

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:)
APPLICATION OF ENRE CORPORATION)

CASE NO. 11,050

ORIGINALREPORTER'S TRANSCRIPT OF PROCEEDINGSEXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

August 18, 1994

Santa Fe, New Mexico

This matter came on for hearing before the Oil
Conservation Division on Thursday, August 18, 1994, at
Morgan Hall, State Land Office Building, 310 Old Santa Fe
Trail, Santa Fe, New Mexico, before Steven T. Brenner,
Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

August 18, 1994
 Examiner Hearing
 CASE NO. 11,050

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APPEARANCES

APPLICANT'S WITNESSES:

DOUGLAS JEFF KERN

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A P P E A R A N C E S

FOR THE APPLICANT:

CAMPBELL, CARR, BERGE & SHERIDAN, P.A.

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P.O. Box 2208

Santa Fe, New Mexico 87504-2208

By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 2:26 p.m.:

3 EXAMINER CATANACH: At this time we'll call Case
4 11,050, the Application of EnRe Corporation for a high-
5 angle/horizontal directional drilling pilot project and for
6 the promulgation of such special operating rules therefor,
7 Rio Arriba County, New Mexico.

8 Are there appearances in this case?

9 MR. CARR: May it please the Examiner, my name is
10 William F. Carr with the Santa Fe law firm Campbell, Carr,
11 Berge and Sheridan.

12 I represent EnRe Corporation. I have two
13 witnesses.

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

17 (Thereupon, the witnesses were sworn.)

18 MR. CARR: At this time I call Jeff Kern.

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

22 DIRECT EXAMINATION

23 BY MR. CARR:

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

25 A. Douglas J. Kern. I go by Jeff.

1 Q. And where do you reside?

2 A. Denver, Colorado.

3 Q. By whom are you employed and in what capacity?

4 A. I'm a consultant geologist for EnRe Corporation.

5 Q. Have you previously testified before this
6 Division?

7 A. Yes, I have.

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

11 A. Yes, they were.

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

14 A. Yes.

15 Q. And are you familiar with the proposed well and
16 the subject area?

17 A. Yes.

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

20 EXAMINER CATANACH: They are.

21 Q. (By Mr. Carr) Mr. Kern, would you initially
22 review for Mr. Catanach the general background events which
23 resulted in this particular Application being filed?

24 A. We have -- EnRe has entered into an agreement
25 with the Jicarilla Apache tribe to develop a large area of

1 Mancos production on the reservation. They have a fairly
2 large block of acreage.

3 We originally filed this well as a West Puerto
4 Chiquito-Mancos Oil Pool well, thinking that was the
5 jurisdiction of it.

6 However, the OCD advised us that this well would
7 be in the Boulder-Mancos Oil Pool, which has 80-acre
8 spacing, as opposed to the 640-acre spacing that we desire.

9 So we've amended the Application so that the
10 project area would conform to the acreage which we think
11 will be drained.

12 Q. Let's summarize now what it is exactly that EnRe
13 seeks in this Application.

14 A. We seek approval of a 640-acre directional
15 drilling pilot project area, that 640 acres being all of
16 Section 22 in 28 North, Range 1 West.

17 We seek the authority to directionally drill one
18 well on the project area. That well would be known as the
19 EnRe Cedar Canyon 22-G.

20 We seek special drilling provisions so that we
21 can traverse quarter and quarter-section lines with the
22 horizontal wellbore within the project area.

23 We wish to drill within 330 feet of the outer
24 boundary of the project area.

25 We would like to receive a project allowable

1 based on the number of 80-acre proration units in the
2 project area which will be developed by the horizontal
3 wellbore and special operating rules and procedures,
4 administrative authorization for additional horizontal
5 wellbores if needed, formation of a nonstandard 640-acre-
6 size spacing unit, and assignment of special oil
7 allowables.

8 Q. Mr. Kern, the administrative authorization we
9 seek for additional horizontal wellbores would only be in
10 the event that there are problems drilling the initial well
11 and that you have to move over and sidetrack or drill an
12 additional well?

13 A. Yes.

14 Q. You're only anticipating one horizontal well on
15 this tract?

16 A. Exactly.

17 Q. And you are requesting authority to drill the
18 well, but at the same time keep the entire horizontal
19 portion of the wellbore at least 330 feet back from the
20 outer boundary of the project area?

21 A. Yes.

22 Q. All right. Let's go to what has been marked as
23 EnRe Exhibit Number 1. Would you identify this and review
24 it for Mr. Catanach?

25 A. Yes, this is a land ownership plat that shows the

1 horizontal wellbore in the middle of the plat there, in
2 Section 22.

3 The solid circle would be the surface location.
4 The dashed surface [sic] would be the maximum bottomhole
5 location, and the wellbore trajectory roughly as we've set
6 it there.

7 The location we originally submitted was actually
8 1650 from the north line and 2020 from the east line. The
9 location shown on this plat is 1950 feet from the north
10 line and 1800 feet from the east line, a move of about 300
11 feet south and a couple of hundred feet to the east for
12 topographic reasons.

13 The project area, all of the acreage is Jicarilla
14 Apache tribe -- that's JAT on the map -- acreage. EnRe
15 controls all the acreage in this township except what you
16 see there on your map, the eastern tier of sections.

17 The Section 14 is owned by Dugan, Williford,
18 Tesoro and Meridian; Section 23 by Tesoro and Meridian; and
19 the bottom right section, 26, by BILLCO -- or most of it is
20 by Billco. EnRe actually has two 80-acre tracts in that
21 section.

22 Q. Now, Mr. Kern, you've moved the well for
23 topographic reasons to comply with tribal, BLM and Forest
24 Service Requirements?

25 A. Yes.

1 Q. But the wellbore is still within the project area
2 in a fashion consistent with the legal advertisement
3 provided for the case?

4 A. Yes.

5 Q. Now, let's look in -- take a broader look. Are
6 there other horizontal wellbores in this area that you're
7 familiar with, completed in this formation?

8 A. Yes, when I worked for American Hunter, we
9 drilled a well approximately two and a half miles to the
10 south of this proposed wellbore on 640-acre spacing, which
11 proved pretty satisfactory, successfully drilled that
12 horizontal wellbore and completed that well for about 300
13 barrels of oil a day.

14 Q. Was that also in the Mancos formation?

15 A. In the Mancos formation.

16 Q. Are you familiar with any other cases where an
17 allowable has been authorized for all tracts drained by a
18 wellbore, not just tracts intersected by that wellbore?

19 A. Yes, it's my understanding that Yates Petroleum
20 Order Number R-10,022 in November of 1993 was granted,
21 similar provisions authorizing an allowable equal to all
22 the acreage that would be developed or drained by the
23 horizontal wellbore.

24 Q. You've stated this well will be located in the
25 Boulder-Mancos Pool?

1 A. Yes.

2 Q. And the spacing for that pool is 80 acres?

3 A. Yes.

4 Q. But you're seeking a dedication or a project area
5 of 320?

6 A. Of 640.

7 Q. Of 640, excuse me.

8 If the Application is granted and this well is
9 drilled, what results are you hoping to obtain in this
10 formation?

11 A. We hope to be able to drill -- or to drain that
12 entire 640-acre section with this wellbore.

13 Q. What is the ownership of the acreage that's going
14 to be dedicated to the well?

15 A. It is all Jicarilla Apache acreage that is
16 covered by an agreement from EnRe, so EnRe is the operator.

17 Q. So all working interest ownership and all royalty
18 interest ownership is common?

19 A. Yes.

20 Q. Is there currently any development on the acreage
21 you're proposing to dedicate to the well?

22 A. No, no wells on the tract.

23 Q. Could you generally describe the nature of the
24 Mancos formation in the subject area?

25 A. It's a highly fractured, oil-saturated, very

1 tight sand that produces as a fractured reservoir. And
2 there's no primary porosity; it's just fractures in the
3 Mancos sand benches.

4 Q. Okay. Let's go to EnRe Exhibit Number 2. Would
5 you identify this and review it for Mr. Catanach?

6 A. Yes, this is a structure map based on the seismic
7 data we have in the area.

8 It essentially shows that the structure is -- the
9 strike of the structure is north-south and that it is
10 dipping off to the west. And we plan to drill the well
11 more or less downdip, hopefully encountering as many
12 fractures as we can as we drill.

13 Q. Looking at this map, the formation dips to the
14 west?

15 A. Yes.

16 Q. This is the same formation that's developed in
17 the West Puerto Chiquito unit in this area, is it not?

18 A. Yes, it is.

19 Q. And what we have is a wellbore that would not
20 only capture production west of it but also, because of the
21 gravity drainage effect in this reservoir, production east
22 of the wellbore on this tract?

23 A. Yes, sir, it would, and I have an exhibit later
24 on that will show that.

25 Q. All right. Let's go to that Exhibit Number 3.

1 I'd ask you to identify that and then review the
2 information on that exhibit for Mr. Catanach.

3 A. This is a schematic diagram of Section 22 with
4 our version of what we think the fracture system looks like
5 there.

6 You'll notice that I've drawn some large arrows
7 on the map, and I've highlighted them with green coloring
8 there, and also some smaller arrows on the map, and they go
9 perpendicular to that in an east-west direction.

10 What I'm trying to show here is that through
11 production and in other fields around the area,
12 predominantly Puerto Chiquito West field, that the major
13 fractures go in a north-south direction, and the highest
14 permeability to oil and anything else in the fracture
15 system is in a north-south direction.

16 But there is another set of fractures that go
17 east-west, and if you'll note carefully how I've drawn them
18 here, you'll see that not many of them connect up. But
19 enough of them do so that in addition to the north-south
20 permeability, gravity drainage is allowed to work on the
21 monocline in here, such that oil is drained downdip to the
22 west across this diagram. And in that manner, we believe
23 that we can drain the entire section with that wellbore.

24 Q. Let's go now to EnRe Exhibit Number 4. What is
25 this?

1 A. This is a type log that shows the Mancos
2 formation, the "A", "B" and "C" zone within the Mancos.

3 We plan to drill this wellbore in the "B" zone,
4 which is the zone that was productive in the American
5 Hunter well two and a half miles to the south of us.

6 This particular log comes from the Mallon well in
7 Section 21, which is about a mile away from us, so it's the
8 best data we've got for what the Mancos looks like in this
9 area.

10 Q. Does this look like a suitable section for an
11 attempt for a horizontal wellbore?

12 A. Yes.

13 Q. Based on your experience drilling the well to the
14 south and also the information from this exhibit, do you
15 see any geological impediment or problem in terms of a
16 horizontal project in this area?

17 A. No, I don't, it looks identical to the area to
18 the south.

19 Q. Could you just summarize for Mr. Catanach the
20 geological conclusions you've been able to reach concerning
21 this project?

22 A. Well, we believe it's an excellent candidate for
23 a horizontal well because of the fractures that we've noted
24 in wells all around the area. And these sand bench
25 developments, the benches of sand, are the ones, the

1 brittle beds, that get fractured.

2 Drilling to the south produced a very good well,
3 and this essentially would be a two-mile offset to that.
4 And we believe we can -- With a horizontal well, we can
5 drill and drain an entire section.

6 Q. Mr. Kern, how soon does EnRe hope to commence
7 this well?

8 A. We think we can get her started in early
9 September.

10 Q. Is Exhibit Number 5 a copy of an affidavit with
11 attached letters confirming that notice of this hearing has
12 been provided in accordance with Oil Conservation Division
13 rules?

14 A. Yes.

15 Q. Were Exhibits 1 through 5 either prepared by you
16 or compiled at your direction?

17 A. Yes.

18 MR. CARR: At this time, Mr. Catanach, we move
19 the admission of EnRe Corporation Exhibits 1 through 5.

20 EXAMINER CATANACH: Exhibits 1 through 5 will be
21 admitted as evidence.

22 Q. (By Mr. Carr) Mr. Kern, will EnRe be calling an
23 engineer to review the actual drilling aspects of this
24 project?

25 A. Yes.

1 MR. CARR: That concludes my direct examination
2 of Mr. Kern.

3 EXAMINATION

4 BY EXAMINER CATANACH:

5 Q. Mr. Kern, if drilled as proposed, this well will
6 traverse more than half a section; is that correct?

7 A. That would be the maximum, yes. The well to the
8 south actually only made it 1100 feet, so you kind of judge
9 the distance by what you encounter along the trace.

10 Q. How was the data on Exhibit Number 3 -- how was
11 that derived?

12 A. It's strictly schematic, based on all our
13 experience. I've worked this area for about three years.
14 I've studied all the wells in West Puerto Chiquito field,
15 East Puerto Chiquito field and Boulder, which surround this
16 tract.

17 And pressure information between wells has proven
18 that the permeability in a north-south direction is really
19 unusually good.

20 Permeability in the east-west direction is less
21 by a factor of about ten, but it's sufficient that gas
22 injection works in this system and will -- that will aid
23 gravity drainage, and the oil does end up being produced by
24 the wells lower down in the monocline.

25 Q. This exhibit by no means -- You don't intend to

1 depict the location of these fracture systems?

2 A. No, no, it's strictly schematic. I should have
3 said that going in.

4 You can, with your seismic, get some idea of
5 where you think the major fracture zones would be. But it
6 is quite an art, and by no means as accurate as this
7 schematic would indicate.

8 Q. Do you know what the allowable in the Boulder-
9 Mancos Pool is?

10 A. I believe it's 160 barrels per 80-acre spacing
11 unit.

12 Q. If I understand correctly, you're asking for
13 eight times -- eight times the normal allowable?

14 A. Yes.

15 Q. Or 1280 barrels a day?

16 A. Yes, sir.

17 Q. Do you recall how much the American Hunter well
18 was capable of producing?

19 A. On one day it produced 1700 barrels of oil. We
20 produced it for several months in the 600-to-800-barrel-a-
21 day range, and our allowable on that well, I think, was 800
22 barrels a day.

23 Q. It's not the issue here, but do you have an
24 opinion as to whether the spacing in the Boulder-Mancos
25 Pool might be too small?

1 A. I definitely believe that. I believe they over-
2 drilled it and probably made it -- maybe not uneconomic,
3 but marginally economic, by overdrilling.

4 Q. So you believe the Mancos in this area is more
5 typical of, say, the Gavilan or West Puerto Chiquito?

6 A. West Puerto Chiquito is probably the best job of
7 draining a field with the most economical number of wells,
8 yes.

9 Q. So it is your opinion, again, that there are
10 fracture systems throughout the section that would aid in
11 the drainage of that section?

12 A. Yes.

13 Q. Is the "B" zone the only potentially productive
14 zone?

15 A. No, it's -- We're choosing that one simply
16 because that was the one that had the best fractures and
17 the good production in the well to the South.

18 The "A" and the "C" zones have produced in other
19 wells, do produce in other wells, and we're just hopefully
20 picking the best one.

21 Q. To drain the "A" and the "C" would probably
22 necessarily require another wellbore?

23 A. We don't know the answer to that. With American
24 Hunter, we actually angled -- tried to angle the wells down
25 through two of the zones, thereby thinking we would drain

1 them both.

2 Evidence in West Puerto Chiquito field indicates
3 that the pressure is being drawn down in all zones, but in
4 that field some wells are in one zone and some wells are
5 perforated in another zone, and in vertical wellbores, you
6 can perforate in all three zones if you want to, and many
7 wells do.

8 With the horizontal wellbore, we don't know
9 exactly how that will work. We'll just learn by
10 experience.

11 Q. There isn't any vertical permeability between
12 these reservoirs, you don't think?

13 A. The "A", "B" and the "C"? We have seen all our
14 fractures in those benches when we've been horizontally
15 drilling. Therefore we're thinking there are either less
16 or no fractures in between the sand benches. But we don't
17 have enough data to say that with certainty.

18 Q. That surface location, has that been approved by
19 the tribe?

20 A. Yes.

21 Q. And that's 1950 from the north, 1800 from the
22 east?

23 A. Yes.

24 Q. Okay. If indeed problems did develop with your
25 wellbore and you sought administrative approval to drill a

1 different -- an additional wellbore, do you have any idea
2 where that might be located, or have you contemplated that
3 at all?

4 A. It would be very close to where we have.

5 What we're doing here is actually following the
6 seismic line as close as we can. And that's what you want
7 to do, is -- We're trying to learn, is what we're seeing on
8 the seismic line truly these fractures as I've depicted
9 here? And the only way you can do that is to drill as
10 close to the line as you can.

11 Q. You don't anticipate any mechanical problems, do
12 you?

13 A. No, we were very successful in the first four
14 wells we drilled with American Hunter.

15 EXAMINER CATANACH: That's all I have of the
16 witness.

17 MR. CARR: That's all we have of Mr. Kern, and at
18 this time I would call Harvey Ashford.

19 JAMES HARVEY ASHFORD, JR.,
20 the witness herein, after having been first duly sworn upon
21 his oath, was examined and testified as follows:

22 DIRECT EXAMINATION

23 BY MR. CARR:

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

25 A. My name is James Harvey Ashford, Jr.

1 Q. Where do you reside?

2 A. In San Antonio, Texas.

3 Q. By whom are you employed and in what capacity?

4 A. I'm a consulting engineer employed by EnRe
5 Corporation.

6 Q. Have you previously testified before this
7 Division?

8 A. No, sir, I have not.

9 Q. Could you briefly review your educational
10 background and your work experience?

11 A. Yes, sir. I graduated from the University of
12 Texas at Austin with a BS in petroleum engineering in 1956.
13 I have since worked for Gulf Oil Corporation, Tenneco Oil,
14 in the midcontinent, Rocky Mountains, the Great Basin, all
15 of the Rocky Mountain area, including the San Juan Basin,
16 Permian Basin of west Texas, Gulf Coast, onshore and
17 offshore, Canada, California, as an engineer in production
18 drilling operations.

19 And then I worked subsequent to that for Tesoro
20 Petroleum, who is an offset owner or operator in this area,
21 as their manager of drilling and production operations.
22 And we, in fact, bought the north part of the Boulder-
23 Mancos field from Mobil when they sold it.

24 I have been a consulting engineer since 1975, and
25 I've worked for a number of operators throughout the

1 country in the US and Canada.

2 Q. Are you a registered petroleum engineer?

3 A. I am a registered professional engineer in the
4 State of Texas.

5 Q. You've testified in other states and in state and
6 federal court?

7 A. I have testified in Texas, Louisiana,
8 Mississippi, Oklahoma, the province of Alberta, California,
9 before the oil and gas conservation commissions.

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

12 A. Yes, sir, I am.

13 Q. And are you familiar with the proposed well in
14 the subject area?

15 A. Yes, I am.

16 MR. CARR: We tender Mr. Ashford as an expert
17 witness in petroleum engineering.

18 EXAMINER CATANACH: Mr. Ashford is so qualified.

19 THE WITNESS: Thank you.

20 Q. (By Mr. Carr) What do you hope to achieve by
21 drilling this well?

22 A. We propose to drill a horizontal well to more
23 efficiently drain that Mancos formation, the fracture
24 system in the Mancos, and minimize the number of wellbores
25 required to develop the reserve.

1 Q. Let's refer to what has been marked EnRe Exhibit
2 Number 6. Mr. Ashford, I'd ask you to go to that exhibit
3 and then review for Mr. Catanach exactly how you propose to
4 drill this horizontal well.

5 A. We propose -- And by the way, if you'll look at
6 the plan layout on that exhibit, it shows you the seismic
7 line just north of our proposed horizontal projection of
8 the wellbore.

9 We had planned to stake that location directly on
10 the seismic line and try to project our wellbore along that
11 seismic line, but it was located on a ridge and in a very
12 densely -- forest growth. And we -- Trees out there cost a
13 lot, by the way. So we decided not to cut the trees and
14 move a little south then, and it kept the Indians in a
15 better mood for this well.

16 We're going to drill a vertical section down to
17 -- according to this projection that we've asked
18 Halliburton to make for us, down to 5977. We will start
19 our medium-long-radius turn -- it's at the rate of eight
20 degrees per hundred -- to a depth of 6526.

21 At that point we will set 7-inch casing. We will
22 drill out of that 7-inch casing with a 6-1/8 hole.

23 We will continue our turn of eight degrees per
24 hundred, down to about 6689, where we will encounter the
25 Mancos "B" sand.

1 Then we will begin to follow the sand, which will
2 require -- According to the seismic, there are about three
3 sections in this area that have varying degrees of dip, and
4 we will follow that dip that we see on seismic and stay
5 within the "B" sand by using a gamma-ray log and our MWD
6 setup.

7 We will attempt to drill this well approximately
8 2500 to 3000 feet in length and try to encounter all the
9 fractures that we see in the seismic.

10 Q. Are you going to complete the well with an open
11 hole or a slotted liner or what?

12 A. After drilling the well, we will then run a
13 pre-slotted or a pre-perforated liner throughout the whole
14 interval, and we will hang it off in the 7-inch casing.

15 Q. No matter how successful you are, you will keep
16 the horizontal portion of the wellbore back at least 330
17 feet from the outer boundary of the project area?

18 A. Our plans are to stop it about 500 or so feet
19 from the boundary.

20 Q. And using this equipment, you will be able to
21 control the location of that hole, both within the
22 formation and as you approach the outer boundary?

23 A. Yes, sir, we will. The degree of accuracy is
24 quite high with the current equipment that we use.

25 Q. And you'll know where it is at all times?

1 A. Yes, sir, we will know all the time.

2 Q. Do you anticipate there will be any real drainage
3 from offsetting tracts?

4 A. No, sir, I think it's going to take this
5 horizontal wellbore to drain the section. And as far as
6 affecting the drainage of oil from sections either north or
7 south, I don't think so.

8 Q. And the wellbore is, in fact, positioned within
9 the center of this section so as to take advantage of both
10 the fractures and the gravity drainage that you expect in
11 this reservoir?

12 A. Yes, it is.

13 Q. If the well is successful, can you estimate what
14 you would anticipate its producing life to be?

15 A. We expect the life to be in excess of 20 years,
16 and we project this based on an enhanced oil recovery or
17 improved oil recovery technique that we plan to use in the
18 future.

19 Q. When you complete drilling, you will have a
20 survey of the entire wellbore, will you not?

21 A. Yes, sir, we will have a certified survey of that
22 entire wellbore.

23 Q. And will you provide a copy of that survey to the
24 Oil Conservation Division?

25 A. Yes, sir, we will.

1 Q. In your opinion, will drilling this well and
2 completing it as a successful producer be in the best
3 interests of conservation, the prevention of waste, and the
4 protection of correlative rights?

5 A. Yes, I think that it will, and it will be more
6 economical on the operator and less costly, so I think that
7 we can thereby justify drilling more wells to develop the
8 reserves along this trend.

9 Q. Was Exhibit Number 6 prepared at your direction?

10 A. Yes, it was.

11 Q. And you can testify as to its accuracy?

12 A. Yes, sir, I can.

13 MR. CARR: At this time, Mr. Catanach, we move
14 the admission of EnRe Exhibit Number 6.

15 EXAMINER CATANACH: Exhibit Number 6 will be
16 admitted as evidence.

17 MR. CARR: And that concludes my direct
18 examination of this witness.

19 EXAMINATION

20 BY EXAMINER CATANACH:

21 Q. Mr. Ashford, how was the vertical portion of the
22 well constructed, the -- down to the kickoff point?

23 A. Down to the kickoff point.

24 This plan assumes that that wellbore will be
25 vertical. We expect that it will probably go updip, we

1 expect maybe a hundred feet or so. So we will have to
2 recapture that portion that we lose back to the east.

3 This is a theoretical vertical hole, and it won't
4 be that way; it will be somewhat deviated.

5 Q. Have you got casing sent uphole from the kickoff
6 point?

7 A. Yes, I have surface pipe set, yes.

8 Q. Where is that set?

9 A. We're planning to set it at 250 feet. It will be
10 10 3/4, 40 1/2-pound.

11 Q. Will that be cemented to surface?

12 A. It will be cemented to surface, according to all
13 the requirements.

14 Q. Do you have an intermediate string?

15 A. No, sir, the 7-inch is the equivalent of an
16 intermediate string. It will be our drill string, but it
17 will also be our production string.

18 Q. So you'll drill down to your kickoff point of
19 5977; is that right?

20 A. Yes, sir, that is the projection using this
21 vertical well.

22 If we do experience a deviation, which we expect
23 drilling that vertical section, then it will change
24 somewhat to put that arc and to hit the "B" sand.

25 Our intent was to hit the "B" sand at shot point

1 438, which you see up in that plan view --

2 Q. Uh-huh.

3 A. -- on the shot-point line.

4 If we do deviate some to the east, we expect to
5 hit the formation before that shot point, but we do not
6 expect to encounter any fractures in it; we'll just have a
7 little extra horizontal portion or near-horizontal portion
8 to drill.

9 Q. The 7-inch casing will be set when you hit a
10 depth of 6526; is that correct?

11 A. Yes, sir, or the equivalent, based on what
12 happens to that vertical section of the hole. We're going
13 to set it into the Mancos "A" formation. It may occur a
14 little shallower if we drift east.

15 See, the beds are coming updip, back to the east.

16 This is our projected depth, based on what we've
17 assumed here. It may change, based on what we encounter as
18 we drill the well.

19 Q. The liner will then be run -- It will be tied
20 into the 7-inch?

21 A. Yes, sir, we will lap that liner 200-feet-plus,
22 and we will use a liner hanger. It will not be a packer-
23 type, it will be just a slip-type.

24 Q. Okay, and that will be run down to TD?

25 A. Yes, sir, it will be run to TD.

1 Q. Okay. Is this more or less the way the American
2 Hunter wells were drilled?

3 A. Exactly, yes.

4 Q. Exactly the same way?

5 A. Yes, sir.

6 Q. No mechanical problems with them?

7 A. The only problem they had is, they did have to
8 shorten the length on the 3-F, which is their good
9 producer, that is on trend with this well. And it was
10 caused by not being able to circulate the well.

11 They just couldn't lift the oil that they were
12 circulating with, with enough nitrogen, so they just had to
13 stop.

14 Q. Okay.

15 A. As a side note, I will be operating -- I will be
16 on site, operating this.

17 Q. How many of these have you drilled?

18 A. Horizontal wells? Well, I live amidst the Austin
19 chalk trend in Texas.

20 They're all around me, and I have been involved
21 with them, yes, sir.

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

24 MR. CARR: Thank you, Mr. Catanach.

25 We have nothing further in this case.

1 EXAMINER CATANACH: There being nothing further
2 in this case, Case 11,050 will be taken under advisement.

3 (Thereupon, these proceedings were concluded at
4 3:00 p.m.)

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12 I do hereby certify that the foregoing is
13 a complete record of the proceedings in
14 the Examiner hearing of Case No. 11050,
15 heard by me on August 18 1981.
16 David R. Catnach, Examiner
17 Oil Conservation Division
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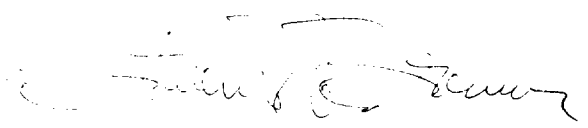
1 CERTIFICATE OF REPORTER

2
3 STATE OF NEW MEXICO)
4 COUNTY OF SANTA FE) ss.

5
6 I, Steven T. Brenner, Certified Court Reporter
7 and Notary Public, HEREBY CERTIFY that the foregoing
8 transcript of proceedings before the Oil Conservation
9 Division was reported by me; that I transcribed my notes;
10 and that the foregoing is a true and accurate record of the
11 proceedings.

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

16 WITNESS MY HAND AND SEAL September 24th, 1994.

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

21 My commission expires: October 14, 1994
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