's not such an issue, and simply that tract  
14 will not be a unit tract is what it amounts to, I  
15 guess.

16 MR. BRUCE: If we could, at least give us  
17 two weeks to verify that to determine whether we can  
18 locate that interest owner. If not, I think then he  
19 or she will have been notified by publication,  
20 although it won't be within the unit, but perhaps the  
21 special operating rules would be applicable to that.

22 MR. STOVALL: So you're suggesting now we  
23 continue it for two weeks and then if you find them --

24 MR. BRUCE: And if we find them and notify  
25 them, we'll continue it again.

1 MR. STOVALL: It sounds like a reasonable  
2 approach.

3 EXAMINER STOGNER: With that then, it will  
4 be continued to May 6. Is that all you have of this  
5 witness at this time?

6 MR. BRUCE: Yes, sir.

7 Call Mr. Harvey to the stand.

8 HUGH E. HARVEY, JR.,  
9 the witness herein, after having been first duly sworn  
10 upon his oath, was examined and testified as follows:

11 EXAMINATION

12 BY MR. BRUCE:

13 Q. Would you please state your name and city  
14 of residence for the record?

15 A. Hugh E. Harvey, Jr., and I reside in  
16 Lakewood, Colorado.

17 Q. Who do you work for?

18 A. I work for Harvey Operating & Production  
19 Company, of which I am the owner.

20 Q. What is your employment background?

21 A. I'm a petroleum engineer. I first worked  
22 for Texas Oil & Gas Corporation. My subsequent  
23 employer to that was Trigg Drilling Company. And in  
24 1985, I incorporated my own company, Harvey Operating  
25 & Production Company, which I've been employed by

1 since.

2 Q. Have you previously testified before the  
3 Division?

4 A. No.

5 Q. What has been your involvement in this area  
6 with respect to the drilling of horizontal wells?

7 A. I designed and managed the drilling of the  
8 Gary-Williams Orquidea well in December, and I have  
9 been responsible for designing and will be responsible  
10 for managing the drilling of this project.

11 Q. And you're familiar with the engineering  
12 matters related to the drilling of this initial well  
13 for the unit?

14 A. Yes, I am.

15 MR. BRUCE: Mr. Examiner, I tender Mr.  
16 Harvey as an expert petroleum engineer.

17 EXAMINER STOGNER: What was the education  
18 background again, Mr. Harvey?

19 THE WITNESS: I have a Master's of Science  
20 in Mining Engineering from the Colorado School of  
21 Mines, granted in 1974, and a Master of Engineering in  
22 Petroleum Engineering granted by the Colorado School  
23 of Mines in 1980.

24 EXAMINER STOGNER: So qualified.

25 Q. (BY MR. BRUCE) Mr. Harvey, would you refer

1 to Exhibit 9 and discuss its contents for the  
2 examiner?

3 A. Exhibit 9 is a plan view of the proposed  
4 Ceja Pelon 27-4H wellbore, showing the surface  
5 location, the proposed bottom hole location, and the  
6 proposed 320-acre spacing unit.

7 Q. One thing we want to clear up first, Mr.  
8 Harvey. The initial plat submitted to the Division  
9 had a setback from the boundary of 600 feet. Was that  
10 correct?

11 A. No. It was our intention to apply for a  
12 660-foot setback boundary.

13 Q. So this well would comply with the special  
14 operating rules which are being requested by  
15 Gary-Williams?

16 A. Yes.

17 Q. And the 600 feet was a typographical error?

18 A. That is correct.

19 Q. Would you on Exhibit 9 discuss what you  
20 plan on doing on drilling the well, very briefly?

21 A. This well will involve basically a  
22 two-stage drilling process. First, we will drill a  
23 vertical well to the base of the Mancos formation,  
24 gather specific geologic data. We will then plug back  
25 that vertical well and abandon the vertical portion of

1 the hole and initiate the drilling of a medium radius  
2 horizontal well.

3 And the exact kick-off point and the exact  
4 vertical target of that well will be determined by  
5 information gathered from the vertical wellbore.

6 Q. On page 2 of your exhibit, you have the  
7 horizontal portion of the wellbore in the C zone.  
8 That's not necessarily the case, is it?

9 A. No. That's just as an example to show that  
10 the well indeed is going to be horizontal. Also, the  
11 schematic, if you will, shows all the formations out  
12 there to be essentially flat-lined and, as Mr. Masse  
13 has testified, they are indeed not.

14 Q. In your opinion, is the drilling procedure  
15 outlined in Exhibit 9 a reasonable plan for the  
16 drilling of this well?

17 A. Yes, it's a reasonable plan and is entirely  
18 within the technical capabilities of the Gary-Williams  
19 Company at this time.

20 Q. You were in charge of the drilling of the  
21 Orquidea well; is that correct?

22 A. That's correct.

23 Q. Maybe you could also discuss some of the  
24 problems that you encountered and what you're trying  
25 to avoid in the drilling of this well and the

1 placement of this well from an engineering standpoint?

2 A. Well, the selection of the horizontal  
3 target in the Orquidea well was determined from a  
4 single point of data, an existing vertical well on the  
5 same lease called the Johnson 4-14. However, once we  
6 drilled past the Johnson 4-14 well, the further away  
7 we got from our existing data, the more problems we  
8 had determining where the zone was going in terms of  
9 inclination, and it caused considerable problems,  
10 especially when we crossed an unexpected faulted zone.

11 Q. And moving on to the unit application, have  
12 you reviewed the operating rules for the San Isidro  
13 Unit?

14 A. Yes, I have.

15 Q. And, in your opinion, are rules similar to  
16 those operating rules reasonable for application  
17 within the proposed Ceja Pelon Unit?

18 A. Yes, they are.

19 Q. And, in your opinion, is the approval of  
20 these two applications in the interest of conservation  
21 and the prevention of waste?

22 A. Yes.

23 Q. Was Exhibit 9 prepared by you or under your  
24 direction?

25 A. Yes, it was.

1 MR. BRUCE: Mr. Examiner, I submit  
2 Gary-Williams Exhibit 9.

3 EXAMINER STOGNER: Exhibit No. 9 will be  
4 admitted into evidence.

5 EXAMINATION

6 BY EXAMINER STOGNER:

7 Q. This proposal really isn't any different  
8 than these other wells out there, is it?

9 A. There's only been a limited number of  
10 wells, to my knowledge, that have drilled the vertical  
11 pilot hole. Some of them have. Some of them  
12 haven't. So that would be the only outstanding  
13 characteristic which is different about this well  
14 plan.

15 Q. What's your understanding of the need for  
16 the pilot hole, just further evaluation?

17 A. Yes. The logging sweep which will be run  
18 in that vertical hole together with other information  
19 will allow us to determine which interval in the  
20 formation is going to be the target of our horizontal  
21 well.

22 Q. Were you essentially aware of the necessity  
23 of keeping this along the line of the seismic?

24 A. Yes, we have, and we've made some  
25 modification in our drilling plan in order to increase

1 our ability to stay along that seismic line.

2 Q. Will this be a true 90-degree horizontal,  
3 or is it particular to follow the dip out here in this  
4 particular horizon, whichever is chosen?

5 A. Yes. And once a horizon is chosen, we will  
6 have to steer the wellbore at whatever angle the dip  
7 dictates.

8 Q. What's the maximum and minimum would that  
9 deflection be?

10 A. I would have to refer that question to Mr.  
11 Masse. He's more familiar with the actual dip angles  
12 out here.

13 Q. I guess I'm asking what is the technical  
14 ability for the drilling aspect of it?

15 A. We can drill from any angle from vertical  
16 to probably 120 degrees, if need be.

17 MR. STOVALL: One hundred and twenty from  
18 vertical?

19 THE WITNESS: Yes. It would be an extreme  
20 case, of course, but our ability to drill these wells  
21 and to whatever angle you want probably exceeds our  
22 ability to interpret the geology.

23 Q. (BY EXAMINER STOGNER) Is there a  
24 completion procedure on the horizontal wellbore?

25 A. The completion procedure will simply be to

1 leave the well open hole. So the only procedure will  
2 be to either complete the well as a flowing well or to  
3 install artificial lift equipment, if required.

4 Q. So what will be coming out from underneath  
5 the 7-inch casing, from then on out, it's open hole?

6 A. That is correct. I might add that the 7-  
7 inch casing is typically set 100 to 150 feet into the  
8 top of the Mancos formation.

9 Q. Once the horizon is depleted or should the  
10 well be plugged and abandoned, what type of procedure  
11 does Gary-Williams propose to plug and abandon these  
12 horizontal wells, this one in particular?

13 A. In particular, what would happen is the  
14 horizontal portion of the hole will be filled with  
15 heavy mud, nine pound per gallon tons or heavier, and  
16 a cement plug will be set as close as practical to the  
17 middle of the horizontal curve or the curve-building  
18 portion of the hole.

19 It's technically very difficult to set  
20 cement plugs any deeper than about a 45-degree hole  
21 angle. So we will go down to approximately where the  
22 hole is at 45 degrees and set a cement plug there and  
23 one across the base of the intermediate casing, and  
24 then probably pull whatever intermediate casing we can  
25 and set a plug across the top of that and one across

1 the base of the surface casing and at the surface.

2 EXAMINER STOGNER: Any other questions of  
3 Mr. Harvey?

4 MR. STOVALL: I don't. I do have a  
5 question for Mr. Bruce when we're through with the  
6 engineer.

7 EXAMINER STOGNER: I have no other  
8 questions of Mr. Harvey.

9 MR. BRUCE: I have no other questions.

10 EXAMINER STOGNER: He may be excused.

11 MR. STOVALL: I see Mr. Ambler is not in  
12 the room, but I think you can probably answer it, Mr.  
13 Bruce. I think the only thing that I heard testimony  
14 about with kind of a variation from the San Isidro  
15 rules was the proration unit?

16 MR. BRUCE: That's correct.

17 MR. STOVALL: Those rules call for a  
18 320-acre proration unit or two 320 contiguous  
19 proration units if the wellbore crosses.

20 MR. BRUCE: The last modification was 320,  
21 480, or 640, consisting of contiguous quarter  
22 sections.

23 MR. STOVALL: Okay.

24 MR. BRUCE: And this one is requesting 320  
25 acres on up, consisting of multiples of 40-acre

1 quarter-quarter sections.

2 MR. STOVALL: Up to a maximum of?

3 MR. BRUCE: I think -- I don't know if we  
4 mentioned it in the application. I think 640 would be  
5 the maximum.

6 MR. STOVALL: It sounds like a reasonable  
7 way to start and then look at what -- although  
8 conceivably participating areas is defined to be  
9 larger than the 640.

10 MR. BRUCE: That is correct.

11 MR. STOVALL: There may be some interest in  
12 how to bring BLM drilling block participating areas in  
13 proration units --

14 MR. BRUCE: That would make a lot of sense.

15 MR. STOVALL: Let's keep that in mind for  
16 the future. It may be something to look at down the  
17 road.

18 MR. BRUCE: If I can state something, and  
19 Mr. Harvey could also testify about this, looking at  
20 Exhibit 9, one of the reasons why they did not  
21 include, say, the entire northeast quarter of Section  
22 28 in that unit is because the wellbore is about 1800,  
23 1900 feet, say, from the southwest corner of that  
24 quarter section. So you're dealing with acreage that  
25 is quite some distance away from the wellbore.

1 MR. STOVALL: It appears to me if we start  
2 with that, then we can look at -- we may want to keep  
3 the proration unit boundaries within a maximum  
4 distance to the wellbore. It might be something that  
5 we could --

6 MR. BRUCE: They are flexible. As has been  
7 testified, they need to commence this well, and  
8 they're --

9 MR. STOVALL: I'm thinking of that as  
10 something you might want to consider when you come  
11 back and look at these again is sort of a  
12 minimum-maximum range to determine the size -- since  
13 we are now doing something new and creating a wellbore  
14 and then building a proration unit around it is what  
15 you're really seeking to do, now build the boundaries  
16 and have some distance things that don't exist when  
17 you've got a proration unit and locate a wellbore  
18 within that proration unit.

19 I was going to say keep on plugging.  
20 That's not a good expression, I guess, in the oil  
21 field. Keep on going. You've come up with some  
22 interesting things in this, and I think we consider  
23 these things as we move along.

24 I have nothing further.

25 EXAMINER STOGNER: Before we finish up for

1 the day, the ad requested a special allowable  
2 consideration, but I do not remember hearing any  
3 aspect of that.

4 MR. BRUCE: Maybe Mr. Harvey could address  
5 that. I think there's two allowable considerations;  
6 number one, while drilling, and then, number two, the  
7 increased allowable for the increased well units. And  
8 if you could address that, Mr. Harvey?

9 MR. HARVEY: The special allowable for the  
10 drilling phase of the well is required because of the  
11 nature of the drilling technique that's used out  
12 here. These wells are drilled in a severely  
13 underbalanced condition, basically air drilling or air  
14 mist drilling, and it's quite common for oil and gas  
15 to be produced during the drilling phase. Sometimes  
16 for short periods of time, that can exceed the normal  
17 allowable for this area. And so we're requesting a  
18 special allowable for the drilling phase of it.

19 MR. STOVALL: Basically a production  
20 allowable, if you will?

21 THE WITNESS: That's correct. And then  
22 during the production phase of the well, we're simply  
23 requesting the same allowable I believe that's in  
24 place at the San Isidro Unit.

25 MR. STOVALL: Would it make sense, given

1 the way that we're stating this, San Isidro says  
2 you've got a 320, and then if you add a 160 or another  
3 320, you have a multiple. And a variation of that is  
4 start with the basic 320, and then proportionate to  
5 the unit, say, if it goes to a 360, you'd add another  
6 one eighth, based upon the proportion.

7 MR. BRUCE: I believe that's what we  
8 requested in the application, and that would be  
9 reasonable. I think those allowables have been found  
10 to be adequate for the San Isidro Unit.

11 MR. STOVALL: Hopefully, one of these days,  
12 it will be too low but -- okay.

13 EXAMINER STOGNER: We're through with Mr.  
14 Harvey at this point.

15 With that, Mr. Bruce, why don't you provide  
16 me at least a proposed rough draft to start us off  
17 with a base order to start with. And with that, both  
18 of these cases, 10714 and 10715, will be continued to  
19 the May 6th hearing.

20 If there's any other developments, Mr.  
21 Bruce, I'm sure you'll keep Mr. Stovall and myself  
22 apprised.

23 I do hereby certify that the foregoing is  
24 a complete record of the proceedings in  
the Examiner hearing of Case Nos. 10714 and 10715  
heard by me on 22 April 1993.

25 Michael E. Stogner, Examiner

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

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, May 5, 1993.

*Deborah O'Bine*

DEBORAH O'BINE  
CCR No. 63

