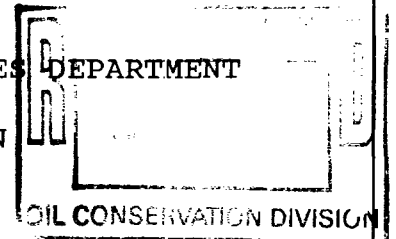


STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



IN THE MATTER OF THE HEARING CALLED BY)
THE OIL CONSERVATION DIVISION FOR THE)
PURPOSE OF CONSIDERING:)

CASE NO. 11,750

APPLICATION OF CHESAPEAKE OIL COMPANY)
FOR CREATION OF A NEW OIL POOL WITH)
SPECIAL RULES AND A DISCOVERY OIL)
ALLOWABLE, LEA COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

May 1st, 1997

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, May 1st, 1997, 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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May 1st, 1997
Examiner Hearing
CASE NO. 11,750

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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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 By: W. THOMAS KELLAHIN

* * *

1 WHEREUPON, the following proceedings were had at
2 12:26 p.m.:

3 EXAMINER STOGNER: At this time I will Case
4 Number 11,750.

5 MR. CARROLL: Application of Chesapeake Oil
6 Company for creation of a new oil pool with special rules
7 and a discovery oil allowable, Lea County, New Mexico.

8 EXAMINER STOGNER: Call for appearances.

9 MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of
10 the Santa Fe law firm of Kellahin and Kellahin, appearing
11 on behalf of the Applicant, and I have three witnesses to
12 be sworn.

13 EXAMINER STOGNER: Any other appearances?
14 Will the witnesses please stand to be sworn at
15 this time?

16 (Thereupon, the witnesses were sworn.)

17 MR. KELLAHIN: Mr. Stogner, by way of explanation
18 I have chosen the procedure of asking for special rules,
19 pool creation and a discovery allowable in this Examiner
20 case before you.

21 I recognize that often Mr. Sexton in the District
22 may create the pool assignment discovery allowable and at
23 some point in the process these things merge together. But
24 this case is being processed before you.

25 I have communicated with Mr. Sexton, I have two

1 letters to share with you so that you know the extent of my
2 involvement with Mr. Sexton.

3 Initially, in a March 10th, 1997, letter, he has
4 for administrative purposes placed this Chambers 1
5 discovery well in the Northeast Shoe Bar-Strawn Pool. I'll
6 show you that later. In addition, he has advised me that
7 in response to my special request he will treat the
8 Chambers 7 well subject to your decision in this case as if
9 it were 80-acre spacing with a special depth bracket
10 allowable of 445 barrels a day.

11 So he's aware of this case and has let us produce
12 the well pending your decision on how to operate the pool.

13 EXAMINER STOGNER: Thank you, Mr. Kellahin.

14 MR. KELLAHIN: My first witness is Mike [sic]
15 Hazlip. Mr. Hazlip is simply here to identify the
16 ownership plat in the area so we can show our efforts to
17 send notice to the other operators and affected owners
18 around here, and very quickly, then, we'll move through his
19 testimony.

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

23 DIRECT EXAMINATION

24 BY MR. KELLAHIN:

25 Q. Mr. Hazlip, for the record, sir, would you please

1 state your name and occupation?

2 A. Mike Hazlip, landman for the Permian Basin for
3 Chesapeake.

4 Q. As part of your duties as a landman for
5 Chesapeake, Mr. Hazlip, have you prepared a tabulation of
6 ownership surrounding the discovery well which is depicted
7 and illustrated on Chesapeake Exhibit 1?

8 A. Yes, sir.

9 Q. And to the best of your knowledge is that an
10 accurate representation of the operators and ownership in
11 the surrounding sections?

12 A. Yes, sir.

13 MR. KELLAHIN: Mr. Examiner, you should find --
14 Somewhere in the end of your exhibit package there should
15 be an Exhibit 11. Exhibit 11 is my certificate of notice
16 about the pool creation. The tabulation of parties to
17 notify was prepared with Mr. Hazlip's assistance and
18 direction.

19 As a result of sending the notifications, Mr.
20 Hazlip, are you aware of any objection from any of the
21 parties notified to the formation of this new Strawn pool?

22 A. No, sir.

23 Q. Have you received any objection to the proposal
24 for 80-acre spacing?

25 A. No, sir.

1 Q. And have you received any objection to the
2 proposed depth bracket allowable of 445 barrels of oil a
3 day per spacing unit?

4 A. No, I have not.

5 Q. None whatsoever?

6 A. None.

7 MR. KELLAHIN: All right. That concludes my
8 examination of Mr. Hazlip, Mr. Examiner.

9 We move the introduction of Exhibits 1 and 11.

10 EXAMINER STOGNER: Exhibits 1 and 11 will be
11 admitted into evidence at this time.

12 EXAMINATION

13 BY EXAMINER STOGNER:

14 Q. Okay, let's see. The pool boundary is at -- it
15 would stand -- would be the south half of the northeast
16 quarter of Section 7; is that correct?

17 A. Yes, sir.

18 Q. Are there any other wells that you're aware of
19 that are being drilled into this pool or would be subject
20 to the pool rules?

21 A. Not currently in this -- in these pool rules.

22 MR. KELLAHIN: You've --

23 THE WITNESS: There may be another -- we're
24 drilling a -- we just drilled a well in the north half of
25 the southwest quarter of Section 8 that might fall in this

1 new pool.

2 EXAMINER STOGNER: Okay, yeah.

3 MR. KELLAHIN: Is that shown by the open red dot?
4 There's a gas well --

5 THE WITNESS: It's an open black dot on mine.

6 MR. KELLAHIN: All right, an open black dot.
7 There's a dryhole symbol below that; isn't that right, Mr.
8 Hazlip?

9 THE WITNESS: Yes, sir.

10 MR. KELLAHIN: Okay.

11 Q. (By Examiner Stogner) As far as you're aware of,
12 this well may be subject to some existing rules or an
13 existing pool; it's not actually in -- included in a pool
14 boundary, is it, at this time?

15 A. No, sir, not other than what Mr. Kellahin has
16 shown you that we received from the OCD while we were --
17 pending this decision here.

18 Q. Okay.

19 A. It was drilled on a wildcat basis.

20 EXAMINER STOGNER: I don't have any questions
21 then.

22 THE WITNESS: Okay.

23 MR. KELLAHIN: Mr. Examiner, my next witness is
24 Robert Hefner. Mr. Hefner is a petroleum geologist.

25 We're going to start with Exhibit Number 2. Go

1 ahead and unfold a copy of that, Robert. We can start with
2 your presentation.

3 ROBERT A. HEFNER, IV,
4 the witness herein, after having been first duly sworn upon
5 his oath, was examined and testified as follows:

6 DIRECT EXAMINATION

7 BY MR. KELLAHIN:

8 Q. All right, are you all set?

9 A. Yes, sir.

10 Q. For the record, sir, would you please state your
11 name and occupation?

12 A. I'm Robert Hefner and I'm a geologist for
13 Chesapeake for the Permian Basin.

14 Q. And where do you reside, sir?

15 A. I reside in Oklahoma City.

16 Q. On prior occasions have you testified before the
17 Division?

18 A. Yes, sir, I have.

19 Q. Concerning this specific prospect in exploring
20 for Strawn oil in southeastern New Mexico, is this
21 something that occupies your attention?

22 A. Yes, sir, this is my project.

23 Q. And this discovery well, the Chambers 7, was in
24 fact your project as a geologist?

25 A. Yes, sir, it is.

1 MR. KELLAHIN: We tender Mr. Hefner as an expert
2 geologist.

3 EXAMINER STOGNER: Mr. Hefner is so qualified.

4 Q. (By Mr. Kellahin) Let's take a moment and have
5 you identify and describe the information shown on Exhibit
6 Number 2, Mr. Hefner.

7 A. Exhibit Number 2 displays several things. One,
8 there's a production color code to producing reservoirs in
9 the area, the youngest being the yellow, represented by
10 Abo; the orange triangles, Wolfcamp; the blue hexagons is
11 Strawn and the green squares is Devonian.

12 This map also shows where the Chambers well has
13 been drilled in Section 7 and also shows some of the local
14 fields that -- Strawn fields and their spacing.

15 Q. This Examiner has been the examining officer for
16 discussions and hearings on the West Lovington-Strawn and
17 with the Gillespie-Crow unit. Approximately where is that
18 in relation to your project?

19 A. It's about a mile and a half to the northwest.

20 Q. It's where we see that group of Strawn wells in
21 blue in Section 33, the lower portion of 33?

22 A. Yes, sir, it is.

23 Q. When we look for the Big Dog-Strawn, where is
24 that in relation to this display?

25 A. It's further to the west --

1 Q. All right.

2 A. -- of the West Lovington-Strawn Pool.

3 Q. There are two designated pools by the Division in
4 this general vicinity to the Chambers discovery. Let's
5 look at 13, down in Section 13 to the southwest, the North
6 Shoe Bar-Strawn.

7 A. That is a field that is currently near depletion,
8 and it was -- its pool rules were based on 160-acre
9 spacing.

10 Q. All right. Are you absolutely convinced as a
11 geologist that your discovery in the northeast of 7 is
12 independent from and a separate source of supply from the
13 North Shoe Bar-Strawn?

14 A. Yes, sir, I am.

15 Q. When we look at the relationship of the Chambers
16 discovery to the other closest Strawn production, the West
17 Lovington-Strawn, are you convinced that there is
18 separation and isolation between that reservoir and your
19 pool?

20 A. I am convinced of that.

21 Q. In a general sense, describe for us why this is a
22 separate Strawn pool.

23 A. The Strawn reservoir itself is highly variable
24 and discontinuous. We will put testimony on later by our
25 engineer that when we drilled this well we found it to be

1 in virgin pressure conditions, which clearly established
2 that it's separate from the North Shoe Bar, since it is
3 near depletion and it was substantially higher pressures
4 than what the current West Lovington-Strawn is seeing.

5 Q. All right. In a geologic sense, though, describe
6 for us the deposition, how -- what's the trapping mechanism
7 in these Strawn reservoirs and how you go about exploring
8 for them.

9 A. The Strawn reservoir is an algal mound that has
10 different growth phases to it. It's very discontinuous and
11 irregular in its growth patterns. Throughout the whole
12 play in the area, rarely -- The average area that one of
13 these mounds covers is 80 acres. It's unusual to find them
14 in any bigger accumulation than that.

15 And they grow -- They grow up against regional,
16 so the sides are very steep-dipping. And it's controlled
17 stratigraphically; it's not a structural play or structural
18 prospect. It's stratigraphic.

19 Q. What were the geologic tools used for this
20 discovery?

21 A. We are utilizing 3-D seismic, because often the
22 subsurface does not lead you to perfect a prospect, and so
23 you have to utilize seismic to identify these Strawn
24 growths.

25 Q. Let's turn to Exhibit 3 and have you identify and

1 describe this display.

2 A. Exhibit 3 --

3 Q. Give me a chance to unfold.

4 A. -- is a larger scale map zooming in on where
5 the -- our discovery is located. It also exhibits -- We
6 use the same production code here, the Wolfcamp being the
7 orange triangles and the Strawn being the blue hexagons.
8 It also displays a cross-section that was put together, and
9 also the two-mile radius of any existing Strawn production.

10 Q. Let's look at the discover in terms of
11 conventional geology, independent of the seismic work, and
12 have you show us the cross-section A-A', so we can get a
13 sense of the stratigraphy and how this separation occurs.

14 A. Okay.

15 Q. So if you'll set aside that display for a moment,
16 let's open the cross-section, Exhibit 4.

17 A. Exhibit 4 is a stratigraphic cross-section. It
18 displays the highly variable nature of the Strawn reservoir
19 and how discontinuous it is.

20 You can see that over at the North Shoe Bar field
21 there's a well in between our discovery well and the
22 producing well in Shoe Bar, known as the Gilmore well,
23 which encountered some early Strawn mound growth, that
24 actually ended up being wet and non-productive.

25 And then you go further to the west, and you get

1 into the Shoe Bar field, which shows that the mound growth
2 that is productive at that location is of a younger growth
3 phase.

4 And then on the other extreme is a well that was
5 drilled by Gillespie in 1996 that has been put into the
6 West Lovington-Strawn field, and that particular well just
7 has a very small interval of upper Strawn mound growth,
8 with the Rouse well, which was drilled in between the
9 Chambers and West Lovington. It was a dry hole.

10 And also it shows you that the structural
11 attitude of the top of the Strawn is really unrelated to
12 where the reservoir development is and the different growth
13 phases found in this reservoir.

14 Q. Have you reviewed the rules for the West
15 Lovington-Strawn Pool?

16 A. Yes. Not in great detail, just only casually.

17 Q. I think I've given you a copy of that order. It
18 was Order Number R-9722. Are you familiar with that
19 order --

20 A. Yes.

21 Q. -- and the findings concerning the necessity for
22 having relaxed well-location setbacks?

23 A. Yes, sir, I'm aware of the 330 offsets because of
24 the nature of the reservoir.

25 Q. And that was done specifically for West

1 Lovington-Strawn?

2 A. Yes, sir.

3 Q. Is there any material difference between West
4 Lovington-Strawn and the Chambers discovery pool in terms
5 of needing the flexibility of well locations?

6 A. No, there is no difference, and that flexibility
7 is needed to maximize recovery in these reservoirs.

8 MR. KELLAHIN: Mr. Examiner, I show you for
9 convenience a copy of Order R-9722.

10 Q. (By Mr. Kellahin) Can you characterize,
11 generally, what are the significant differences, if any,
12 between the Chambers Pool and the West Lovington-Strawn, or
13 is it simply one of size?

14 A. Well, right now with our current understanding,
15 it's probably just one of size. We don't know how big the
16 proposed Chambers pool may end up being, although I think
17 we now know what the limits of the West Lovington field is,
18 and that appears to be of a much bigger accumulation in
19 total areal extent than what we have here.

20 Q. Let's integrate the seismic information, and
21 let's do that by looking at Exhibit 5. If you'll turn to
22 that structure map, let's see what the structure looks
23 like.

24 A. Exhibit 5 is a structure map on top of the
25 Strawn, which is not necessarily related to the top of

1 reservoir-quality rock, just the top of the Strawn
2 carbonate. It was generated with both subsurface control
3 and 3-D seismic.

4 Q. Well, let me understand and lay the foundation
5 for this. Am I correct in understanding that Exhibit 5
6 only shows a tiny portion of the data that you've
7 integrated from the 3-D seismic information, and that
8 information is limited and confined to the northeast
9 quarter of 7?

10 A. Yes, sir. I have outlined in the south half of
11 that northeast quarter the interpretation of where that
12 seismic anomaly is that's related to the reservoir.

13 Q. As a geologist, what do you see to be the
14 appropriate initial spacing for a pool like this?

15 A. The 80-acre spacing would be appropriate for
16 this.

17 Q. Why does that make sense?

18 A. The outline of this anomaly falls across those
19 two 40-acre tracts, and it's approximating the 80-acre
20 designation that we're requesting.

21 Q. Is the continuity of these mounds such that a
22 single well, even on 80 acres, would have sufficient
23 reservoir characteristics to allow that well the
24 opportunity to deplete the entire Strawn mound?

25 A. Yes, sir, it does. We've found that this Strawn

1 mound has a high relationship between both vertical and
2 horizontal permeability that would indicate it should be
3 able to do that with one well.

4 Q. Without getting into the engineering aspects of
5 our presentation, in a geologic sense, it's logical to you,
6 then, to have spacing greater than 40 acres?

7 A. Yes, sir, absolutely.

8 Q. And there's no reason to treat this pool
9 differently than what we see was done for West Lovington-
10 Strawn, in terms of pool rules?

11 A. No, sir. And the 330 offsets would be required
12 to ideally locate these wells, as you can see, it's this
13 well location in relation to those quarter-quarter
14 outlines.

15 Q. All right, let's talk about the next well that's
16 being drilled by Chesapeake. It's over in the northwest of
17 the southwest of 8 --

18 A. Yes, sir.

19 Q. -- and it's shown on this exhibit?

20 A. It is shown.

21 Q. At this point, that's a well that has not yet
22 been completed for production?

23 A. No, sir, it has not. We have just finished
24 logging that well.

25 Q. Again, the flexibility of well locations is

1 appropriate and is a useful way of executing the locations
2 you see based upon the 3-D seismic?

3 A. Absolutely, to locate the most efficient
4 location.

5 Q. Give me an indication -- We've seen a number of
6 3-D presentations this morning. Give me an indication of
7 the current ability of that technology to precisely locate
8 the boundaries of the productive limits of the mound.

9 A. The outline that you see on this exhibit is from
10 that interpretation, although the tool does not allow us,
11 really, to go all the way down to what we might call the
12 zero.

13 Q. So what you're looking for is to get the point of
14 greatest thickness?

15 A. Yes, sir, it is, and to maximize our probability
16 of having a successful well.

17 Q. And this interpretation, then, should not be
18 taken to definitively define the size or the shape of the
19 mound itself at this point?

20 A. No, it's just an indication of its overall
21 geometry.

22 Q. Were you successful in realizing a thickness that
23 you had forecast on the 3-D work with the discovery well?

24 A. Yes, it did fit that interpretation.

25 Q. All right. The initial, I think, spacing for the

1 well was proposed to be 80 acres, and it was to be the --
2 it was supposed to be the south half of the northeast of 7?

3 A. Yes, sir.

4 MR. KELLAHIN: That concludes my examination of
5 Mr. Hefner.

6 We move the introduction of his Exhibits 2
7 through 4.

8 EXAMINER STOGNER: Exhibits 2 through -- What did
9 you say, 4?

10 MR. KELLAHIN: Four.

11 EXAMINER STOGNER: -- will be admitted into
12 evidence.

13 MR. KELLAHIN: Was it 5? I'm sorry, 5. I missed
14 one. Two through 5.

15 EXAMINER STOGNER: Exhibits 2 through 5 will be
16 admitted into evidence at this time.

17 EXAMINATION

18 BY EXAMINER STOGNER:

19 Q. This looks like it will be the only well that
20 would even begin to penetrate this zone or this particular
21 reservoir, or mound, I should say, at this point?

22 A. Yes, sir.

23 Q. So this would be a -- What? A one-well pool? Or
24 do you see it extend anything beyond that?

25 A. There's a possibility that it could extend

1 towards our Alston location. We still don't know if that
2 is in the same reservoir or not at this point.

3 Q. It's been your observation with this particular
4 algal mound, is it age relation or deposition relation with
5 the Shoe Bar down to the south and up to the north in that
6 Lovington area, the West Lovington area? Are we looking at
7 all one time in which this area was deposited?

8 A. All the same time, but there's lateral variations
9 of where these happen to nucleate and grow, and that would
10 be -- There's really no relation between -- in a regional
11 sense, that you'll find these nuclei actually growing.
12 They're very localized as far as their preference for where
13 to grow. And so you will not find reservoir-quality rock
14 regionally. It's highly variable throughout that time
15 period.

16 Q. Does there appear to be any erosional evidence on
17 those algal mounds, or were they just buried with sediment
18 falling on top of them?

19 A. It appears to have been a drowning that stopped
20 the growth, fairly rapid, because you get the Penn shales
21 that cap these, and...

22 EXAMINER STOGNER: No other questions.

23 Mr. Kellahin?

24 MR. KELLAHIN: Okay. At this time, Mr. Examiner,
25 we call our reservoir engineer, Mr. Ed Gallegos.

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ED GALLEGOS,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Gallegos, for the record, sir, would you
please state your name and occupation?

A. Yes, my name is Ed Gallegos. I'm a production
reservoir engineer for Chesapeake Operating in Oklahoma
City.

Q. And where do you reside, sir?

A. Oklahoma City.

Q. On prior occasions have you testified before this
Division?

A. No, sir, I have not.

Q. Summarize your education for us.

A. I have a bachelor of science in mechanical
engineering from the Colorado School of Mines. In addition
to that, I have a minor in petroleum engineering.

Q. In what year?

A. 1992.

Q. 1992? Okay.

Summarize your employment.

A. I currently have five years' experience in the
industry, two and a half of it which were with Kerr-McGee,

1 doing productions/operation engineering, the other two and
2 a half being with Chesapeake, doing reservoir and
3 production engineering.

4 Q. As part of your engineering duties, have you
5 studied the reservoir data and done the engineering
6 calculations concerning the Chambers 17 discovery well in
7 this area?

8 A. Yes, sir, I have.

9 Q. As part of your preparation, have you also looked
10 at other Strawn production in Township 16 South, 37 East,
11 Lea County?

12 A. Yes, sir, I have.

13 Q. And based upon that study, do you now have
14 engineering conclusions about the appropriate spacing and
15 other rules to adopt for this pool?

16 A. Yes.

17 MR. KELLAHIN: We tender Mr. Gallegos as an
18 expert petroleum engineer.

19 EXAMINER STOGNER: Mr. Gallegos is so qualified.

20 Q. (By Mr. Kellahin) Let me have you turn to
21 Exhibit 6, and let's look at the reservoir data. Describe
22 your volumetrics, and then let me ask you some specific
23 questions. Go ahead.

24 A. Okay. The upper half of Exhibit 6 summarizes
25 diagnostic pressure data that has been obtained on the

1 Chambers 1-7, the first piece of evidence being the average
2 reservoir pressure taken from a drill stem test on November
3 9th, 1996.

4 Q. All right, taking that pressure, the 4223 pounds,
5 p.s.i. --

6 A. Yes.

7 Q. -- is that an indication to you as an engineer
8 that this is a test out of a partially depleted Strawn
9 mound, or is this a new well in a new pool?

10 A. The pressure we see here indicates that is a
11 virgin pressure reservoir.

12 Q. Okay. What would you expect the pressure to be,
13 had it been depleted or connected with existing Strawn
14 wells?

15 A. The West Lovington field evidence was submitted
16 on June 16th, 1995, that the average reservoir pressure
17 there was 3363 p.s.i. This pressure data point here from
18 our DST puts us about 900 pounds above that reservoir
19 pressure, indicating that we are isolated from that
20 reservoir.

21 Q. Okay. Let's skip the pressure buildup data and
22 come back to that in a minute. Let's look at the last
23 portion of the display where you've gone through some
24 volumetric drainage area analysis.

25 A. Yes, sir.

1 Q. There is a data sheet which we've marked as
2 Exhibit 7, on the legal page --

3 A. Uh-huh.

4 Q. -- following Exhibit 6. What does the data sheet
5 represent?

6 A. That data sheet is the raw data that was used for
7 a volumetric study of Township 16 South, 37 East.

8 Q. And so when you look at the volumetric study's
9 conclusions, are we finding those tabulated for the
10 Examiner on the bottom of the page of Exhibit 6?

11 A. Yes, sir.

12 Q. All right. Let's look at the bottom of page 6
13 [sic] now, and have you summarize your drainage conclusions
14 by looking at that township.

15 A. The summary, or the conclusion of our reservoir
16 study there is that the average drainage area for that
17 township is 85 acres. In the analysis, we had to use
18 standard assumptions, which are basic averages for the area
19 for Strawn algal mounds, which a porosity of 10 percent,
20 water saturation of 30 percent, a recovery factor of 15
21 percent and a B_0 of 1.21.

22 Q. When we now look at the Chambers Pool, the
23 discovery pool --

24 A. Uh-huh.

25 Q. -- would you recommend that that be established

1 on initial spacing of 40 acres?

2 A. No, sir.

3 Q. Why not?

4 A. From the volumetric study we saw in Township 16
5 South, 37 East, our volumetrics indicate that we are in an
6 80-acre reservoir, as the reservoirs in Township 16 South,
7 37 East were.

8 Q. Generally, what does it cost to drill a well to
9 this depth and get it completed?

10 A. Drilling and completion costs are approximately
11 one million dollars.

12 Q. So you're dealing with a million dollars. If we
13 space this on 80 acres and you get your average EUR, as
14 shown on your study, your average EUR is 263,000 barrels of
15 oil recovered in relation to those costs, that's
16 profitable, right?

17 A. Yes, sir.

18 Q. If you divide that in half and drill an extra
19 well, that well would be unnecessary?

20 A. Yes, to develop --

21 Q. In addition, it might make it too risky to
22 drill --

23 A. Yes, sir.

24 Q. -- that unnecessary well?

25 A. Yes, sir.

1 Q. Okay. Let's look at the pressure buildup data.
2 In the middle portion of Exhibit 6 you give us some
3 conclusions from the pressure buildup data.

4 A. Yes, the pressure buildup data that you see there
5 is from a pressure buildup taken on April 12th, 1997. The
6 average reservoir pressure at that time was 3603 p.s.i.,
7 calculated permeability of 32.4 millidarcies, and at the
8 end of the 72-hour buildup the radius of investigation was
9 798 feet.

10 Due to the high productivity of this well, we did
11 not want to shut the well in for a longer period than the
12 72 hours. Therefore, we did not get to see the boundaries
13 of the reservoir from this buildup.

14 Q. That was going to be my question. The 798 radius
15 is not a boundary?

16 A. No, sir.

17 Q. You simply terminated the test before you
18 established a boundary?

19 A. Yes.

20 Q. Even if -- Even based upon this information,
21 then, if you had conducted a complete test to such point in
22 time that you had full pressure buildup, your boundary
23 would be substantially larger, or farther away than 798?

24 A. Yes.

25 Q. All right, let's look at the buildup data.

1 You've got Exhibit 8. Identify and describe this for us.

2 A. Exhibit 8 -- I believe the way you have it
3 numbered is, Exhibit 8 is a semi-log plot.

4 Q. I did. I've got these inside out.

5 A. Okay, make sure. Actually, what I'd like to
6 refer to is the derivative log log plot.

7 Q. Yeah, that's Exhibit 10. Let's skip to 10 and
8 start in that order.

9 A. Okay. On Exhibit 10, at the end of the buildup,
10 if we were seeing a reservoir boundary, we would expect to
11 see the pressure data points, the red line, we would expect
12 to see them begin to tail upwards, as would the derivative
13 points, as shown in the black. We did not see this --

14 Q. They're just absolutely flat on this plot, aren't
15 they?

16 A. Yes, sir.

17 Q. And that's a clear indication to you as an
18 engineer that you have not hit a boundary with the test?

19 A. Yes.

20 Q. All right. Let's look at Exhibit 9, which is
21 your semi-log plot of the data.

22 A. Exhibit 9 was used to extrapolate the average
23 reservoir pressure at the time of the buildup.

24 Q. And then let's go back to Exhibit 8 and, for the
25 record, have you identify that exhibit.

1 A. Exhibit 8 is just a plot of the -- a Horner plot
2 of the DST, taken on November 9th, 1996.

3 Q. What's your forecast as an engineer of the
4 appropriate spacing, then, for this discovery?

5 A. Eighty acres.

6 Q. And are you satisfied that there's sufficient
7 reservoir data to convince you that this is a separate
8 Strawn pool from any existing producing Strawn pools?

9 A. Yes, sir.

10 Q. Do you concur with Mr. Hefner's conclusion about
11 well locations?

12 A. Yes.

13 Q. Having the flexibility of the 330 setbacks is
14 appropriate in Strawn development and, in particular, this
15 type of pool?

16 A. Yes.

17 Q. All right. It appears that this may be simply a
18 one-well pool at this point, right?

19 A. We do not have enough diagnostic data to evaluate
20 the overall size of the reservoir at this time.

21 Q. All right. So in order to avoid drilling
22 unnecessary wells that may be at too great a density, you
23 would recommend that we adopt these rules for 80-acre
24 spacing?

25 A. Yes.

1 Q. Do you have a forecast of how long we should have
2 them on a temporary basis before they would be considered
3 for permanent?

4 A. I would estimate that it will take a year to a
5 year and a half's production to fully diagnose the size of
6 the reservoir.

7 Q. Would an 18-month period after the issuance of
8 the order give you enough time to get the additional data
9 to verify spacing?

10 A. Yes.

11 MR. KELLAHIN: All right. That concludes my
12 examination of Mr. Gallegos.

13 We move the introduction of his Exhibits 6
14 through 10.

15 EXAMINER STOGNER: Exhibits 6 through 10 will be
16 admitted into evidence.

17 Mr. Kellahin, the only question I have at this
18 point -- and I'll throw it out -- is, what's the proposed
19 name for the pool?

20 MR. KELLAHIN: I don't have a proposed name.

21 THE WITNESS: I believe on the Application it was
22 the Chambers Pool.

23 MR. HAZLIP: I thought it was the Chambers, was
24 the first --

25 MR. KELLAHIN: Was that your --

1 THE WITNESS: On the Application that was the
2 first.

3 EXAMINER STOGNER: Okay. So I need somebody to
4 answer it, just one person. Any -- sort of a background on
5 how the Chambers name is there, or how it came to be, who
6 proposed it and why.

7 MR. HAZLIP: The Chambers are the royalty owners
8 under that well, under that whole northeast -- or under
9 that whole quarter section.

10 EXAMINER STOGNER: So they're the ranchers? Is
11 there a ranch out there, a Chambers ranch?

12 MR. HAZLIP: Yeah, it's the Chambers -- they --
13 Let's see. Kenneth and Geraldine Chambers, yes, they own
14 the northeast quarter of the section. They have a house
15 out there.

16 EXAMINER STOGNER: So there's a Chambers manor or
17 mansion or house or something --

18 MR. KELLAHIN: These fellows don't know the
19 practice. I think the Division likes to name pools with
20 regards to a topographic feature or some known structure or
21 event out there. Is there anything out there?

22 EXAMINER STOGNER: Okay, well, you all --

23 MR. HAZLIP: Could we call you back on that, Mr.
24 Stogner?

25 EXAMINER STOGNER: Yeah, why don't you maybe

1 propose something, get with Paul Kautz and propose
2 something and back through Mr. Kellahin with me, and it
3 doesn't sound like you're just real set on Chambers being
4 the name of it or anything --

5 MR. HAZLIP: No.

6 EXAMINER STOGNER: -- so --

7 MR. KELLAHIN: We'll talk to Paul about a
8 recommended name.

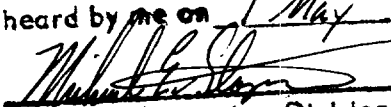
9 EXAMINER STOGNER: Okay, at this point I'll just
10 take it under advisement and work on an informal basis with
11 you on that.

12 Does anybody else have anything further in Case
13 Number 11,750? Then this matter will be taken under
14 advisement.

15 And with that, this hearing is adjourned.

16 (Thereupon, these proceedings were concluded at
17 1:00 p.m.)

18 * * *

19
20
21 I do hereby certify that the foregoing is
22 a complete record of the proceedings in
the Examiner hearing of Case No. 11750.
heard by me on 1 May 1997.
23  , Examiner
24 Oil Conservation Division
25

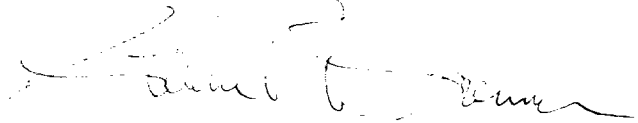
CERTIFICATE OF REPORTER

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 May 10th, 1997.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998