

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. 13,779

APPLICATION OF UNIT PETROLEUM COMPANY TO)
AMEND THE SPECIAL RULES AND REGULATIONS)
FOR THE NORTH OSUDO-MORROW GAS POOL, LEA)
COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, JR., Hearing Examiner

September 14th, 2006

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, JR., Hearing Examiner, on Thursday, September 14th, 2006, 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

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September 14th, 2006
Examiner Hearing
CASE NO. 13,779

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A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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* * *

1 WHEREUPON, the following proceedings were had at
2 10:20 a.m.:

3 EXAMINER JONES: And let's call Case 13,779,
4 Application of Unit Petroleum Company to amend the special
5 rules and regulations for the North Osudo-Morrow Gas Pool,
6 Lea County, New Mexico.

7 Call for appearances.

8 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,
9 representing the Applicant. I have two witnesses.

10 EXAMINER JONES: Any other appearances?
11 Will the witnesses please stand to be sworn?

12 (Thereupon, the witnesses were sworn.)

13 FRED SCHANTZ,
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. Would you please state your name for the record?

19 A. My name is Fred Schantz.

20 Q. Where do you reside?

21 A. Midland, Texas.

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

23 A. Unit Petroleum Company, and I'm their district
24 landman.

25 Q. Have you previously testified before the

1 Division?

2 A. Yes, I have.

3 Q. And were your credentials as an expert petroleum
4 landman accepted as a matter of record?

5 A. Yes, they were.

6 Q. And are you familiar with the land matters
7 involved in this Application?

8 A. Yes, I am.

9 MR. BRUCE: Mr. Examiner, I'd tender Mr. Schantz
10 as an expert petroleum landman.

11 EXAMINER JONES: Mr. Schantz is certified as an
12 expert petroleum landman.

13 Q. (By Mr. Bruce) Mr. Schantz, could you identify
14 Exhibit 1 and just briefly tell the Examiner what it is?

15 A. Exhibit 1 is a land plat showing -- describing
16 the boundaries of the North Osudo-Morrow Gas Pool, and it's
17 basically located in 19 South -- Township 19 South, Range
18 36 East, and Township 20 South, Range 36 East, in Lea
19 County, New Mexico.

20 MR. BRUCE: Mr. Examiner, the top of this pool is
21 cut off on this plat. We'll have a better plat later on.
22 But the exact acreage is page 2 of Exhibit 1.

23 Q. (By Mr. Bruce) What is Exhibit 2, Mr. Schantz?

24 A. Exhibit 2 is a copy of Order Number R-3305, which
25 established the rules for the pool.

1 Q. And what are the current pool rules?

2 A. The rules require 640-acre spacing, one well per
3 well unit, wells to be located 1650 feet from a section
4 line and 330 feet from a quarter quarter section line. *and*

5 The rules also provide for administrative
6 approval of unorthodox location *in* nonstandard units. *?*

7 Q. What does Unit seek in this case?

8 A. Well, we seek to change the pool rules as
9 follows: to retain 640-acre spacing and provisions for
10 administrative approval of unorthodox locations and
11 nonstandard units, allow one well per quarter section,
12 allow wells to be located 660 feet from a quarter section
13 and ten feet from a quarter quarter section.

14 Q. So in the Morrow this would make the location
15 requirements the same as the statewide rules; is that
16 correct?

17 A. Exactly.

18 Q. And you would retain the 640-acre spacing so that
19 people in existing wells would not have their interests
20 affected?

21 A. Yes, sir.

22 Q. Does Unit also seek to limit the pool rules for
23 the North Osudo-Morrow Gas Pool to the acreage currently
24 within the pool, as described in Exhibit 1?

25 A. Yes.

1 Q. So that if these rules are granted, wells outside
2 of that area, even within a mile of the pool, would not
3 have -- would not be affected by the rules?

4 A. That's right.

5 Q. Who are the operators in the pool? And I refer
6 you to Exhibit 3.

7 A. Yes, Exhibit 3 lists the operators of wells
8 currently producing in the pool. They are COG Operating,
9 Brothers Production, Lanexco and Nearburg Producing.

10 Q. Okay. Now at the top it lists Read and Stevens,
11 but those are Devonian wells, are they not?

12 A. That's right.

13 Q. So -- And the Morrow operators in the pool were
14 notified of this hearing, were they not?

15 A. Yes, they were.

16 Q. And is that affidavit submitted as Exhibit 4?

17 A. Yes, it is.

18 Q. Have any of the operators in the pool contacted
19 you to object to your request?

20 A. No, they have not. COG sent an e-mail, marked
21 Exhibit 5, in which they stated that they do not object to
22 the rules changes.

23 MR. BRUCE: And Mr. Examiner, we only notified
24 the operators under Division Rules because we're not
25 seeking to alter anybody's interests in the -- in the pool.

1 Q. (By Mr. Bruce) Mr. Schantz, were Exhibits 1
2 through 5 prepared by you or under your supervision or
3 compiled from company business records?

4 A. Yes, they were.

5 Q. And in your opinion is the granting of this
6 Application in the interests of conservation and the
7 prevention of waste?

8 A. Yes, sir.

9 MR. BRUCE: Mr. Examiner, I'd move the admission
10 of Exhibits 1 through 5.

11 EXAMINER JONES: Exhibits 1 through 5 will be
12 admitted into evidence.

13 EXAMINATION

14 BY EXAMINER JONES:

15 Q. Mr. Schantz, why limit the rules to the
16 boundaries of the pool?

17 A. To the boundaries of the pool?

18 Q. I mean, why not allow it be like a -- they
19 normally have an undesignated one mile. If someone drills
20 a well within a half a mile of the pool boundaries, it
21 usually has to obey the rules of the --

22 A. Well, the contiguous --

23 MR. BRUCE: Mr. Examiner, if I could answer that
24 it's partly because, as our next witness will testify,
25 there's really -- there's no way to distinguish this pool

1 from other Morrow pools in the area, and these 640-acre
2 pools have become quite a headache. And as a result, over
3 the years they've limited the -- the Division has limited
4 the extent -- or limited 640-acre spacing in a number of
5 pools just to its current horizontal extent.

6 I think if you'd look at the McMillan-Morrow and
7 the Cinta Roja-Morrow, Catclaw Draw and some others, so
8 that people could just drill statewide outside of there.

9 EXAMINER JONES: So the current rules that were
10 of 1968 vintage limit it to the pool boundaries?

11 MR. BRUCE: Yeah.

12 EXAMINER JONES: Okay. I don't have any more
13 questions.

14 THE WITNESS: Okay.

15 EXAMINER JONES: Thank you.

16 GEORGE J. ULMO,
17 the witness herein, after having been first duly sworn upon
18 his oath, was examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MR. BRUCE:

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

22 A. George Ulmo.

23 Q. Would you spell your last name for the court
24 reporter?

25 A. U-l-m-o.

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

25 a circle around a well symbol, approximately a quarter-inch

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

1 Q. Where do you reside?

2 A. Midland, Texas.

3 Q. And who do you work for?

4 A. Unit Petroleum.

5 Q. What is your job at Unit?

6 A. I'm district geologist.

7 Q. Have you previously testified before the
8 Division?

9 A. Yes, I have.

10 Q. And were your credentials as an expert petroleum
11 geologist accepted as a matter of record?

12 A. Yes, they were.

13 Q. And are you familiar with the geology involved in
14 this Application?

15 A. Yes, I am.

16 MR. BRUCE: Mr. Examiner, I tender Mr. Ulmo as an
17 expert petroleum geologist.

18 EXAMINER JONES: Mr. Ulmo is an expert petroleum
19 geologist.

20 Q. (By Mr. Bruce) Could you refer to your Exhibit 6
21 and describe the pool and the wells that have been drilled
22 in the pool in a little more detail?

23 A. Okay, the Osudo North-Morrow Pool is shown by a
24 heavy dashed outline. And a Morrow penetration is shown by
25 a circle around a well symbol, approximately a quarter-inch

1 diameter. And they have a larger circle, probably a half-
2 an-inch diameter, around some of those wells, and those
3 wells are what I believe are -- have been drilled on
4 nonstandard locations within the Osudo-Morrow field,
5 according to the field rules, as they've been previously
6 described.

7 Q. And how many total wells did you find in the
8 pool?

9 A. I found 22 wells that were drilled for the Morrow
10 within that area.

11 Q. And how many of those 22 are at unorthodox
12 locations?

13 A. Eleven.

14 Q. So 50 percent of the wells were drilled at
15 unorthodox locations?

16 A. Yes, that's correct.

17 Q. Now you have some notations at the bottom. What
18 about production from the wells in the pool?

19 A. Based on the cumulative production map, which
20 we'll see on Exhibit 13 [sic], I added up all the
21 production from the standard wells, the standard locations
22 and the nonstandard locations. And the standard locations
23 produced about 8.7 BCF, and the nonstandard ones have
24 produced for over 30 BCF.

25 Q. So what would be nonstandard under the pool

1 rules, those appear to be the better locations?

2 A. Yes, they're drilled trying to chase the geology
3 instead of just a pre-set pattern, you know, because the
4 way the pattern was described, the rules are set out, you
5 can only drill within the interior 160 acres, you know,
6 right around the center of the section, and the Morrow just
7 does not obey that geometry.

8 Q. Also in looking at this plat, a lot of these well
9 units have more than one well on them, or have had more
10 than one well on them?

11 A. That's correct.

12 Q. Two and even three wells per section?

13 A. That's true, yes.

14 Q. And finally, just for the Examiner's reference,
15 there's a half section in the north half of 17, and then
16 the south half of 9 lists some wells. What does that
17 reflect?

18 A. Those are 30-acre tracts that Unit wishes to get
19 force pooling on in order to drill --

20 Q. 320-acre tracts?

21 A. Yeah, I don't know what I said. That's what I
22 meant to say. We intend to drill two Morrow tests to, you
23 know, explore for gas in the Morrow there.

24 Q. Well, let's move on actually to your production
25 plat. It's marked Exhibit 7. Let's move on to that, and

1 you can discuss production from the --

2 A. I think I might --

3 Q. -- from pool and from the offsetting area.

4 A. I think I might have said Exhibit 13 before, but
5 I should have said 7.

6 Okay, this map depicts the Osudo-Morrow Pool in
7 the purple outline and the area surrounding that field.
8 And on the map there are red larger circles which indicate
9 wells that have produced from the Morrow, and purple which
10 I also included, which indicates Atoka production. And the
11 reason I did that was, sometimes people call Atoka -- I
12 mean, it's really Morrow. I just put them all on the map,
13 just to not miss anything.

14 And underneath the well, the colored dot, would
15 be a number -- or near the wellbore would be a number. The
16 red would be the MCF gas produced, and the green would be
17 the barrels of oil produced from that well. And these
18 numbers are pretty current, I think probably about March,
19 '06, the IHS data.

20 Q. In looking at these production numbers from wells
21 in the pool and outside the pool, there's really no way to
22 distinguish wells in the North Osudo-Morrow from wells in
23 other pools, is there?

24 A. No, it's the same as the Morrow. You couldn't
25 tell the difference at all. Same sand channels, same type

1 of production. Nothing significant about it.

2 Q. Let's move on to your Exhibit 8 and go through
3 that for the Examiner.

4 A. Okay, this is a structure map on the top of the
5 middle Morrow clastics. It's pretty much the bottom of the
6 last carbonate -- the uppermost carbonate zone within the
7 Morrow, and it's a good structural marker, and it shows the
8 Osudo North field being part of a structural platform that
9 extends down further to the south. That would turn into
10 the Antelope Ridge field. So that big structural ridge is
11 -- goes on for miles, and the Osudo Morrow is just --
12 covers part of that ridge.

13 And as you drop off to the west, the structure
14 drops off dramatically across a big fault which is shown
15 down on the southwestern part of that township. It drops
16 down over a thousand feet or so. And that's pretty much
17 it.

18 Now our prospect is located Section 17 and
19 Section 9. And the heavy black lines on there are faults,
20 and I didn't label the up or down relationship there. But
21 there's a well in Section 8, which is the -- on the cross-
22 section, B-B', which is shown in red, the well -- by the
23 letter B, up on a structural block. It was drilled for
24 Devonian, and it didn't have much Morrow sand in it
25 whatsoever.

1 And we think this structure, being a big high
2 area at the time that Morrow was deposited, deflected the
3 Morrow sands, and they were more or less channeled on the
4 south side of that structure -- we think these sands were
5 sourced on the platform which is just to the east. That's
6 the Monument-Eumont field, because it's Eumont over there,
7 but that's the source of the sediments for the Morrow in
8 this area.

9 Q. Okay.

10 A. And this is on a 100-foot contour interval.

11 Q. Well, let's move on to your isopach maps. Now
12 when you're talking about the Morrow, in this area is the
13 middle Morrow the primary producing zone?

14 A. Yes, it is.

15 Q. And your next set of I think four maps are
16 isopachs. Are they all segments of the middle Morrow?

17 A. Yes, they are.

18 Q. Okay.

19 A. And I also isopached the lower Morrow, but in
20 this area there was no lower Morrow sand, so I didn't
21 provide those.

22 Q. Okay. Well, why don't you run through your next
23 exhibits, 9 through 12, and just tell the Examiner a little
24 bit about them.

25 A. Would it be possible to do 13 first?

1 Q. Oh, sure, the cross-section.

2 A. Yeah, we're going to jump to 13. 13 is cross-
3 section, B-B', and it's kind of big, so...

4 EXAMINER JONES: Sometimes I think geologists
5 work for Weyerhaeuser.

6 THE WITNESS: Yeah. I could have made it smaller
7 but then you couldn't see anything, so...

8 The main purpose for this cross-section is just
9 to illustrate the stratigraphy and some of the nomenclature
10 that I'll use on the maps.

11 Just going from left to right, the wells are
12 numbered 1 through 7, I think they are.

13 Q. (By Mr. Bruce) Yeah.

14 A. And there's an index map on the bottom of the
15 thing that shows the line of cross-section and the
16 numbering of the wells.

17 Number 1 is up on the structure that we just
18 talked about, and the Morrow section, the entire middle and
19 lower Morrow section is only about 150 feet thick, total.
20 And then I show the big fault. You drop off that structure
21 and there's several hundred feet of relief there, and then
22 the Morrow section expands to approximately, oh, about 500
23 feet or so, thickness.

24 And wells 2 through -- well, 2 and 3 did not get
25 to the lower Morrow, they ended in the -- they bottomed in

1 the middle Morrow, and they both were productive from two
2 different sands. Well Number 3 also had two sands
3 productive in the middle Morrow, and it did drill to the
4 lower Morrow and found no reservoir.

5 And then wells 5, 6 and 7 drilled through the
6 Morrow, the entire Morrow, and they found productive sand
7 in the middle Morrow also, and not in the lower, so...

8 And you'll note that most -- no two wells look
9 alike in the middle Morrow and -- pretty complicated.

10 Now, I've divided the Morrow into -- the lower
11 and the middle Morrow into several cycles based on
12 stratigraphy and the worldwide sea level changes and broken
13 them up into three cycles each, and I numbered them 1, 2,
14 3, going from the bottom up. So the middle Morrow, for
15 example, would be middle Morrow, M-1, M-2, M-3. And then
16 the 3 I've subdivided into A and B, with A on the bottom
17 and B on the top.

18 And this enables me to correlate each sand and
19 map each one individually and try to figure out, you know,
20 how to chase each sand, you know, and so on. Okay?

21 So I guess we can -- Okay, on that cross-section,
22 wells 2, 4 and 5 are in Section 17 where we intend to
23 drill. Well Number 4 was drilled first in that section,
24 and it found good production in the M-1 sand, lowermost
25 sand, and it -- that well produced 5 BCF from that sand and

1 then was later plugged back to the upper sand.

2 Prior to that, the well in -- the well number 2,
3 which is in unit F of that section, was drilled. And it
4 blew out when it hit the first sand in the Morrow. And
5 they pulled up their drill pipe about 13 feet off the
6 bottom and cemented the drill pipe in the hole and produced
7 it through a drill pipe.

8 And there's no log on that well, obviously, and
9 -- but it -- I've estimated that sand thickness at about 13
10 or so feet, just as how they completed it.

11 Q. It still produced quite a bit of gas?

12 A. It made 4 BCF, and that was from the M-3B sand.

13 Then the well number 5 was drilled -- At that
14 time there had been two wells in that section producing.
15 Okay. Then the well that was previously drilled in the
16 southern half -- trying to think -- I think it ceased
17 producing, and so they drilled a replacement well, well
18 number 5 on the cross-section, shortly thereafter. And it
19 found a different sand than -- It had that lowermost sand,
20 but it did have the M-3B sand, so it was completed at that
21 time in that sand. So there were two wells producing on
22 that section.

23 Q. So you said there were three wells completed in
24 Section 17, in different quarter sections, and they were
25 all commercial wells, were they not?

1 A. Yes, they were, uh-huh. And the only one that
2 was a standard location was the well in unit F.

3 Q. Okay.

4 A. That's pretty much all that this cross-section is
5 intended to...

6 Q. Okay, now let's run through your isopachs and --

7 A. Okay, the first net sand map -- I'll start from
8 the bottom up and go up -- the middle -- the middle Morrow
9 M-1 sand. This is a net sand map based on a clean gamma-
10 ray cutoff which is shown on the cross-section, there's a
11 line, a vertical line on the gamma-ray that -- what I -- I
12 would have used to choose which clean sand or not clean --

13 MS. MacQUESTEN: Which exhibit is this?

14 THE WITNESS: Oh, I'm sorry, this is Exhibit 9.

15 MS. MacQUESTEN: Thank you.

16 THE WITNESS: You're welcome.

17 So this is the net sand map for the M-1 sand.

18 And you'll note that some of the wells have a red circle
19 around the Morrow penetration symbol, and those -- that
20 indicates wells that produced from this sand. Okay.

21 Trying to distinguish -- just saying Morrow, and try to
22 delineate particular sands. Now it may have also produced
23 from another sand, but at least it did have production in
24 this sand.

25 And if you notice the channel that runs -- well,

1 the thicks would indicate channel systems. When they pinch
2 out as you go up to the north and east, and they get very
3 thick as you go down across the big fault and down into the
4 next township to the west, they get very thick down there.

5 And so our prospect is located in this channel
6 system. And note there's many of these red circles that
7 seem to be trying to follow that channel down to the south
8 of our prospect.

9 So we anticipate we could have as much as 30 feet
10 of sand, which is comparable to the thickest sand that I've
11 seen -- on the cross-section, wells number 3 and 4 had
12 fairly thick sand.

13 And those two wells, by the way, they've produced
14 about 14 BCF together from that one sand. And there's a
15 danger they could have drained the whole thing so, you
16 know, we don't know if we're going to be depleted or not,
17 but it's worth a shot to try to extend that production up
18 to the north. Okay.

19 Q. (By Mr. Bruce) Why don't you move on to Exhibit
20 10, which is the M-2 sand, and it shows pretty much the
21 same information but just with respect to the different
22 sand; is that correct?

23 A. Right, that's correct. And basically the M-2
24 didn't produce in the immediate vicinity, you know, very
25 much. Usually it's -- I guess -- I don't know why, it just

1 didn't quite hit good sand so, you know, we don't give it
2 much hope, but it's always possible.

3 And you'll note that the orientation of these
4 sands is parallel to that structural high that I had mapped
5 before, and all the channels seem to -- seem to want to go
6 that way. They may not stack up one on top of the other,
7 but they could be confined to a narrow valley, and we would
8 hit one or two of them by drilling.

9 Q. And what is Exhibit 11?

10 A. Exhibit 11 would be the next sand up, which would
11 be the M-3A. And again, all the same type of notations
12 with the red circles showing production from that sand.
13 And again we have a possibility of about 10 feet of sand, 5
14 or 10 feet, you know, where we're planning to drill.

15 And then the next exhibit, Number 12, is the
16 M-3B. That sand produced from the two wells in Section 17
17 at unit F and I. Those two wells total -- have made like 6
18 BCF total, and we think we could have as much as maybe 15
19 feet or so sand there. Again, it may have been depleted by
20 those other wells, but we just don't know.

21 And up to Section 9, you know -- the farther we
22 get from those wells, the better chance we have that we
23 won't be depleted, and that's part of the reason why our
24 location is where it is.

25 Q. Now in looking at these maps together, is there

1 any way to dist- -- The Morrow, as you said, might be -- a
2 certain zone might be present in one well and not in the
3 offset well? It's discontinuous, a typical Morrow --

4 A. Yes.

5 Q. -- correct?

6 A. That's correct.

7 Q. And -- But these same zones show up through this
8 broad area, not only in the North Osudo-Morrow Pool but in
9 the Osudo-Morrow Pool to the west?

10 A. Yes, that's -- that's correct.

11 Q. And that pool is spaced on statewide 320 acres?

12 A. Yes.

13 Q. When you're looking at drilling -- You are
14 planning on drilling a couple of wells out here. Are you
15 in essence trying to hopefully stack these middle Morrow
16 zones together?

17 A. Yes, we'd like to at least have a chance to find,
18 you know, two or more -- more than one in a single wellbore
19 is possible.

20 Q. And with respect to these locations that you
21 propose in Sections 9 and 17, are those in your opinion
22 optimum locations for your proposed wells?

23 A. Yes, they are.

24 Q. And again, this will be -- when you drill the
25 well in Section 17, that will be the fourth well in this

1 section?

2 A. Yes.

3 Q. And at this point -- What was the total
4 production so far from Section 17?

5 A. About 9 -- almost 10 BCF. Nine and a half to 10
6 BCF.

7 Q. And you're still willing to drill one more well
8 in that half section?

9 A. Yeah, we are. If you note on the production map,
10 go down to Section 5 of the township below, there's a well
11 there, one well that made 28 BCF. So it -- it doesn't -- I
12 don't think you can say that 9 or 10 BCF is going to drain
13 a whole section, or even two sections. You know, it just
14 depends on where that sand goes, how much permeability
15 there is and the thickness of it.

16 Q. So looking at the production and at the number of
17 wells drilled in this general area, and at the geology, is
18 there any way to distinguish the North Osudo-Morrow Pool
19 from other statewide Morrow pools?

20 A. No.

21 Q. And again, as a result, in your opinion is
22 changing the pool rules to allow one well per quarter
23 section and loosening up the footage requirements, as
24 testified to by Mr. Schantz, a reasonable thing to do?

25 A. Yes, it is.

1 Q. Do you think that could encourage further
2 development in this pool?

3 A. Yes.

4 Q. Were Exhibits 6 through 13 prepared by you or
5 under your supervision?

6 A. Yes.

7 Q. And in your opinion is the granting of this
8 Application in the interests of conservation and the
9 prevention of waste?

10 A. Yes.

11 MR. BRUCE: Mr. Examiner, we'd move the admission
12 of Exhibits 6 through 13.

13 EXAMINER JONES: Exhibits 6 through 13 will be
14 admitted to evidence.

15 EXAMINATION

16 BY EXAMINER JONES:

17 Q. Mr. Ulmo, you just haven't drilled your big well
18 yet, have you? You're going to recover a lot more than --

19 A. Well, we haven't drilled either one of them yet.

20 Q. Okay, either one of them.

21 A. No.

22 Q. Okay.

23 MR. BRUCE: Mr. Examiner, the next hearing will
24 involve the well, the proposed well, in Section 9.

25 EXAMINER JONES: Okay, okay. Yeah, I was almost

1 thinking that we should have combined these two, but --

2 THE WITNESS: Well, we have three cases on one
3 map here, actually.

4 Q. (By Examiner Jones) Okay. The -- So you think
5 that Morrow is trending basically southwest, that most of
6 these channels are trending southwest because of --

7 A. Well, the Central Basin Platform is just to the
8 east. All those shallow oil wells, the Eumont field, the
9 Morrow is not even present over there, it was never
10 deposited. That was a little mountain range, I suppose,
11 while this was being deposited. So all the sediments were
12 being eroded off of there and dumped down into the Basin to
13 the west.

14 Q. You don't think the sediments came from the north
15 and just came right alongside those mountains?

16 A. I don't think so. The Delaware Basin, you know,
17 it's like, you know, a curve -- the northern extent is
18 circular, basically, and there are mountains off to the
19 northwest, the Pedernals, and then the Northwestern Shelf,
20 and this is the nearest source of sediment. So I think the
21 sediment is coming from all directions, just filling up the
22 Basin --

23 Q. Okay.

24 A. -- and there's no reason to believe that it came
25 from one direction only and this other place was just

1 sitting there doing nothing, you know, it doesn't make any
2 -- When it rains, the water goes downhill everywhere, not
3 just from one direction, you know, and --

4 Q. Okay.

5 A. -- and so I think the sediments were coming in --
6 in this area, influenced largely by this -- the nearest
7 structure. Now maybe some out to the west, there may be
8 more influence from the north, but I'm just dealing with
9 right here.

10 Q. Okay, during the Morrow time, from the beginning
11 to the end of Morrow time, how much time period was that?
12 How many millions of years?

13 A. Oh, boy, I don't know for sure.

14 Q. Were those mountains --

15 A. Hundreds of -- I mean, a hundred million,
16 probably, you know. It was a long time.

17 Q. Pennsylvanian-age --

18 A. Yeah, the whole lower Pennsylvanian, you know, is
19 -- the Atoka -- I'm not sure the number of years, but I --

20 Q. So you think that Central Basin Platform was
21 there during the whole --

22 A. Well, it started --

23 Q. -- millions of years?

24 A. Yeah, it began to form right after Mississippian
25 time, which the Morrow is the next thing after

1 Mississippi. So this Central Basin Platform is beginning
2 to be uplifted and the Delaware Basin was beginning to
3 subside at that time, and so the sediments were then being
4 -- starting to get stripped off of the Platform and dumped
5 into the Basin. And that continued all the way through the
6 Wolfcamp, even after that.

7 Q. Okay. And the source for the oil and gas in the
8 Pennsylvanian?

9 A. The shales, you know, within the Pennsylvanian
10 shale, that's good source beds. And the Barnett is right
11 below the Morrow so it may have contributed some too, I
12 don't know.

13 Another thing on my reasoning for the nearby
14 source is, I have seen, I think in the next township south
15 -- somebody showed us a prospect, and they had some FMI
16 images of some Morrow sands there, and their determination
17 was that they had braided-stream deposits.

18 And that -- braided streams -- the streams either
19 get right near the source, you know, very close to the
20 source of the sediments --

21 Q. Okay.

22 A. -- and they couldn't have come 50 miles and still
23 have been braided streams, they had to be five or ten miles
24 away.

25 Q. Okay. You guys are the operators in that 640

1 acres in Section 17, right?

2 A. Yes.

3 Q. But you said --

4 A. Well, we would be of this well. We --

5 MR. BRUCE: There is no current Morrow well in
6 that Section 17.

7 EXAMINER JONES: Oh, these are all abandoned
8 wells?

9 MR. BRUCE: Yes.

10 EXAMINER JONES: But you took over the rights; is
11 that right? Took over --

12 MR. BRUCE: In the north -- Mr. Schantz can
13 testify to this, but in the north half --

14 EXAMINER JONES: Okay.

15 MR. BRUCE: -- Unit has leases.

16 THE WITNESS: -- bought new leases.

17 Q. (By Examiner Jones) Well, the -- I was just
18 getting at -- if you did own some of the information on the
19 other wells, you might know something about the pressure
20 history of them and whether they have drained your location
21 or not.

22 A. I did look at the public information regarding
23 that and -- you know, PI. You can take a P/Z plot, and I
24 have those with me.

25 The first well that was drilled in that section,

1 in unit N, shows a pressure decline from initial pressure
2 of about 7000 pounds down to 200, and the other wells are
3 similar. They all drop down to about 200 at the time they
4 were abandoned, with the exception of the well in unit F.
5 It was suddenly abandoned at 1000 pounds. It looked like,
6 to me, it must have had a mechanical failure. It was going
7 along and then died.

8 And it was like shortly after that that the
9 replacement well was drilled in the southern half of 17,
10 and that well -- I'm sorry, when that well, the well in
11 unit F, dropped down, the production in the well in 17
12 jumped back up, so they seem to be in pressure
13 communication. And then it finally declined to about 160
14 p.s.i. So there may be significant drainage in there. You
15 know, we may be drilling a well for nothing. We might find
16 that M-3B sand that nobody's produced from, or another sand
17 in the M-1 that may look like the same sand but not
18 actually be connected.

19 Braided streams, they just kind of random -- you
20 know, you don't -- can't really tell. They might look
21 alike but might not be connected.

22 Q. You can't see this stuff on seismic?

23 A. No.

24 Q. Okay.

25 A. We don't have seismic, so I don't know if you can

1 see it or not.

2 EXAMINER JONES: I have no more questions, I
3 think. We appreciate you guys --

4 THE WITNESS: Okay.

5 EXAMINER JONES: -- coming up here on this case.

6 THE WITNESS: I'll try to make my cross-section a
7 little smaller next time.

8 EXAMINER JONES: That's all right.

9 So we'll take Case 13,779 under advisement.

10 (Thereupon, these proceedings were concluded at
11 10:55 a.m.)

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

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_____, Examiner
Oil Conservation Division

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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 September 17th, 2006.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006