

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 MANZANO OIL CORPORATION)
 FOR POOL CREATION AND SPECIAL POOL)
 RULES, CHAVES COUNTY, NEW MEXICO)

CASE NO. 11,504

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

April 4th, 1996

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, April 4th, 1996, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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 Examiner Hearing
 CASE NO. 11,504

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A P P E A R A N C E S

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By: ERNEST L. CARROLL

* * *

1 WHEREUPON, the following proceedings were had at
2 8:53 a.m.:

3 EXAMINER STOGNER: Call now Case 11,504.

4 MR. CARROLL: Application of Manzano Oil
5 Corporation for pool creation and special pool rules,
6 Chaves County, New Mexico.

7 EXAMINER STOGNER: Call for appearances.

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

11 We represent Manzano Oil Corporation in this
12 matter, and we have two witnesses.

13 MR. PADILLA: Mr. Examiner, I'm Ernest L.
14 Padilla, Santa Fe, New Mexico, for Julian Ard. I have no
15 witnesses today.

16 EXAMINER STOGNER: Any other appearances?

17 I'm sorry, Mr. Carr, how many witnesses did you
18 say you had?

19 MR. CARR: I have two.

20 EXAMINER STOGNER: Two.

21 MR. CARROLL: Mr. Carr --

22 MR. CARR: Yes?

23 MR. CARROLL: -- is Mr. Ernest Carroll going to
24 show up today?

25 MR. CARR: Mr. Carroll called and indicated that

1 Yates was not opposing this Application but did request
2 that the record reflect he had filed his written entry of
3 appearance in the matter.

4 EXAMINER STOGNER: When you refer to Yates,
5 that's Yates Petroleum?

6 MR. CARR: Yes, sir, Yates Petroleum Corporation.

7 EXAMINER STOGNER: Okay. At this time I'm going
8 to ask the witnesses to please stand to be sworn.

9 (Thereupon, the witnesses were sworn.)

10 EXAMINER STOGNER: Mr. Padilla, Mr. Carr, since
11 there's somebody else that's entered an appearance in this
12 matter, is there any need for opening comments or opening
13 remarks at this time?

14 MR. CARR: I don't have an opening statement.

15 MR. PADILLA: No, I don't have one.

16 EXAMINER STOGNER: Okay, Mr. Carr, you may
17 continue.

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

21 DIRECT EXAMINATION

22 BY MR. CARR:

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

24 A. Mike Brown.

25 Q. Mr. Brown, by whom are you employed?

1 A. I'm employed by Manzano Oil Corp., Roswell, New
2 Mexico.

3 Q. And what is your current position with Manzano
4 Oil Corporation?

5 A. I'm geologist.

6 Q. Have you previously testified before the Oil
7 Conservation Division and had your credentials as a
8 geologist accepted and made a matter of record?

9 A. I have and they were.

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

12 A. I am.

13 Q. Are you familiar with the Manzano "SV" Vest State
14 Well Number 1?

15 A. I am.

16 Q. And have you made a geological study of the area
17 surrounding this well?

18 A. Yes, I have.

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

21 EXAMINER STOGNER: Any objections?

22 MR. PADILLA: No, your Honor.

23 EXAMINER STOGNER: Mr. Brown is so qualified.

24 Q. (By Mr. Carr) Mr. Brown, could you briefly
25 summarize what Manzano seeks with this Application?

1 A. Manzano seeks the creation of a new pool for the
2 production of oil and gas from the Bough C formation. The
3 acreage in question is the east half of the southwest
4 quarter of Section 16, Township 14 South, Range 30 East,
5 Chaves County, New Mexico.

6 We're also seeking special pool rules, including
7 provisions for 80-acre spacing and 330-foot setbacks.

8 Q. What are the current rules which govern the
9 development of the Bough C formation in this area?

10 A. Statewide 40s.

11 Q. Have you prepared certain exhibits for
12 presentation here today?

13 A. Yes, I have.

14 Q. Could you refer to what has been marked for
15 identification as Manzano Oil Corporation Exhibit Number 1,
16 identify this and review it for Mr. Stogner?

17 A. Okay, this is a land plat of the Vest State
18 Number 1 area. I'm showing in red the location of the Vest
19 State Number 1 well, which is located 1650 feet from the
20 west, 330 feet from the south of Section 16. In red is the
21 proposed 80-acre proration unit.

22 To the south in Section 21, I've noted in green
23 an 80-acre proration unit that is to be dedicated to a well
24 that Yates Petroleum has staked, and it's supposed to spud
25 next week, and that well is the Vest Ranch Federal "RE"

1 Federal Number 2.

2 Q. And there's a spot on that spacing unit
3 indicating the approximate location of that well?

4 A. Yes, sir.

5 In yellow is the remainder of Manzano's
6 leasehold, and in the southwest of the southwest quarter
7 there's a 40-acre tract that's owned by Julian Ard.

8 Q. And where does Amoco actually own acreage in the
9 area?

10 A. They control the northeast quarter of Section 16.

11 Q. Okay, let's go to Exhibit Number 2. Would you
12 identify that?

13 A. This is a porosity and resistivity log slice
14 covering the Bough A, B, C and D in the Vest State Number
15 1.

16 Q. Could you just briefly review for Mr. Stogner the
17 history of this one?

18 A. Okay. The well was spud in October of 1995 as a
19 Devonian test. We tried two disappointing drill stem tests
20 in the Devonian and TD'd the well at a depth of 10,757 feet
21 on November 28th.

22 After wireline logging, we decided to run a
23 straddle pack DST over the Bough C interval, and at that
24 point, given the results of the test, decided to run casing
25 to 9790 feet. We did that on December 5th. We attempted a

1 completion in a Morrow sand and then moved up to begin
2 completion in the Bough C.

3 Moving to the exhibit, the Bough C interval that
4 we tested and ultimately perforated is shown. The interval
5 is approximately 28 feet thick. It runs from 8312 and
6 down.

7 I've noted on this exhibit, the left-hand side is
8 your porosity log, the right-hand is your resistivity. The
9 Bough C here, like I said, was 28 feet thick. It's fairly
10 tight with the exception of a small interval at the bottom,
11 and I've noted the 4-percent porosity cutoff line. And in
12 orange is greater than 4-percent neutron porosity, and
13 yellow is greater than 4-percent density porosity.

14 Manzano perforated from 8316 to -19 and 8327 to
15 -38. We acidized the well with 500 gallons of 15-percent
16 NEFE, and the well initial potential flowing at 900 pounds
17 on a 9/64 choke for 152 barrels of oil, 150 MCF of gas and
18 zero barrels of water per day. And that completion date is
19 1-15-96.

20 Q. How close is the nearest Bough C production to
21 this well?

22 A. It's about 11 miles away.

23 Q. Let's go to what has been marked Manzano Exhibit
24 Number 3, your cross-section, and I'd like you to review
25 this for the Examiner and also basically explain the trace

1 for the cross-section.

2 A. All right. This is a cross-section that I put
3 together, just to establish for the Commission that this
4 is, in fact, Bough C production.

5 On the left is the Manzano Vest State Number 1.
6 I move across into the known Bough-producing areas in the
7 Tatum Basin. The well to the -- directly to the right is
8 in Tulk field. I move up to the Baum field, over to
9 Saunders, then the well over to the right is in Cuerno
10 Largo, and that's another Manzano-operated field.

11 I've shown numerous picks. This cross-section is
12 hung on the Wolfcamp double-X marker, which is a very good
13 regional correlation marker that we use. I've noted in
14 green the second marker that's real easy to pick out, and
15 that's the base of the Three Brothers. I show -- which
16 also corresponds to the top of the Pennsylvanian. The
17 Bough D in blue is another regional correlation marker.
18 And then I've noted the Bough A, the Bough B and the Bough
19 C as you move across.

20 I wanted to note that the markers are really
21 quite good, and I was able to correlate fairly easily
22 across. This is a period of fairly calm deposition. Most
23 of your major markers correlate over very extensive areas.

24 The Bough C in particular is the main pay in
25 almost all the fields that you look at. The Bough B is a

1 little less, and there's very little Bough A production.

2 The well that I wanted to note most is the Cuerno
3 Largo field, and we'll talk about that in detail. As I
4 said, that's a Manzano-operated field. But if you look at
5 the Bough C in particular and look over at the Vest State,
6 you'll see they're extremely comparable in thickness, gross
7 carbonate. The porosities are also very comparable.

8 I think that the production in this field, though
9 it's early, will be very similar to what we see in Cuerno
10 Largo.

11 Q. Let's go to Manzano Exhibit Number 4. What is
12 this?

13 A. This is a listing of the Pennsylvanian or
14 Wolfcamp Bough fields in the area. This is a mostly Tatum
15 Basin Bough. I tried not to include anything Pennsylvanian
16 that was northwest shelf or too far south to be Bough
17 production.

18 I noted spacing, and that came from the 1994 New
19 Mexico Oil and Gas Engineering Committee Report, as well as
20 cumulative oil production from the field in thousands of
21 barrels of oil.

22 I've totaled it in the lower right. I've totaled
23 by spacing 40, 80 and 160 and also shown the percent of the
24 total.

25 I did want to say that I wasn't able to check

1 every one of these fields and to make sure that they are
2 Bough, but I have direct experience in nine of them that I
3 know. The two Allison fields, the Allison Penn-Lea, the
4 Allison Penn-Roosevelt, which are on 80-acre spacing, are
5 Bough C. The Baum Upper Penn is Bough C. The Cuerno
6 Largo-Penn -- it's on 40-acre spacing -- it's Bough C.
7 It's on statewide 40s, but as we'll see in a minute it's
8 been effectively developed on 160s. Lazy J Penn, the
9 Ranger Lake Bough, the Ranger Lake Penn, which are both 80s
10 and the Vada Penn, which is 160 acres.

11 Q. All right, let's go to your structure map.
12 First, I think it's important to note the field that we're
13 mapping here.

14 A. Right, Exhibit 5 is a structure map of the Cuerno
15 Largo field.

16 This is a field that is operated by Manzano, is
17 it not?

18 A. Yes, we operate six of the seven wells that are
19 within the field. The field outline is Sections 25, 26, 35
20 and 36.

21 As you can see, we have a pretty large area. The
22 wells are effectively on 160-acre spacing. The structure
23 of the Bough D shows just a gentle nosing, and this is
24 stratigraphically trapping up against the -- down to the
25 east fault.

1 Q. Manzano will also call an engineering witness,
2 will it not, to review the pressure information on the
3 wells in this pool?

4 A. Yes, we will.

5 Q. Is Exhibit Number 6 an affidavit confirming that
6 notice of this Application has been provided in accordance
7 with Oil Conservation Division rules?

8 A. Yes, it is.

9 Q. Were all operators in the pool, or the proposed
10 pool, notified?

11 A. They were.

12 Q. Were all operators within a mile of the proposed
13 boundary also notified?

14 A. They were.

15 Q. Are there any unleased minerals within the
16 proposed pool boundary?

17 A. No, sir.

18 Q. What geological conclusions can you reach from
19 your study of the Bough C in this area?

20 A. First, that the interval perforated in the Vest
21 State Number 1 is in fact Bough C, that this Bough C is
22 similar in thickness and porosity to other Bough fields
23 developed on 80-acre and 160-acre spacing, and that
24 basically no geologic reason that I see to expect that this
25 well will behave any differently from wells in the other

1 Bough C fields that are developed on 80- and 160-acre
2 spacing.

3 Q. Mr. Brown, were Exhibits 1 through 6 either
4 prepared by you or compiled under your direction?

5 A. They were.

6 MR. CARR: At this time, Mr. Stogner, we would
7 move the admission into evidence of Manzano Exhibits 1
8 through 6.

9 EXAMINER STOGNER: Exhibits 1 through 6 will be
10 admitted into evidence, unless there's any objection.

11 MR. PADILLA: No.

12 EXAMINER STOGNER: There being none, they will be
13 admitted into evidence.

14 MR. CARR: That concludes my direct examination
15 of Mr. Mike Brown.

16 EXAMINER STOGNER: Thank you, Mr. Carr.

17 Mr. Padilla, your witness.

18 CROSS-EXAMINATION

19 BY MR. PADILLA:

20 Q. Mr. Brown, let me direct your attention to your
21 Exhibit Number 1, which is your land plat.

22 A. Yes, sir.

23 Q. The acreage colored in green is the Yates-
24 proposed proration unit?

25 A. Yes, sir.

1 Q. What field rules are applicable for that well?

2 A. Right now, until this -- results of this would be
3 the statewide 40s.

4 Q. Why have you colored 80 acres in there?

5 A. The 80 acres represents -- we have -- Manzano
6 owns 50 percent, Yates Petroleum owns 50 percent of that
7 80-acre tract. Manzano had the right to propose the well,
8 which we did. Yates Pet. will operate it.

9 Q. What's dedicated to the well right now?

10 A. I'm not sure what they've dedicated to it.

11 Q. If the current rules are 40 acres, it should be
12 40, correct?

13 A. The well will be drilled to the Devonian, which
14 would be 40-acre spacing.

15 Q. How about to the Bough C? What proration unit
16 would control today?

17 A. Right now, it would be 40 acres.

18 Q. What's the acreage in yellow?

19 A. The acreage in yellow is the Manzano acreage.

20 EXAMINER STOGNER: I'm sorry, Manzano what?

21 THE WITNESS: Manzano acreage.

22 Q. (By Mr. Padilla) What is Manzano's relationship
23 to Sun Valley Energy?

24 A. We work very closely on numerous projects. This
25 is one that we put together, together, and Manzano operates

1 the wells and -- That's basically about it.

2 Q. For Sun Valley, is that -- Manzano operates the
3 wells for Sun Valley?

4 A. We operate the wells that they're involved in, I
5 should say. We're not really operating for them. We have
6 more of the working interest than Sun Valley has, so...

7 Q. I have here a term assignment from Amoco
8 Production Company to Sun Valley Energy Corporation.

9 A. Uh-huh.

10 Q. Is that a -- Well, let me ask the question this
11 way: Is Manzano working under that term assignment --

12 A. Yes, sir.

13 Q. -- from the Amoco acreage?

14 A. I'm sure we are, yes.

15 Q. This term assignment, Mr. Brown, has a provision
16 in it that says in effect that you're to drill on 40-acre
17 spacing unless special rules are implemented --

18 A. Right.

19 Q. -- in which case, the size of the proration
20 unit -- in other words, Sun Valley has to drill one well
21 per spacing unit?

22 A. Right.

23 Q. Is Sun Valley or Manzano motivated by this
24 provision to change the spacing in this area?

25 A. Yes, we developed this area for Devonian, 40-acre

1 spacing, and given that we're 11 miles away, we had no
2 indication that Bough C would be a potential target. So
3 our motivation was for 40-acre Devonian locations.

4 The discovery of the Bough C has definitely
5 changed those plans. The Bough C is not effectively
6 developed on 40's, as we'll establish well in the
7 engineering testimony. It's just too dense of spacing for
8 Bough C.

9 Q. But your Exhibit 4 does have eight fields out
10 there that are produced on 40-acre spacing?

11 A. Right, most of those were older fields. I think
12 if you'll do engineering work on them, you'll see that
13 those wells were overdrilled. But at the time it was
14 drilling wars, and they densely drilled those fields.

15 Q. Now, your cross-section, as I understand it, is
16 not to establish that there's a continuity across this area
17 of Bough C formation or zone, correct?

18 A. The Bough C is present over extensive areas, even
19 -- I mean, it's almost always -- well, it is always present
20 that I know of, even up on the top of the structures. It
21 does stratigraphically trap, it also structurally traps.
22 It was a very extensive area of deposition though.

23 Q. But you're not trying to show by this cross-
24 section that the entire area going from, say, your Vest
25 State Number 1 well to the Cuerno Largo field is

1 continuously productive of Bough C?

2 A. Oh, no, sir. That's correct, it is not
3 continuous.

4 Q. And would you agree that the characteristics may
5 be different from your -- reservoir characteristics may be
6 different from the State Number 1 to the Cuerno Largo
7 field?

8 A. It's possible. There's nothing geologic that I
9 see that would establish that it would be different, but...

10 Q. Would stratigraphic traps and things of that
11 nature have anything to do with reservoir characteristics?

12 A. The Bough C seems to be fairly consistent on its
13 reservoir characteristics across almost all the field, so I
14 would not anticipate it would be any different where we're
15 at.

16 Q. In terms of drainage, you're saying, in effect,
17 that all of the fields that you've listed in your Exhibit 4
18 produce the same, have the same reservoir characteristics?

19 A. Generally the same. Of course, there's going to
20 be difference. The Bough C does change thickness somewhat,
21 but the Bough C deposition was similar across a very large
22 area. It was a shelf, quiet shelf. These are phylloid
23 algal mounds. The -- Where productive, the wells are very
24 similar because the deposition was similar.

25 Q. What type of reservoir drives do these fields

1 have, say the first one you have there, Allison Penn-Lea?

2 A. I think they're all pretty much solution gas
3 drive.

4 Q. You think they're all solution gas drives. Are
5 there any that are gas cap or --

6 A. That's more engineering questions, but to my
7 knowledge, I'm pretty sure they're mostly all solution gas
8 drive.

9 Q. Are there any that are water driven?

10 A. Not to my knowledge.

11 Q. The rest of your exhibits are engineering, I take
12 it --

13 A. Yes, sir.

14 Q. -- that have been handed to me by Mr. Carr.

15 Let me go back to Exhibit Number 1 and ask you,
16 Mr. Brown, there's a well in that 80 that you have bordered
17 by red. Is that a -- Did that penetrate the Bough C?

18 A. No, sir, that's, I believe, Queen. Those are all
19 shallow wells. The only deep wells in the general area is
20 the well in the southwest of the southwest of 16, then our
21 Vest State Number 1, and there is a deep well somewhere to
22 the south. But very few deep penetrations in this area.

23 Q. Did you examine the log on that well in the
24 southwest of the southwest of Section 16?

25 A. Yes, I did.

1 Q. What did that show in terms of the Bough C?

2 A. It is an older vintage log. What you can pull
3 from the logs is that the Bough C is there, which is
4 expected. The Bough C generally won't change in thickness
5 very quickly. So it does have Bough C, as did the other
6 two deep penetrations in the well, as far as carbonate.

7 Q. Do you know whether the Bough C was tested in
8 that well?

9 A. According to what was reported to the State, no.

10 Q. How about the well in the northwest quarter of
11 the southwest quarter? Did that penetrate the Bough C?

12 A. I'm sorry, which well?

13 Q. The well in the northwest quarter of the
14 southwest quarter?

15 A. That was a shallow Queen well.

16 Q. Do you have a structure map for this area of
17 Section 16 for the Bough C?

18 A. We ran 3-D seismic, so we have an idea of what
19 the Devonian structure will be. On the Bough C, you've got
20 much more gentle slopes. I could estimate one, but with
21 really one or two points of control it's very hard to do
22 much.

23 Q. Why is that?

24 A. Too much -- Give me too much power to draw it any
25 size I want it to be. I would suspect that generally it

1 will cover parts of Sections 16 and 21.

2 Q. Do you have any well control out there to do a
3 structure map of the Bough C?

4 A. Not enough to do a meaningful map, no, sir.

5 Q. So essentially you're basing your Application for
6 80 acres, from a geologic standpoint, on the other Bough C
7 fields that you have studied?

8 A. Yes, sir.

9 Q. And you currently have no information to even do
10 a structure map of this area; is that what you're telling
11 us?

12 A. I can do one that would mimic the Devonian. But
13 as far as the Bough C, no, it's extremely difficult.

14 Q. What did this well potential, the well you
15 drilled?

16 A. What did it potential at?

17 Q. Yes.

18 A. 152 barrels of oil.

19 Q. From the Bough C?

20 A. From the Bough C, yes, sir.

21 Q. If Julian Ard drills a well in the southwest
22 quarter of the southwest quarter, as he has already had
23 permitted, and it's a well that's -- I believe it's 1330
24 from your lease line and 1330 from the south line, and you
25 have the Yates location down there, and in fact you're

1 going to have three wells on pretty near 40-acre spacing,
2 correct?

3 A. That's correct.

4 Q. Do you have any plans to develop the northwest
5 quarter of the southwest quarter at this time?

6 A. What our plans are now is just -- We're just
7 going to sit back and watch as the development goes on. We
8 are involved in the Yates Pet well to the south, and we'll
9 see what additional information that gives us. We're going
10 to be very deliberate in our development plans. Just
11 mainly we'll respond to what's going on.

12 Q. From the standpoint of 80-acre spacing, wouldn't
13 your location or the Yates well location be better located
14 in the northwest of the northwest of Section 21?

15 A. No, sir, the Yates Pet location is based on two
16 things. One, it's a Devonian. It is going to be drilled
17 to the Devonian formation. We had a structure in the
18 Devonian, as we thought. It was tight, but with oil shows.
19 Yates is going to test that, see if it develops on their
20 side.

21 From the Bough C standpoint, Yates wants to drill
22 a well as close to ours as possible, which is that.

23 Q. So what does that do to your 80-acre spacing if
24 you have three wells located right up against each other in
25 terms of the Bough C production?

1 A. Well, all the acreage that would be included in
2 the -- say in our north portion of our 80-acre spacing
3 should be downdip to our well. So from a drainage
4 standpoint, the wells are located on the crest of the
5 structure, and you have downdip draining towards it.

6 So it should be in good positions to adequately
7 drain this reservoir.

8 Q. What does it do for 80-acre spacing? That's my
9 question. It doesn't do anything for 80-acre spacing, does
10 it?

11 A. Yes, it does. It allows you a larger drainage
12 pattern downdip.

13 Q. With all three wells being located -- offsetting
14 each other the way they're proposed?

15 A. That is correct. You still have larger areas to
16 drain from.

17 We start putting wells on 40s, your interference
18 between those wells would hit much sooner, and your per-
19 well cums will go -- will basically be cut in half.

20 Q. In terms of your seismic information, does your
21 well in the southeast quarter of the southwest quarter show
22 that you're at the best location there for Bough C
23 production?

24 A. The Bough C, when we did all of our work, was
25 just too thin to really draw any conclusions, as far as the

1 seismic goes.

2 On the Devonian, we are in the best Devonian
3 position as far as structure. Whether or not the Bough C
4 directly -- Bough C structure directly correlates to
5 Devonian, we're just going to have to wait and see. It's a
6 little too early to call. I would think that they would
7 have pretty strong correlation, but right now we do not
8 know.

9 Q. In effect, isn't what you're saying is that this
10 is really a Devonian play here, not really Bough C? Bough
11 C was just something that you got?

12 A. Something that we got, that's correct.

13 Q. And you have very little information on the Bough
14 C in terms of drainage?

15 A. We have a lot of information on a regional
16 standpoint. What we see here is, we have a new -- a Bough
17 C play, and we want to develop the field rules that would
18 best drain this field now. We do not know how large this
19 could be. It could be an extensive field. It may end up
20 being just a two-, three-, four-well field. Right now we
21 do not know what it is.

22 And we want to go ahead and establish the proper
23 field rules, the proper spacing, now, early in the
24 development of the field, before we start overdrilling this
25 thing.

1 Q. Do you have any plans to drill wells in the
2 southeast quarter of Section 16?

3 A. I'm sure we will. I would anticipate that we'll
4 be forced to respond if the Yates Pet well is good. I
5 would venture to say they'll probably drill along that
6 border, and we'll respond to it.

7 Q. How about the northwest quarter of Section 16?

8 A. Right now that's of less -- It's not as
9 prospective in my mind. But once again, we're just going
10 to have to see how this well is developed.

11 Q. Is it fair to say that production in the south
12 half of Section 16 would be better than from the north half
13 of Section 16 in terms of Bough C production?

14 A. With the limited information I have now, I would
15 say that's correct.

16 Q. How about the north half of the south half,
17 versus the south half of the south half of Section 16?

18 A. As far as the southernmost 160?

19 Q. Right.

20 A. It's a little harder to say on that point. On
21 the Devonian structure it was better. The Bough structure,
22 we don't know.

23 Q. In terms of Bough C production, would the Yates
24 location be more favorable to you now than a location, say,
25 in the northwest quarter of the northwest quarter of

1 Section -- southwest quarter of Section 16?

2 A. The --

3 MR. CARR: What location was that?

4 Q. (By Mr. Padilla) I'm sorry. I'm asking, in
5 terms of Bough C potential or expectations, would the
6 location at the Yates location in Section 21 be better
7 than, say, a well in the northwest quarter of the southwest
8 quarter of Section 16?

9 A. On the Devonian structure it is better, and it's
10 similar -- should be similar in structure to our well. And
11 that's about as far as you can take the comparison. When
12 I'm looking for Bough C development, I wanted to drill a
13 well that was similar, as far as on the structure, and then
14 just see if porosity develops.

15 That's the major risk as we move around this
16 field: Is this going to be a stratigraphic play that's
17 limited to the crest of a structure? Or is it going to be
18 a much larger feature, like most of the Bough C fields are,
19 where structure doesn't play as big a part?

20 Q. I'm getting the impression from your answers that
21 -- and correct me if I'm mistaken, but that as you go
22 further north from your location in the southeast quarter
23 of the southwest quarter of Section 16, that you look at
24 that as less favorable now than, say, the Yates location
25 for Bough C potential?

1 A. Well, of course, the Yates well is the closest
2 well I could get as far as, you know, to the current
3 producing well.

4 In the absence of new information, I don't know
5 what happens as I move away from the wellbore, so right
6 now, yes, I'd stay as close as I could to the well.

7 Q. Say you had an option to drill the well there in
8 the northeast quarter of the southwest quarter to offset
9 your well down there --

10 A. Uh-huh.

11 Q. -- and you also have the option to drill the
12 Yates well. Which well would you drill? Would you go
13 north or south, in other words, is what I'm asking, for
14 Bough C?

15 A. I would probably just drill the Yates Pet well
16 for right now, just because of where it is structurally on
17 the Devonian feature. I do think that that northwest
18 quarter is very prospective, the northwest of the southwest
19 is very prospective as well.

20 Q. Well, let me ask you this question: If the 80
21 acres comprised of the west half of the southwest quarter
22 were being developed by Manzano, where would you propose
23 the well: the northwest quarter or the southwest quarter?

24 A. I don't really see a whole lot of difference
25 between those two, as long as you stay either in the

1 southeast of the northwest or the southeast of the
2 southwest part of that. I'd move as far east on that as I
3 could.

4 But structurally, based on a Devonian structure,
5 they're about the same. They're both on the flanks, a
6 little bit flankish.

7 But there was only ten feet of difference on the
8 Bough C between the Vest State Number 1 and the Julian Ard
9 well there in the southwest, so we're not talking about
10 significant structural change on the Bough C.

11 Q. But you were dry in the Devonian in your well,
12 correct?

13 A. We were dry with some oil show on the top, and we
14 were very wet on our last test.

15 The Texas Crude well, which is the one on Julian
16 Ard's acreage, also had a little bit of oil show on the
17 top, and it was tight.

18 So the question is, as far as Devonian goes, do
19 we develop porosity at another spot on the structure?
20 There's oil in it, we know that. It's just, are we going
21 to find it with porosity?

22 MR. PADILLA: Mr. Examiner, that's all I have of
23 this witness.

24 EXAMINER STOGNER: Thank you, Mr. Padilla.

25 Mr. Carr, do you have any redirect?

REDIRECT EXAMINATION

1
2 BY MR. CARR:

3 Q. Mr. Brown, if I understand your testimony, your
4 geological interpretation is based on information from the
5 Vest State Number 1 well; is that right?

6 A. Yes, sir, that is correct.

7 Q. And how that data compares to other producing
8 Bough C fields in the general area; is that right?

9 A. That's correct.

10 Q. And that -- Manzano will present an engineering
11 witness to discuss in detail the drainage aspects of this
12 Application?

13 A. That is correct.

14 MR. CARR: That's all I have.

EXAMINATION

15
16 BY EXAMINER STOGNER:

17 Q. One quick question, Mr. Brown, at this time. I
18 may have other questions after we hear the engineering
19 testimony concerning this matter.

20 You used the term several times in your
21 testimony, "overdrill".

22 A. Yes, sir.

23 Q. Do you want to elaborate a little bit more?

24 A. Basically, what happens is that in the field
25 there's a set number of reserves that will be essentially

1 drained no matter how dense the drilling is. What we try
2 to find is the spacing that will allow us to get the total
3 field reserves with the fewest number of wells.

4 In a lot of the fields, they could have drilled
5 on 80s or 160s, drained the entire amount of reserves and
6 saved themselves the cost of multiple wells.

7 In our Cuerno Largo area, that's been our
8 interpretation. We have statewide 40s, we've drilled on
9 160s, and we've seen considerable drainage across all that
10 field.

11 We feel if we would go on 40-acre spacing, we
12 would essentially drill three wells, three additional
13 wells, and then cut our per-well cums by a quarter -- or
14 three-quarters.

15 So it just gets to the point where it's not
16 economic to drill wells when you're not increasing the
17 amount of reserves.

18 So -- You know, that's basically it.

19 EXAMINER STOGNER: With that, I have no other
20 questions at this time for Mr. Brown.

21 I may afterwards.

22 MR. CARR: At this time, Mr. Stogner, we would
23 call Donnie Brown.

24 EXAMINER STOGNER: I'm sorry? Who?

25 MR. CARR: Donnie Brown, another Mr. Brown.

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DONNIE BROWN,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. My name is Donnie Brown.

Q. Mr. Brown, where do you reside?

A. Roswell, New Mexico.

Q. By whom are you employed?

A. By Manzano Oil Corporation.

Q. And what is your position with Manzano?

A. Petroleum engineer.

Q. Have you previously testified before this
Division?

A. Yes, I have.

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

A. Yes, they were.

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

A. Yes.

Q. And are you familiar with the Manzano Vest State
Number 1 well?

1 A. Yes, I am.

2 MR. CARR: Are the witness's qualifications
3 acceptable?

4 EXAMINER STOGNER: Any objections?

5 MR. PADILLA: No.

6 EXAMINER STOGNER: Mr. Donnie Brown is so
7 qualified.

8 Q. (By Mr. Carr) Mr. Brown, have you made an
9 engineering study of the data available on the Bough C
10 formation in the area surrounding the Vest State Number 1
11 well?

12 A. Yes, I have.

13 Q. And in making this study, what was it you were
14 actually trying to determine?

15 A. My main purpose was to determine the areal
16 drainage based on the information we have to date from the
17 Vest State well.

18 Q. Could you refer to what has been marked as
19 Manzano Exhibit Number 7, identify this and review it for
20 Mr. Stogner?

21 A. Yes, this exhibit shows the first eight days of
22 production after our gas-measurement facilities were in
23 place.

24 In eight days it showed the well produced 1276
25 barrels of oil and 2162 MCF of gas. I had an average GOR

1 of 1694 cubic feet per barrel. The gas gravity was
2 measured at 0.7, and the API oil gravity was measured at
3 45.5 at 60 degrees fahrenheit.

4 Q. Now, with the data available, did you attempt to
5 calculate a formation volume factor?

6 A. Yes, I did.

7 Q. And is that calculation set forth on the Manzano
8 Exhibit Number 8?

9 A. That's correct.

10 Q. Would you review that for the Examiner, please?

11 A. Exhibit Number 8 is the calculation of formation
12 volume factor, formation volume factor being the volume of
13 one stock tank barrel of oil, with its associated dissolved
14 gas at reservoir pressure and temperature.

15 Formation volume factor, then, is equal to the
16 weight of one barrel of oil, plus the weight of its gas in
17 solution, divided by the pressure gradient in p.s.i. per
18 foot, as determined from bottomhole pressure surveys at or
19 near the reservoir.

20 Based on the 45.5-degree API gravity and the 1694
21 GOR, I determined that the formation volume factor was 1.6.

22 Q. Now, did you have the calculated formation volume
23 factor confirmed by an outside consulting firm?

24 A. Yes, I did.

25 Q. And who was that?

1 A. William Cobb and Associates, Association, an
2 international reservoir engineering consulting firm out of
3 Dallas. They have far better software than I do for
4 calculating material balance and formation volume factors,
5 so I had them do an independent study.

6 Q. And what was the formation volume factor that
7 they were able to calculate?

8 A. They came up with a 1.68.

9 Q. And yours was 1.6?

10 A. 1.6.

11 Q. All right. Let's go to what has been marked
12 Exhibit Number 9. Can you identify this?

13 A. Yes, Exhibit Number 9 is a plot of bottomhole
14 pressure versus cumulative production.

15 We have two points. The original pressure of the
16 reservoir taken during the DST, it was 3161, 3161 p.s.i.
17 After we had produced a total of 7100 barrels, we took
18 another bottomhole pressure, and it was determined to be
19 2753.

20 And what I've done is a straight-line
21 extrapolation between those two points, and I can say that
22 if we take this reservoir pressure to abandonment of 100
23 pounds, we should expect to recover a minimum of 51,000
24 barrels of oil.

25 Q. What are Manzano Exhibits 10 and 11?

1 A. Exhibit 10 and 11, I took these out of two
2 reservoir engineering books. Exhibit 10 was from Dr.
3 Calhoun's *Fundamentals of Reservoir Engineering*, and
4 Exhibit 11 is from Dr. Pinson's *Oil Reservoir Engineering*.

5 And what I'm attempting to show here is, in a
6 solution gas drive reservoir, which is what we have, that
7 if you extrapolate in a straight line, the early reservoir
8 pressure versus cumulative production, that you tend to
9 extrapolate on the conservative side.

10 Q. So that would suggest that the 51,000 barrels --

11 A. That would suggest that the 51,000 is
12 conservative. You tend to -- it could be -- You tend to be
13 in error as much as 1.3 to 1.5. I would really think the
14 reserves of this well to be on the order of 80,000 to
15 100,000.

16 Q. Let's go to Exhibit Number 12, where you've
17 calculated the areal extent of the drainage for this well.
18 I'd ask you to review that calculation with Mr. Stogner.

19 A. Yes, I've calculated the areal drainage based on
20 20-percent primary recovery for Bough C reservoir, which is
21 for a carbonate of this gravity oil, and this GOR of 20-
22 percent recovery factor I think is reasonable. And in our
23 experiences in Bough C production with more mature
24 production, 20-percent recovery is reasonable in those
25 fields also.

1 If the 51,000 represents 20 percent of the
2 original oil in place, then the original oil in place in
3 the Vest State is 255,000 barrels.

4 Now, based on the 1.6 formation volume factor and
5 a porosity of 6.4 percent and a water saturation of 32
6 percent as determined from our log analysis and our net pay
7 over 4 percent of 10 feet, I calculate that the drainage is
8 121 acres.

9 Q. If you calculate 121 acres, why are you asking
10 for 80-acre spacing?

11 A. Well, as I'll show later, the Bough C is easily
12 drained on 160 or greater acres. With this limited data,
13 we're requesting 80 acres as being prudent and reasonable
14 with this limited data.

15 Q. Let's go to Manzano's Exhibit 13. What is this?

16 A. Well, this is a Horner plot of our pressure
17 buildup from our second bottomhole pressure test.

18 Q. And what does this show you?

19 A. It shows where we derive the second pressure
20 point at 2753, and it also shows that the -- calculates
21 that the permeability of the Bough C formation is 97.6
22 millidarcies. Very good permeability for a Penn carbonate.
23 It's equivalent to most Bough C permeabilities that drain
24 in excess of 80 acres and 160 acres.

25 Q. Let's go to Exhibit 14. And I think in working

1 with this, it might be appropriate to go back and also
2 review this with Exhibit Number 5, the structure map, on
3 the Cuerno Largo area.

4 A. Exhibit 14 is a pressure production history of
5 the Bough C interval in our Cuerno Largo-Penn field, which
6 we operate some seven of the eight wells.

7 They're listed in chronological order, by date.

8 The first well drilled in the area was the Shell
9 MS State Number 1, in the northwest of the northeast of
10 Section 26. It was drilled in August of 1965. And from
11 DST, they had a bottomhole pressure of 3226, which is
12 normal for virgin Bough C reservoirs. They chose to plug
13 and abandon that well.

14 The first productive well in that field was
15 drilled by Tom Brown, SWB State Number 1, in July of 1971.
16 They had a DST original pressure of 3000. It has produced
17 300,000-plus barrels.

18 Manzano came along some 14, 13 years later and
19 drilled the Cox State Number 1, which is in the northwest
20 of the northwest of 36, a 160-acre offset to the Tom Brown
21 well. And it experienced an initial bottomhole pressure of
22 1838, 1838 p.s.i., showing that it had suffered drainage
23 from a well 160 acres away.

24 We subsequently drilled several other wells,
25 which also showed depletion due to the production of the

1 Tom Brown well, and they were anywhere from 160 to 320
2 acres away.

3 Most recently, in February of this year, we
4 twinned the Shell MS State Number 1. By "twin", we drill
5 50 feet away from the original location. We DST'd the
6 Bough C and experienced pressures of 1090 pounds.

7 Now, this well is some 320 to 640 acres away from
8 the producing wells in that field, and this demonstrates
9 very drastically that the Bough C can drain as much as 640
10 acres away.

11 I demonstrated this to show that the Bough C is
12 capable of draining 80-acre spacing efficiently.

13 Q. Mr. Brown, what conclusions have you reached from
14 your study of the Bough C in this area?

15 A. The Bough C can drain in excess of 160 acres
16 effectively and efficiently.

17 Q. Are you recommending that 80-acre spacing be
18 adopted, at least on a temporary basis, for this pool?

19 A. Yes, I am.

20 Q. In your opinion, does this well perform in a
21 fashion similar to other Bough C wells operated by Manzano?

22 A. Yes, it is.

23 Q. If 80-acre spacing is not approved for the well,
24 development will have to take place under the Amoco
25 assignment on a 40-acre basis; is that not correct?

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

2 Q. What would be the result of 40-acre development
3 in this area?

4 A. Basically, if you drill on 40 acres you gain the
5 same reserves as you would on 80 acres, but you have twice
6 as many wells, you have twice the cost.

7 Q. And you wouldn't make a significant increase in
8 the reserves you would recover?

9 A. No.

10 Q. Why is Manzano seeking special location
11 requirements, 330 feet off the boundary of the tracts?

12 A. It would give us flexibility in picking locations
13 on any 80-acre laydown or standup.

14 Q. And in fact, the current wells that are projected
15 or drilled to the Devonian are on setbacks of 330 feet; is
16 that correct?

17 A. That's correct.

18 Q. For what period of time do you request temporary
19 rules be established for the pool?

20 A. We would request a temporary field establishment
21 of two years or 18 months, somewhere in that period.

22 Q. Were Exhibits 7 through 14 prepared by you?

23 A. Yes, they were.

24 MR. CARR: Mr. Stogner, at this time I would move
25 the admission into evidence of Manzano Exhibits 7 through

1 14.

2 EXAMINER STOGNER: Are there any objections?

3 MR. PADILLA: No.

4 EXAMINER STOGNER: Exhibits 7 through 14 will be
5 admitted into evidence at this time.

6 MR. CARR: And that concludes my direct
7 examination of Donnie Brown.

8 EXAMINER STOGNER: Thank you, Mr. Carr.

9 Mr. Padilla, your witness.

10 CROSS-EXAMINATION

11 BY MR. PADILLA:

12 Q. Mr. Brown, on your Exhibit 14, that's strictly on
13 the Cuerno Largo-Penn field, right?

14 A. That's correct.

15 Q. And essentially you've taken the wells shown on
16 Exhibit Number 5, and those wells shown on that structure
17 map --

18 A. Yes.

19 Q. -- are the ones that are shown on Exhibit 14?

20 A. That's correct.

21 Q. How long had -- Well, let me ask, first of all,
22 on Exhibit 14, you have the Shell MS State Number 1, and
23 that was a dryhole, right?

24 A. Yes.

25 Q. And then you had the Tom Brown SWB State Number 1

1 drilled about six years later, and that produced, you said,
2 over 300 barrels.

3 When you're looking at the pressure of the Shell
4 well and the Tom Brown well, is that -- you're talking
5 about virgin pressure, pretty much --

6 A. Yes.

7 Q. -- to --

8 A. Yes.

9 Q. -- 3000?

10 Do you know why the Shell well was plugged and
11 abandoned? Was it just dry or what?

12 A. I don't know what they was thinking back in 1965,
13 but as I say, we've just twinned it and completed the well
14 in the Bough C for 100 barrels of oil a day at 490 pounds.
15 They tested oil and water, when they tested the Bough C on
16 their DST. Why they chose to plug it, I don't know, unless
17 back in 1965 they was looking for something else.

18 Q. What I want to understand is, how can you have
19 this kind of pressure on the Shell well and then not have
20 similar -- pretty similar pressure on the Tom Brown, and
21 have totally different production characteristics?

22 A. Well, the Tom Brown well, when it first came into
23 -- came on production, it made very little -- very little
24 oil, and they produced something like 2000 barrels of water
25 a day for months on end, before it turned around and came

1 home.

2 Q. Could there be some geologic feature separating
3 the two wells? One's in Section 26 and the other's in 25.
4 And then they're -- They're not that far apart, they're
5 both the north half of the sections; is that correct?

6 A. Are you talking about the Tom Brown well --

7 Q. Yeah.

8 A. -- and the Shell well?

9 Q. Correct, the top two wells.

10 A. I don't think so, because when we came in here
11 and twinned the Shell Brown, we came in with a bottomhole
12 pressure of 1000 pounds, which is about what the field
13 pressure is right now. So that shows good communication
14 between the Tom Brown well and the rest of the producing
15 wells to the Shell well.

16 Q. But as I understand, these two wells were the
17 first two wells in that pool, or --

18 A. That's correct.

19 Q. In terms of structure, there's no structural
20 difference that I see on Exhibit Number 5, yet one is
21 productive and one is not.

22 A. Well, what I'm saying, that the Shell MS State
23 Number 1 should have been productive. They missed it,
24 because we've come right behind them and drilled 50 feet
25 away from that well and are producing 100 barrels a day

1 with a flowing pressure of 490 pounds.

2 Q. Now, what effect do you have, say, between 1971,
3 when the Tom Brown well was drilled, and 1984, when the
4 Manzano Cox State Number 1 was drilled --

5 A. Well, see, it was --

6 Q. -- in terms of drawdown?

7 A. It was a drawdown of some 1200 pounds, which
8 showed that on 160 acres the Tom Brown well had drained the
9 Cox location some 160 acres away.

10 Q. Does that also indicate a limited reservoir?

11 A. Well, it made 300,000 barrels, and the total
12 field's made in excess of 600,000. I wouldn't call that
13 limited.

14 Q. Now, on the Manzano Sidewinder Number 1,
15 Diamondback Number 1 and the Tenneco State Number 1, there
16 were no --

17 A. Uh-huh.

18 Q. -- pressures taken?

19 A. No, it was -- We drilled several wells, the time
20 we got to the Sidewinder and the Diamondback, and we knew
21 what pay we was looking for, so we didn't go to the
22 expenditure to take DST pressures.

23 Q. You don't know whether the pressure was greater
24 than 1090 or less?

25 A. No, we didn't take it.

1 Q. On your straight-line curve, let me see if I
2 understand the relationship. You said that -- You
3 testified, I believe, that that was conservative because it
4 was straight-line, and it should react more like the line
5 on Exhibit 10; is that -- Did I understand you?

6 A. That's correct. What I'm -- This Bough C in the
7 Vest State is being driven from a solution gas drive.
8 We're producing oil with a GOR of 1600, pressures above
9 2500 pounds, no water. The only way it can produce is
10 through a solution gas drive.

11 So what I've shown by these textbook
12 demonstrations is, these are typical curves, pressure
13 versus cumulative production, for a solution gas drive
14 field. And I've simply shown that if you take a straight-
15 line extrapolation in the very early life, that you're
16 going to extrapolate a cumulative reserve less than what
17 you would if you had additional years of data, or as they
18 have done here.

19 Q. So you actually expect more oil?

20 A. That's correct.

21 Q. Right.

22 A. Yeah. I would suspect anywhere from 1.3 to 1.5
23 times more than what I've extrapolated on this straight-
24 line curve.

25 Q. Now, on your Exhibit 8 you have -- where you've

1 calculated your formation volume factor --

2 A. Yes.

3 Q. -- what factors in that formula are factors that
4 you would assign from data that is assumed?

5 A. Nothing. The gradient, bottomhole pressure
6 gradient, was measured when we took a -- when we ran our
7 bottomhole pressure survey on February the 20th.

8 The weight of the oil is based on the 45.5-degree
9 gravity, and the weight of gas is again based on the 1600
10 GOR.

11 Q. So everything that -- all the information you
12 have in there came from that well?

13 A. That's correct.

14 MR. PADILLA: I don't have any further questions,
15 Mr. Examiner.

16 EXAMINER STOGNER: Thank you, Mr. Padilla.

17 Mr. Carr, do you have any redirect at this time?

18 MR. CARR: I have no redirect at this time, Mr.
19 Stogner.

20 EXAMINATION

21 BY EXAMINER STOGNER:

22 Q. Mr. Brown, you said the 330 feet offset that
23 you're requesting today, which is -- varies from the normal
24 on 80-acre spacing for New Mexico, is requested for
25 flexibility. What do you mean, "flexibility"?

1 A. Well, we're basically -- We're stuck with the 330
2 because the 330 was -- We drilled the first well to the
3 Devonian, and at 330 off the lease line was based on the
4 most optimum location for 3-D. So our first well's on 330.
5 So here Yates comes, and they're drilling off at 330. So
6 we feel like we've pretty well got to stick to it.

7 Q. Are you advocating, even if 330 is approved, that
8 the operators be allowed to drill more than one well per
9 proration unit?

10 A. More than one well per --

11 Q. Per 80-acre?

12 A. No, one well per 80 acre is what I'm advocating.

13 Q. Okay. With the 330-foot offset and 80-acre
14 spacing and one-well restriction, are you proposing any
15 further restrictions, such as which quarter-quarter section
16 in the 80 be drilled, or would that be up to the operator,
17 which --

18 A. I think that would be up to the operator, and we
19 could either lay down your 80s or stand them up.

20 EXAMINER STOGNER: Any other questions of Mr.
21 Brown?

22 MR. PADILLA: I have one, based on your question.

23 FURTHER EXAMINATION

24 BY MR. PADILLA:

25 Q. Mr. Brown, looking at the land plat, I asked the

1 first Mr. Brown about what would happen if Julian Ard
2 drilled his location 330 from the south line, Yates drilled
3 its well, and of course your well is now already drilled.
4 What does that do to drainage in terms of having three
5 wells offsetting each other in that manner?

6 A. Well, of course that would be sharing in the
7 reserves, what -- obviously, since we've stated that these
8 wells can drain over 160 acres by themselves.

9 The only thing it would prevent is drilling
10 another well in the offset 40 acres and coming up with a
11 rate war or a drilling war.

12 As far as the drainage or recovery, if you drill
13 on 40 acres, you're going to have the same recovery as you
14 drilled on 80 acres, only twice the cost.

15 Q. But there's nothing now to prevent those three
16 wells being located -- based on your Application, from
17 being located that way? They're essentially drilling --
18 Well, they're crowded in on very close proximity, correct?
19 I'm not sure what they do in terms of drainage, what it
20 does to your testimony about effective drainage.

21 MR. CARR: What is the question?

22 Q. (By Mr. Padilla) Well, the question is --

23 A. I guess we could have 80 acres, but basically --

24 Q. -- what area are the three wells draining?

25 A. Yeah, they're going to be draining the whole

1 reservoir, wherever that is.

2 Q. Will they be draining 120 acres because they're
3 that close?

4 A. All three wells? Yeah.

5 Q. I mean, obviously they're going to drill -- if a
6 well goes on forever, it will slowly drain the entire area.
7 But if you have three wells that close together, based on
8 your testimony, on 80-acre spacing, and you have the three
9 wells that close, are you only effectively going to drain
10 150 acres or 160, a limited area, instead of three times
11 121?

12 A. Well, I really don't know what you're getting at,
13 but if you had three wells basically in a little pod there,
14 in 80 -- They're basically on 40-acres, so they don't
15 interfere with each other, they're going to be draining the
16 40 acres surrounding it.

17 But all three of them as a unit would be draining
18 the entire reservoir area, however big that is. And it
19 would be better, you know, to ultimately space these where
20 you would -- rather than having Yates drill here, drill
21 over here, the next well up here and the next well over
22 here. But it's not -- The first two wells are not working
23 out that way.

24 Q. And your Application does not restrict where you
25 drill it, other than being 330 --

1 A. Well, it would be alternate 40s, should be the --
2 would be your plan.

3 Q. But the Application does not call for that?

4 A. I don't think it does, does it?

5 MR. CARR: No, it does not.

6 MR. PADILLA: I don't have anything further.

7 FURTHER EXAMINATION

8 BY EXAMINER STOGNER:

9 Q. Just to wrap up some loose ends, Mr. Brown.

10 On Exhibit Number 1, Section 16, in the west half
11 of the southwest quarter, there are two well symbols --

12 A. West half?

13 Q. Yes, sir.

14 A. West half of the southwest --

15 Q. -- of 16.

16 A. Okay.

17 Q. There are two well symbols there. The first one
18 up in the northwest quarter of the southwest quarter, the
19 old Amoco Number 1, what's the status of that well? Do you
20 know?

21 A. I think it's P-and-A'd. Mike probably knows
22 better.

23 MR. MIKE BROWN: I think it's shut-in Queen gas
24 well. I don't think it's still producing. If it is, it's
25 not producing very much.

1 EXAMINER STOGNER: Okay. And this is to either
2 one of you guys. How about the plugged and abandoned well
3 symbol down in the southwest-southwest? What's the status
4 of that well?

5 MR. DONNIE BROWN: That, in fact, is plugged and
6 abandoned.

7 EXAMINER STOGNER: Plugged and abandoned from
8 which interval?

9 MR. MIKE BROWN: Drilled to the Devonian.

10 MR. DONNIE BROWN: Drilled to the Devonian, then
11 they plugged and abandoned it.

12 EXAMINER STOGNER: Okay, just some loose ends I
13 want to tie up.

14 Any other questions at this time? If not, you
15 may be excused, Mr. Brown.

16 Are there any closing statements, at this time?
17 Mr. Padilla or Mr. Carr?

18 MR. CARR: Mr. Padilla -- If he would like to
19 close, I will. If not, I won't.

20 MR. PADILLA: I don't have any closing arguments,
21 other than to say I think the Application is premature at
22 this time, and that there's already a well -- Julian Ard's
23 well is already permitted on 40-acre spacing, and therefore
24 should be exempted from the special rules.

25 EXAMINER STOGNER: Now, when you said "the Julian

1 Ard well", Mr. Padilla, could you pinpoint that for me on
2 Exhibit Number 1, tell me where it is?

3 MR. PADILLA: Well, better than that, Mr.
4 Examiner, let me give you -- and ask you to take official
5 notice of the well location.

6 EXAMINER STOGNER: Okay, you're handing me a --

7 MR. PADILLA: -- application to drill.

8 EXAMINER STOGNER: And actually this Form C-101
9 for the Julian Ard, Ard State Well Number 1, to be located
10 330 from the south, 990 from the west of Section 16 -- I'll
11 take administrative notice of this, and it's also in our
12 file. So that answers my question.

13 MR. CARR: And I'd like to respond to those
14 comments, if I may, Mr. Stogner.

15 EXAMINER STOGNER: Okay, please.

16 MR. CARR: I would point out that the order that
17 will be entered in this case needs to be based on the
18 evidence presented here today. Aside from an APD, no
19 evidence was presented by Julian Ard, and as we all know,
20 filing an APD does not necessarily mean a well will ever be
21 drilled.

22 So I think it's important to look at the evidence
23 that has been presented here today, and what the evidence
24 shows, that the wells that we're proposing to drill, based
25 on the best evidence we have available at this time, those

1 wells will drain 80 acres.

2 We're standing with an assignment provision, and
3 unless the pool rules are changed, we'll be developing this
4 reservoir on 40-acre spacing. And if we do that, we will
5 increase the cost of developing the reserves. We will be,
6 in fact, drilling unnecessary wells.

7 Now, we're asking for temporary rules, and if as
8 this pool develops it appears that, in fact, the wells will
9 only drain 40 acres, if these wells do not perform as they
10 are expected to, if they don't perform like other Bough C
11 wells, then of course the rules can be changed.

12 It would be nice to be here before you today and
13 ask that wells be located in diagonal quarter-quarter
14 sections. But as the evidence shows, really, the drilling
15 in this area is pushed in a big measure by Devonian
16 development. And if we made that kind of a request, if we
17 asked for development in diagonal quarter-quarter sections,
18 what we would be doing, in effect, is probably setting
19 things up so we would be coming back for a number of
20 hearings to get exceptions to the requirement. And for
21 that reason we haven't asked that there be specific
22 quarter-quarter sections in which wells must be placed.

23 We believe that the evidence shows that if this
24 Application is approved, operators will have an opportunity
25 to produce the reserves in the Bough C without having to

1 incur wasteful drilling practices, unnecessary costs, and
2 we could avoid, as Mr. Brown, Mr. Donnie Brown,
3 characterized it, a drilling war in this area.

4 We request that the Application be approved.

5 EXAMINER STOGNER: Thank you.

6 One other loose end --

7 MR. CARROLL: I've got one too.

8 EXAMINER STOGNER: Oh, I'm sorry, go ahead.

9 MR. CARROLL: Mr. Carr, if you could refresh my
10 memory as to what you said regarding Mr. Ernest Carroll and
11 Yates at the beginning of this case?

12 MR. CARR: Yes, Mr. Carroll filed an
13 application -- or a prehearing statement -- indicating they
14 would appear in opposition to the Application. Early this
15 week there were communications between Manzano and Yates.

16 The day before yesterday, while at a meeting here
17 at the Oil Commission, Mr. Carroll called. He advised me
18 that Yates had decided not to oppose the Application, but
19 he requested that I be sure that the record reflect that he
20 had filed an entry of appearance in this case, and -- for
21 Yates Petroleum Corporation. And I believe the record
22 clearly reflects that he has appeared for Yates in this
23 matter.

24 Thank you.

25 EXAMINER STOGNER: Should an order be issued, is

1 there any proposed rule name that your Applicant has
2 requested or desires -- other than Brown, or Carr, or
3 Padilla?

4 (Laughter)

5 MR. CARR: No, sir.

6 EXAMINER STOGNER: Okay. With that, Case Number
7 11,504 will be taken under advisement at this time.

8 (Thereupon, these proceedings were concluded at
9 10:05 a.m.)

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CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL April 12th, 1996.


 STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11504, heard by me on 4 April 1996.


 Examiner
 Oil Conservation Division