

STATE OF NEW MEXICO
 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
 OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY)
 THE OIL CONSERVATION DIVISION FOR THE)
 PURPOSE OF CONSIDERING:) CASE NO. 12,995
)
 APPLICATION OF CONCHO OIL AND GAS CORP.)
 FOR COMPULSORY POOLING AND AN UNORTHODOX)
 WELL LOCATION, EDDY COUNTY, NEW MEXICO)
)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID K. BROOKS, JR., Hearing Examiner

January 23rd, 2003

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID K. BROOKS, JR., Hearing Examiner, on Thursday, January 23rd, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

STEVEN T. BRENNER, CCR
 (505) 989-9317

I N D E X

January 23rd, 2003
 Examiner Hearing
 CASE NO. 12,995

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* * *

A P P E A R A N C E S

FOR THE DIVISION:

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* * *

ALSO PRESENT:

MICHAEL E. STOGNER
Hearing Examiner
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, NM 87505

* * *

1 WHEREUPON, the following proceedings were had at
2 9:09 a.m.:

3 EXAMINER BROOKS: At this time we'll call case
4 Number 12,995, Application of Concho Oil and Gas Corp. for
5 compulsory pooling and an unorthodox well location, Eddy
6 County, New Mexico. Call for appearances.

7 MR. BRUCE: Mr. Examiner, Jim Bruce representing
8 the Applicant. I have two witnesses to be sworn.

9 EXAMINER BROOKS: Any other appearances?

10 Very good, will the witnesses please stand to be
11 sworn?

12 (Thereupon, the witnesses were sworn.)

13 MICHAEL M. GRAY,

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

16 DIRECT EXAMINATION

17 BY MR. BRUCE:

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

19 A. Michael M. Gray.

20 Q. Where do you reside?

21 A. Midland, Texas.

22 Q. How do you work for, and in what capacity?

23 A. Concho Oil and Gas Corporation, as a landman.

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

1 A. Yes.

2 Q. And have your credentials as an expert landman
3 been accepted as a matter of record?

4 A. Yes.

5 Q. Are you familiar with the land matters involved
6 in this case?

7 A. Yes.

8 Q. And your area of responsibility at Concho does
9 include this area, does it not?

10 A. Yes.

11 MR. BRUCE: Mr. Examiner, I tender Mr. Gray as an
12 expert petroleum landman.

13 EXAMINER BROOKS: His credentials are accepted.

14 Q. (By Mr. Bruce) Mr. Gray, would you identify
15 Exhibit 1 and describe what Concho seeks in this case?

16 A. Exhibit 1 is a land map showing the location of
17 the unit for the drilling of our proposed well, along with
18 a depiction of the location.

19 What we want to accomplish in the case, this is
20 an unorthodox location within the Atoka-Pennsylvanian Pool,
21 and we also have a compulsory pooling matter in this case.

22 Q. And are you seeking only to pool zones spaced on
23 320 acres?

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

25 Q. And is the Morrow the objective formation?

1 A. Yes, sir.

2 Q. Okay. Now, could you identify Exhibit 2 and just
3 briefly discuss the ownership in the well unit?

4 A. Exhibit 2 is a depiction of the ownership of the
5 north half of Section 20, 18-26, showing Concho Oil and Gas
6 Corp. as the owner of the northeast quarter and a number of
7 companies with an undivided interest in the northwest
8 quarter.

9 Q. Okay. Is title quite complicated in the
10 northwest quarter?

11 A. Yes, the title in the northwest quarter is
12 contractual under the entire northwest quarter. Our
13 examining title attorney is still working on determining
14 the precise ownership of those interests in the northwest
15 quarter.

16 Q. So you know who they are, but you don't have a
17 percentage interest as to each at this point?

18 A. That's correct.

19 Q. Of these people in the northwest quarter, have
20 you come to terms with any of them?

21 A. We have come to terms with BWB Partners 1,
22 Eastland Oil Company and McBride Oil and Gas Corporation.

23 Q. Okay, so you do not seek to pool those three
24 companies?

25 A. That's correct.

1 Q. Okay. Now, what is the well's footage location?

2 A. The footage location is 1980 feet from the north
3 line and 1980 feet from the east line.

4 Q. And this is an unorthodox location under the pool
5 rules, is it not?

6 A. Yes, it is.

7 Q. What do those pool rules require?

8 A. I believe that they require 990 feet from the
9 outer boundary of a quarter section.

10 Q. Okay, and do they also require wells be in a
11 specific quarter section?

12 A. Yes, the field rules require that wells be
13 drilled within the southeast quarter or northwest quarter
14 of a section within the field.

15 Q. Okay, so this well is in the --

16 A. It's in the northeast --

17 Q. -- in the wrong quarter section?

18 A. It's in the northeast quarter, that's correct.

19 MR. BRUCE: Okay. Mr. Examiner, I'd also note
20 that this pool, the Atoka-Pennsylvanian Pool, is one of the
21 few prorated pools left in the southeast part of the state.

22 EXAMINER BROOKS: Thank you.

23 Q. (By Mr. Bruce) Now let's discuss your efforts to
24 obtain -- Oh, before I go on, the geologist will discuss
25 further the reason for the unorthodox location, will he

1 not?

2 A. Yes, that's correct.

3 Q. Now, let's move on to your Exhibit 3 and discuss
4 your contacts with the working interest owners.

5 A. Exhibit 3 is a set of copies of authorities for
6 expenditure which were sent by certified mail in July of
7 2002 to the working interest owners in the northwest
8 quarter of the section, and also a set of authorities for
9 expenditure which were sent on January 14th, 2003, which
10 refreshed the AFE from July, and the AFE actually increased
11 a little over five percent from that time to -- from July
12 until January.

13 Q. So it went up from about \$736,000 to \$776,000 --

14 A. That's correct.

15 Q. -- approximately? Okay. You just wanted the
16 interest owners to have a newer AFE?

17 A. Yes, I wanted them to have the most current AFE
18 and current estimate of costs.

19 Q. Have you had any telephone contacts with these
20 interest owners?

21 A. I've talked to Read and Stevens on numerous
22 occasions, Marathon Oil Company, Devon Energy Corporation.
23 We are considering farmout arrangements with all of those
24 companies. Read and Stevens also represents a number of
25 these parties in the northwest quarter.

1 Q. Okay, like First Century Oil and some of those
2 other --

3 A. Yes, that's correct.

4 Q. Okay. In your opinion, has Concho made a good
5 faith effort to obtain the voluntary joinder of the
6 interest owners in the well?

7 A. Yes.

8 Q. Looking at the most recent letter, the January
9 14th letter, could you discuss very briefly the current AFE
10 for the proposed well?

11 A. The AFE was prepared by one of our petroleum
12 engineers in the office. The cost to casing point is
13 approximately \$442,000. Completed cost -- or the
14 additional cost to complete the well, approximately
15 \$332,000, for a grand total of approximately \$776,000.

16 Q. And what is the approximate depth of the well?

17 A. The approximate depth is 9000 feet.

18 Q. Now, is this proposed cost in line with the cost
19 of other wells drilled to this depth in this area of the
20 state?

21 A. It is -- Yes, sir, it's in line with our costs in
22 the area.

23 Q. Okay. Does Concho request that it be designated
24 operator of the well?

25 A. It does.

1 Q. And do you have a recommendation for the
2 supervision and administrative expenses to be charged by
3 Concho?

4 A. \$600 a month for operating expenses and \$6000 a
5 month for drilling expenses.

6 Q. Are these amounts equivalent to those normally
7 charged by operators in this area?

8 A. Yes, sir.

9 Q. And do you request that these amounts be adjusted
10 as provided in the COPAS accounting procedure?

11 A. Yes.

12 Q. Were the parties being pooled notified of this
13 hearing?

14 A. Yes.

15 Q. And is Exhibit 4 the affidavit of notice to the
16 parties being pooled?

17 A. Yes.

18 Q. Okay. Now, Mr. Gray, if you could just briefly
19 go back to your Exhibit 1, the leasehold situation is
20 pretty cut-up. Looking at that, to the west, that Section
21 19, is that operated by Concho?

22 A. Concho operates a well in the west half of
23 Section 19 called the McCaw well.

24 Q. As to the unorthodox location, the south half of
25 Section 20, is that operated by Yates Petroleum

1 Corporation?

2 A. Yes, it is.

3 Q. And to the east and to the north, do the
4 Division's records also show that Yates Petroleum
5 Corporation is the operator?

6 A. Yes, sir.

7 Q. And then in the north half of Section 16, Harvey
8 E. Yates Company is the operator?

9 A. Yes.

10 Q. Okay. And so the only offsets were Yates
11 Petroleum and Heyco with respect to the unorthodox
12 location, and were they given notice of this location?

13 A. Yes.

14 Q. And is that submitted as Exhibit 5?

15 A. Yes, sir.

16 Q. Were Exhibits 1 through 5 prepared by you or
17 under your supervision or compiled from company business
18 records?

19 A. Yes, they were.

20 Q. And in your opinion is the granting of Concho's
21 Application in the interests of conservation and the
22 prevention of waste?

23 A. Yes.

24 MR. BRUCE: Mr. Examiner, I'd move the admission
25 of Concho Exhibits 1 through 5.

1 EXAMINER BROOKS: One through 5 are admitted.

2 MR. BRUCE: And I have no further questions of
3 the witness.

4 EXAMINATION

5 BY EXAMINER BROOKS:

6 Q. Are all the interests in the west half of the
7 proposed unit leased? The --

8 A. In the northwest quarter?

9 Q. Yeah.

10 A. Yes, sir, the northwest quarter is held by
11 production by a San Andres well in the northwest quarter.

12 Q. Then all these people that are listed are all
13 working interest owners, there are no unleased interests?

14 A. They're all working interest owners.

15 Q. Now, you said the Atoka-Pennsylvanian Pool. Is
16 that the complete name of the pool?

17 A. Yes, sir.

18 Q. Okay. And this is governed by special pool
19 rules?

20 A. Yes.

21 Q. Which provide 990 from any quarter-section
22 boundary?

23 A. Yes.

24 Q. Is that -- That's quarter-section boundary, not
25 quarter-quarter section?

1 A. It's quarter-section, yes, sir.

2 Q. And is there a limitation on the quarter-
3 section -- quarter-quarter section?

4 A. Not on the quarter section. There's a limitation
5 on the quarter sections in that the special rules only
6 allow wells in the southeast quarter of the section or the
7 northwest quarter.

8 Q. The northwest, and this one is in the northeast.

9 A. And this is in the northeast.

10 Q. So it's both off-pattern and too close to the
11 boundary?

12 A. Yes, sir.

13 EXAMINER BROOKS: Okay, but that's going to be
14 discussed by the next witness, as I understand it.

15 I believe that that covers my questions.

16 Mr. Stogner?

17 EXAMINATION

18 BY EXAMINER STOGNER:

19 Q. Just a follow-up. You said that Yates is an
20 operator to the north and the east. How about the south
21 half of Section 16 to the northeast? Is that Yates?

22 A. Yates operates a well in the south half of
23 Section 16 that's in the Dayton-Strawn field, is the
24 designated field for that well. I believe there was a well
25 for that field -- I mean, excuse me, in the south half of

1 16, that is no longer active, that was in the Atoka-
2 Pennsylvanian field.

3 Q. And who operated that well?

4 A. Yates.

5 Q. That was a Yates well?

6 A. Yes.

7 EXAMINER STOGNER: I don't have any other
8 questions of this witness.

9 THE WITNESS: If I may, we do have a March
10 expiration problem on these leases in the northeast
11 quarter.

12 EXAMINER BROOKS: March what?

13 THE WITNESS: I believe it's March 16th.

14 FURTHER EXAMINATION

15 BY MR. BROOKS:

16 Q. One other question. Did I correctly understand
17 you to say that Yates is the operator of the south half of
18 that section?

19 A. South half of Section 20, yes, sir.

20 Q. And do they have a well on this?

21 A. There is a well on the southeast quarter of
22 Section 20 that's an active well in the Atoka-Pennsylvanian
23 field.

24 Q. Okay. And do you know, approximately where is
25 that well located?

1 A. No, I think Mr. Mazzullo when he gives his
2 testimony, can tell you where that well was.

3 EXAMINER BROOKS: Very good, I have nothing
4 further from this witness.

5 MR. BRUCE: Mr. Examiner, for your information,
6 Yates Petroleum did contact me directly about the
7 unorthodox location, just to verify why it was unorthodox,
8 but they haven't expressed any objection to the location.

9 EXAMINER BROOKS: Well, I would assume if they
10 were concerned about it, Bill Carr would be out here. Very
11 good.

12 LOUIS J. MAZZULLO,
13 the witness herein, after having been first duly sworn upon
14 his oath, was examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. BRUCE:

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

19 A. Lou Mazzullo, Albuquerque, New Mexico.

20 Q. What is your occupation?

21 A. I'm a petroleum geological consultant.

22 Q. And what is your relationship to Concho in this
23 case?

24 A. I am here on a consulting basis for Concho Oil
25 and Gas. I'm also the originator of the prospect.

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

3 A. Yes, I have.

4 Q. And were your credentials as an expert geologist
5 accepted as a matter of record?

6 A. Yes, they were.

7 Q. And are you familiar with the geology involved in
8 this Application?

9 A. Yes.

10 MR. BRUCE: Mr. Examiner, I'd tender Mr. Mazzullo
11 as an expert petroleum geologist.

12 EXAMINER BROOKS: His credentials are accepted.

13 Q. (By Mr. Bruce) Mr. Mazzullo, could you identify
14 Exhibit 6 for the Examiner and discuss a couple of items?
15 First of all, what the objective zone is, what you're
16 trying to hope to accomplish with this well. After you're
17 done with that, maybe we'll discuss the reason for the
18 location in a little more detail.

19 A. Exhibit 6 is a composite of three different --
20 gross isopach maps of three different sand objectives in
21 the Morrow formation. The Morrow is the objective
22 formation on this prospect. Each of the maps is plotted on
23 a structure map on the top of the middle Morrow marker that
24 will be referenced later in the next exhibit, and each of
25 the zones that I show in yellow and brown tones are the

1 primary objective zones that we are seeking to intersect.
2 We're trying to maximize our production out of this
3 wellbore by trying to hit all three zones at the same time
4 at this location.

5 The designations t-3, t-5 and t-7 in ascending
6 order from the base of the middle Morrow on up are
7 different units of sand that I have correlated both through
8 the use of samples and well logs across this area, and I
9 sought to designate areas of the individual sands that were
10 either tight or potentially productive of hydrocarbons.
11 The tight zones are the light brown tones, and the
12 potentially productive fairways are in bright yellow.

13 Q. Okay. Now, in looking at this, a couple of
14 things. Just looking at the risk penalty, could you
15 discuss why -- First of all, let me ask the conclusion. If
16 any of the parties being pooled in this case go nonconsent,
17 do you believe the maximum cost-plus-200-percent penalty
18 should be assessed against them?

19 A. Yes, I do.

20 Q. And looking at this map, why is that?

21 A. The Morrow is a very risky venture to begin with,
22 and the reason why I spotted this location where I did was
23 to take advantage of the maximum potential number of sand
24 zones that we could intersect, possibly intersect in the
25 wellbore.

1 It doesn't mean that we're going to get them, but
2 my best estimate from mapping over an area much larger than
3 this -- I have mapped over a couple of township areas to
4 arrive at this particular prospect. The reason the
5 location is where it's at is to, a), take advantage of the
6 three zones that I think are potential and, b), to stay far
7 enough updip to avoid any possible water legs or, in the
8 case of the t-5 sand, drainage imparted by the Yates well
9 in the southeast quarter of the section.

10 Q. Okay. Now, in looking at the unorthodox
11 location, first of all, why don't you want to drill a well
12 in the northwest quarter of this section?

13 A. There's only one zone that is potential in the
14 northwest quarter that hasn't been drained by an existing
15 well, that's the t-3 -- that has been -- that's been
16 drained by an existing well. The t-3 zone has already been
17 drained by the well that's been plugged. It was plugged in
18 the early 1990s, I believe.

19 Other than that, there is little potential for
20 multiple-pay objectives in the Morrow anywhere other than
21 in the northeast quarter of the section.

22 Q. Okay. And then as to the footage location that
23 doesn't comply with that 990 setback, why did you choose
24 the -- in essence, 660 feet off the quarter-section line?
25 Why did you pick that location?

1 A. Well, going any further to the east, for example,
2 would put us downdip substantially, and there's a risk of
3 getting into the water leg of those reservoirs. Some of
4 these reservoirs are water-bearing.

5 Also, I am not entirely sure of the exact
6 boundaries of any of these sands because it's best-guess
7 work on my part. And so I wouldn't want to risk moving any
8 further away from what I consider to be the best location
9 to intersect all three of the sands simultaneously.

10 Q. Okay. Now, in this Atoka-Pennsylvanian Pool, is
11 this, to the best of your knowledge, the first well that's
12 been drilled out there in a number of years?

13 A. Yes, I believe a lot of the wells date back from
14 the 1960s, early 1960s or even earlier than that.

15 Q. Okay. Why don't you move on to your Exhibit 7
16 and discuss the middle Morrow perhaps in a little more
17 detail?

18 A. If you reference Exhibit Number 6, it shows two
19 cross-sections on each of the isopach maps, A-A' and B-B',
20 and A-A' is a north-to-south structural cross-section, B-B'
21 is essentially an east-to-west structural cross-section,
22 showing the relationship among and between the sands, the
23 objective sands that we have on this prospect.

24 If you look along A-A', you'll see that the --
25 I'm sorry, along B-B', you'll see that the plugged well in

1 the northwest quarter of Section 20 is plugged in a zone --
2 primarily in two different zones, what I designate the t-3b
3 and the t-4 zones.

4 The t-3b zone is an offshoot of the t-3 zone that
5 we see in Exhibit 6. There are actually two different
6 channels. They're separate channels, separate
7 stratigraphically as well as structurally, and I believe
8 separate reservoirs as well. That's the only zone that's
9 anywhere near common to what I expect to find in the
10 northeast quarter of Section 20.

11 What I expect to find in the northeast quarter of
12 Section 20 are two virgin reservoir, essentially virgin
13 reservoirs, that don't produce anywhere near this well,
14 this proposed wellbore: the t-3a and the t-5 and the t-7.
15 Actually there are three of them. The t-3a, as I said, is
16 separate from the t-3b that's producing in the northwest
17 quarter of the section that's already been depleted.

18 The t-5 is an unusual sand in that it is not
19 present anywhere north of the location. I believe it's a
20 localized stratigraphic pinchout of that sand.

21 And the t-7 sand is another bifurcated channel
22 system that the closest producer out of that stratigraphic
23 horizon is in the west half of Section 18.

24 So we're dealing with two to three potentially
25 virgin reservoirs here.

1 Q. But again, the lenticular nature of the Morrow
2 shows how risky it is?

3 A. Yes, it's very risky. As I said, you know, we
4 could be out of it very easily, depending upon whether or
5 not my channel boundaries are correctly drawn in there or
6 whether or not porous sand is even preserved in the middle
7 of these channels.

8 Q. Okay. Finally, Mr. Mazzullo, let's move on to
9 Exhibit 8, and could you identify what that is for the
10 Examiner?

11 A. Exhibit 8 just is a summary of the existing
12 Morrow pools in the area. Atoka-Penn Pool is actually
13 productive out of the Morrow. Back in the early 1960s or
14 whenever that pool was designated, it was unclear what
15 formation it was producing. It was just generally referred
16 to as the Penn. But it is, in fact, the Morrow.

17 It is separate from the West Atoka-Morrow field,
18 which is a newer field designation to the north and
19 northwest, and the East Eagle Creek-Atoka Morrow field that
20 overlaps the West Atoka field to the north.

21 Q. And now, looking at these -- And then you have,
22 of course, a different pool, the Dayton-Strawn Pool, which
23 just covers a half section in Section 16?

24 A. Right, Section 16 overlaps the Atoka-Penn field.

25 Q. The Atoka-Penn field has the special pool rules.

1 Do these other Morrow or Atoka or Strawn pools have any
2 special pool rules?

3 A. No.

4 Q. They're just on statewide rules?

5 A. They're on statewide rules.

6 Q. Now we're dealing with an unorthodox location
7 here, but like you said, you've looked at a couple of
8 townships in this area?

9 A. Yes.

10 Q. Do you see any reason to distinguish the Morrow
11 production in the Atoka-Penn Pool from these other pools
12 that are on this map or other Morrow pools in this area?

13 A. No, as you can see from my maps themselves,
14 they're part of the same Morrow systems that we're dealing
15 with, both the West Atoka field and the Atoka-Penn field
16 are part and parcel of the same Morrow systems that we're
17 dealing with here.

18 Q. Okay, so even though we do have special pool
19 rules, geologically there's no difference?

20 A. Geologically, there's no difference.

21 Q. In your opinion, is the granting of Concho's
22 Application in the interest of conservation and the
23 prevention of waste?

24 A. Yes.

25 Q. And were Exhibits 6, 7 and 8 prepared by you?

1 A. Yes, they were.

2 MR. BRUCE: Mr. Examiner, I tender the admission
3 of Concho Exhibits 6, 7 and 8.

4 EXAMINER BROOKS: Six, 7 and 8 are admitted.

5 EXAMINATION

6 BY EXAMINER BROOKS:

7 Q. You believe, then, that what you're telling --
8 what I've got down here, what you believe is that the t-7
9 and the t-5 and t-3a zones, although they're not
10 encountered in any of the other wells, will be encountered
11 at this particular location, correct?

12 A. With the exception of the t-5, which is
13 encountered in the southeast quarter of Section 20.

14 Q. Yeah, I was going to ask you about that.

15 A. Right.

16 Q. It looks like it actually --

17 A. Yeah, it is.

18 Q. -- is encountered in the well to the south- --

19 A. It is.

20 Q. -- -east?

21 A. I think I mentioned that, but then I kind of
22 retracted it.

23 Q. Well, is it -- You depict it here as encountered,
24 and --

25 A. Uh-huh.

1 Q. -- I'm not as familiar as the technical people
2 are with these symbols. Did that well produce in that t-5?

3 A. Yeah, if it's filled in with red, that means it's
4 producing out of that particular horizon.

5 Q. I thought that was probably what it meant.

6 A. Yeah. Or it least it was perforated in that
7 zone.

8 Q. My question, then, is very simple: Why do you
9 expect to encounter these additional reservoirs? What
10 information do you have, since you don't have well control?

11 A. Regional mapping and the presence of traces or
12 even several feet of sand in the wells to the north and
13 south of this well. As I mentioned before, this prospect
14 is born out of more extensive regional work that I've done
15 in this area over the past 20 years or so, and this is
16 narrowed down to this prospect level. But if you follow
17 these prospect systems down to the south and to the north,
18 you find wells that are, in fact, productive out of these
19 intervals. They're just further away and off the
20 boundaries of these maps.

21 With the exception -- example of t-7. T-7 I show
22 as a bifurcated system. It's the same stratigraphic
23 horizon but this channel's split, and you do have
24 production in the west half of Section 18 out of that zone,
25 but you don't in Section 17, for example, because two of

1 the wells are on the margins of that channel in tight
2 material, along A-A', along cross-section A-A'. And the
3 other well in the west half of Section 17 is productive out
4 of the t-3 and not out of the t-7. So there's virtually no
5 production within more than a mile from the t-7 at our
6 proposed location, from our proposed location.

7 Q. Your theory, then, basically, is that because
8 these sands appear in these lenticular structures in
9 various places --

10 A. Right.

11 Q. -- within this general area, and based on your
12 mapping of the way this specific location otherwise
13 corresponds to the other data in the area, that that's
14 probably where they're going to be?

15 A. That's probably where they're going to trend.
16 And again, it's based not only on this subregional work,
17 but I've done work over the entire basin, the Morrow basin,
18 over the past 20 years that allows me to draw these types
19 of configurations, as well as know in which horizons the
20 sands are oriented either north to south or east to west.

21 Q. Okay. In looking, then, at your map, I can see
22 why you would not recommend a well in the northwest
23 quarter, which would be, as I understand it, on pattern,
24 because if you drilled in the northwest quarter you would
25 either have to drill toward the east side, in which case

1 you would miss the t-7 as you have mapped it, or you would
2 have to drill further to the west to try to catch the other
3 branch of the t-7, in which case you would miss the t-5
4 altogether?

5 A. That's right, that's correct.

6 Q. Okay. I think I understand the logic.

7 A. That's maximizing our bang for the buck.

8 Q. Now, why could you not move this well slightly
9 farther to the north to make it orthodox?

10 A. Would that make it orthodox, though? It's 660
11 from the west boundary.

12 Q. From the west boundary of the quarter section.
13 That's true, yeah, you would have to also move it --

14 A. -- to the east.

15 Q. -- further east.

16 A. Right.

17 Q. And the reason for not moving it further east,
18 you said, was, it would take it downdip and risk a water --

19 A. There is that risk because, you know, I drew the
20 5400-foot contour, negative 5400-foot contour, the way I
21 did, but it could easily, you know, come back on us towards
22 the north. And so in order to avoid any chance of getting
23 further downdip -- It may or may not make a difference, but
24 I can't tell you that, because we don't know where -- you
25 know, how the gas-water system is situated in these

1 particular sands. But I wouldn't want to risk going any
2 further downdip. Like I say, as far updip as possible.

3 Q. And of course, assuming your mapping also here is
4 pretty much correct, you're moving over toward the edge of
5 where you placed the t-3?

6 A. Yes, yeah, stay away from the edges and stay in
7 the middle of what I consider to be the most prospective
8 fairways for each of the sands.

9 Q. Of course, because you've asked to unitize this
10 whole half section, which of course is the appropriate
11 spacing unit, you're not really encroaching on anybody by
12 being to the west, but you are encroaching to the south.
13 So again, I would repeat, is there any reason why it
14 couldn't be moved to the north?

15 A. It could theoretically be moved to the north, you
16 know, a few feet, yes.

17 EXAMINER BROOKS: I think that's all my
18 questions. Mr. Stogner?

19 EXAMINATION

20 BY EXAMINER STOGNER:

21 Q. In your studies when you were looking at this,
22 the old well over in the northwest quarter --

23 A. Yeah.

24 Q. -- let's see, I was looking at your Exhibit
25 Number 7, and it looked like it was drilled and completed

1 in 1967. When was it plugged and abandoned?

2 A. That's the Irene Brainard Number 1 in Section --
3 Where are we? -- Section 20. I show it to have been
4 plugged in August of 1999, according to the OCD records.

5 Q. And those were the perforated intervals, as shown
6 on the cross-section?

7 A. Yes, to the best of my knowledge, the best of the
8 ability of the data to be honest.

9 Q. Okay. Now, also I have a question -- You show
10 something called an interformational unconformity.

11 A. Unconformity, right.

12 Q. What is that?

13 A. Basinwide, I have found that within the middle
14 Morrow or what's called the Morrow clastics interval, there
15 was an episode of tectonics whereby the Morrow was uplifted
16 and partially eroded. That erosion surface, the
17 interformational unconformity, is a basinwide feature that
18 causes units within part of the middle Morrow to truncate,
19 as I've shown in the t-5 interval on Exhibit 6.

20 I've found that time and time again throughout
21 the basin, no matter where I go, there it is. And it's
22 responsible for a lot of stratigraphic-type trapping that
23 is sometimes not recognized as such but is present
24 throughout the basin.

25 EXAMINER STOGNER: I have no other questions, Mr.

1 Brooks.

2 EXAMINER BROOKS: Nor have I.

3 Is there anything further, Mr. Bruce?

4 MR. BRUCE: No, sir.

5 EXAMINER BROOKS: Very good. Case Number 12,995
6 will be taken under advisement.

7 (Thereupon, these proceedings were concluded at
8 9:42 a.m.)

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I hereby certify that the foregoing is
a true and correct report of the proceedings in
the examiner hearing of Case No. 12995,
conducted by me on Jan 23, 2003.
Liquid K Brooks, Examiner
Of Conservation Division

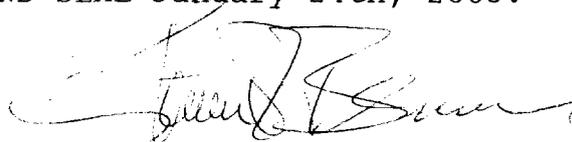
CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL January 24th, 2003.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 16th, 2006