

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. 12,651

APPLICATION OF BURLINGTON RESOURCES OIL)
AND GAS COMPANY FOR APPROVAL OF A PILOT)
PROJECT INCLUDING UNORTHODOX WELL)
LOCATIONS AND AN EXCEPTION FROM RULE 4)
OF THE SPECIAL RULES AND REGULATIONS FOR)
THE BASIN-FRUITLAND COAL GAS POOL FOR)
PURPOSES OF ESTABLISHING A PILOT INFILL)
DRILLING PROGRAM TO DETERMINE PROPER)
WELL DENSITY FOR FRUITLAND COAL GAS)
WELLS, SAN JUAN AND RIO ARRIBA COUNTIES,)
NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

May 17th, 2001

Santa Fe, New Mexico

01 MAY 31 AM 10:23
OIL CONSERVATION DIVISION

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, May 17th, 2001, 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.

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 Examiner Hearing
 CASE NO. 12,651

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A P P E A R A N C E S

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* * *

ALSO PRESENT:

STEVE HAYDEN
Geologist
Aztec Field Office (District 3)
NMOCD

* * *

1 WHEREUPON, the following proceedings were had at
2 10:28 a.m.:

3 EXAMINER STOGNER: I believe at this time we will
4 call Case Number 12,651, which is the Application of
5 Burlington Resources Oil and Gas Company for approval of a
6 pilot project that includes unorthodox well locations and
7 an exception from Rule 4 of the Special Rules and
8 Regulations for the Basin-Fruitland Coal Pool for purposes
9 of establishing a pilot infill drilling program to
10 determine proper well spacing for the Fruitland Coal Gas
11 wells in San Juan and Rio Arriba Counties, New Mexico.

12 Okay, that will just affect only the Fruitland
13 Coal Gas Pool in those two counties, not the others?

14 MR. KELLAHIN: That's not what I intended to say,
15 Mr. Stogner. The five off-pattern wells are located in Rio
16 Arriba and San Juan Counties --

17 EXAMINER STOGNER: Okay.

18 MR. KELLAHIN: -- but we're intending to affect
19 the whole pool.

20 EXAMINER STOGNER: And this is just getting the
21 information together. It's only -- Are these wells in San
22 Juan and Rio Arriba County, or this area?

23 MR. KELLAHIN: I believe so.

24 EXAMINER STOGNER: Oh, okay. Okay.

25 MR. KELLAHIN: That may be a little confusing.

1 EXAMINER STOGNER: Now it's not. It was, but now
2 it's not. This is to gather information that will come
3 back later and affect the whole pool in the whole San Juan
4 Basin.

5 MR. KELLAHIN: Yes, sir.

6 EXAMINER STOGNER: Okay, at this time I'll call
7 for appearances.

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

12 EXAMINER STOGNER: Any other witnesses?

13 MR. CARR: May it please the Examiner, my name is
14 William F. Carr with the Santa Fe office of the law firm
15 Holland and Hart, L.L.P. We represent Williams Production
16 Company and BP Amoco Production Company. I do not have any
17 witnesses. I have a statement at the end of the hearing.

18 EXAMINER STOGNER: Any other appearances?

19 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,
20 representing Cross Timbers Oil Company. I have no
21 witnesses. We have a statement at the end of the case.

22 EXAMINER STOGNER: Did your witnesses leave, Mr.
23 Bruce?

24 MR. BRUCE: They were the southeast New Mexico
25 witnesses.

1 EXAMINER STOGNER: Oh, that was the southeast
2 Cross Timbers group, not the northwest Cross Timbers group.

3 MR. BRUCE: I do have someone here for the
4 northwest.

5 EXAMINER STOGNER: Okay, but you do not plan to
6 put them on as a witness?

7 MR. BRUCE: Correct.

8 EXAMINER STOGNER: Any other appearances?
9 Okay, will the three witnesses please stand to
10 be sworn?

11 (Thereupon, the witnesses were sworn.)

12 EXAMINER STOGNER: Just for the record, so the
13 other parties in this case -- There's an imaging project
14 going on, to image our records, and Burlington Resources is
15 up in the Farmington area, and the person in the Division
16 that's heading this project up is Frank Chavez in Aztec.
17 And this would be a good example of a typical-type case
18 with a lot of information, a multi-colored large exhibit.
19 How is things like this going to be imaged? Can we assure
20 to our customers later on, that comes in behind us, that
21 want to review the whole record, that this is the kind of
22 imaging that he's looking at.

23 So I was just talking to Mr. Kellahin that this
24 would be a good example to take to Mr. Chavez of what the
25 record looks like in a case such as this, since they're up

1 there in the northwest, next door, and they visit him.

2 This would be a very good one.

3 And so that's what I was talking about, we were
4 not planning anything against Williams, BP or Cross
5 Timbers.

6 Thank you, Mr. Kellahin.

7 MR. KELLAHIN: Mr. Examiner, Mr. Carr advised me
8 on Friday that he would represent Amoco and Williams today.
9 Mr. Bruce also within the time provided advised me that he
10 represented Cross Timbers. I've arranged to bring enough
11 exhibit books so that the parties of record will have the
12 exhibit books.

13 In addition, we have additional copies. If there
14 are companies appearing today that are not parties of
15 record, I'll ask Mr. Alexander to distribute as many as he
16 has. If there are companies that don't get a book, if
17 they'll leave their business card with Mr. Alexander, we'll
18 arrange for them to get copies of the book.

19 EXAMINER STOGNER: Thank you. What I had
20 mentioned earlier is something extra that not necessarily
21 has to do with this case, but if Burlington could work with
22 Mr. Chavez on the separate issue of a typical case such as
23 this, it would be greatly appreciated for him and also for
24 me.

25 This is a very colorful exhibit in which I'm

1 looking at, which is -- measures about five by five. These
2 are the kind of exhibits that people want to look at and
3 want to see. And I think it would not be very good if we
4 had this imaged in black and white. I'm sure that the
5 witness is going to be talking about the colors today.
6 I've already ran into this in the old imaging system.

7 But enough of that, let's get back to this, and
8 Mr. Kellahin, I'll turn it over to you.

9 MR. KELLAHIN: Mr. Stogner, with your permission
10 let me give you a brief introduction of what we're
11 proposing to show you this morning.

12 First of all, the exhibit book is arranged so
13 that, should you choose to do so, there is an executive
14 summary for the land portion, a separate one for the
15 geologic presentation, and last one for the petroleum
16 engineering simulation. The purpose was to have that
17 summary so that parties that were not in attendance here
18 could read the book and figure out the project.

19 You may recall that Mr. Chavez, the Aztec
20 supervisor for the Division, has a work-study group. This
21 proposal presented by Burlington this morning evolves from
22 that work-study group discussion.

23 Burlington desires to go forward with a reservoir
24 simulation project that includes simulating in different
25 areas of what is called the underpressured area of the

1 pool, to develop the appropriate reservoir data for
2 simulation of those five areas. We'll talk to you about
3 our reasons why we pick those areas and what we attempt to
4 obtain as a result of drilling these wells.

5 There are five wells in five different areas, all
6 in the underpressured area. Four of them are off-pattern.
7 The footages are consistent with footage requirements of
8 the pool, but four will be infill in that they are off-
9 pattern, which means that they will be either in the
10 southeast quarter of the northwest quarter of the section.

11 In addition, there is a fifth well which is on
12 pattern but represents the second well in the GPU. We
13 therefore docketed the case to demonstrate that they were
14 exceptions from the well density, and they were off-pattern
15 in terms of well location.

16 You may remember that in 1991 the Division
17 entered a comprehensive order establishing on a permanent
18 basis the rules for the Basin-Fruitland Coal Gas Pool.
19 That work was based upon reservoir within the overpressured
20 area. The terminology in the San Juan Basin is to refer to
21 the overpressured area as the fairway.

22 We're going to describe to you what is generally
23 believed to be the range of the overpressured area. There
24 is a transition zone, if you will, between the
25 overpressured and the underpressured, and the fact that up

1 until now there has not been reservoir simulation of the
2 underpressured area. And when you look at the 1991 order,
3 you'll see that there is a strong bias towards reservoir
4 simulation, to help address well density in the pool.

5 We have a time-line for you that we are
6 proposing. It is our hope and expectation that if we can
7 stay on the time-line, that by the spring of next year
8 we'll be in a position, with the cooperation of the rest of
9 the operators in the pool that have shown an interest in
10 participating in this work-study group, to bring back to
11 the Division a comprehensive presentation to address well
12 density in the overpressured area, well density in the
13 underpressured area and, if there is there is a difference
14 in spacing, then how to handle that.

15 While Burlington currently believes that the well
16 spacing in the fairway at one well per 320 is appropriate
17 and will continue to be so, that is a subject of debate
18 among the work group. We don't propose to engage in that
19 debate this morning.

20 We are seeking your permission for a science
21 project, and that project is in the underpressured area
22 involving five wells. It's necessary to drill the new
23 wells in order to obtain discrete pressure data for each of
24 the layers of the coal. That is something that hasn't been
25 done. We need that data.

1 In addition, we want the opportunity to produce
2 those wells and periodically test them.

3 Our plan is to ask your permission to produce
4 these wells for a period not to exceed 180 days, at which
5 point they'll be shut in. If we deem it necessary to ask
6 to continue to produce these pilot test wells longer than
7 the 180-day period, we'll come back and ask you, and we'll
8 give you the reasons to do that.

9 But we think in order to avoid any question about
10 correlative rights, drainage of the test wells, the fact
11 that they're increased density, we believe it appropriate
12 to fix a producing limit, recognizing that these wells are
13 marginally economic, that we're going to spend a
14 substantial sum of money on the study, but we're not asking
15 you to let us simply produce these without any restrictions
16 at this time.

17 We want to gather the data, present it to Mr.
18 Chavez's work group and other parties in the San Juan Basin
19 that are interested, and continue our discussions about the
20 appropriate spacing unit.

21 So that's our plan, and that's what we're asking
22 for permission to do, Mr. Stogner.

23 EXAMINER STOGNER: Thank you, Mr. Kellahin.

24 MR. KELLAHIN: My first witness is Mr. James
25 Strickler.

1 JAMES R.J. STRICKLER,

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

4 DIRECT EXAMINATION

5 BY MR. KELLAHIN:

6 Q. Mr. Strickler, for the record, sir, would you
7 spell your last name for the court reporter?

8 A. S-t-r-i-c-k-l-e-r.

9 Q. And where do you reside, sir?

10 A. Farmington, New Mexico.

11 Q. And what is your occupation?

12 A. I'm a senior staff landman for Burlington
13 Resources.

14 Q. On prior occasions, have you testified before the
15 Division as a petroleum landman?

16 A. Yes, sir.

17 Q. Pursuant to your employment with Burlington, have
18 you been assigned the responsibility to comply with the
19 Division notice requirements for the five pilot wells that
20 we're discussing this morning?

21 A. Yes.

22 Q. In order to satisfy that requirement, Mr.
23 Strickler, did you make yourself knowledgeable about the
24 notice rules?

25 A. Yes.

1 Q. In addition, have you provided in the exhibit
2 book a summary of the various industry meetings that have
3 taken place concerning well spacing in the pool?

4 A. Yes, sir.

5 Q. And you've provided that information for Mr.
6 Stogner, should he care to review it?

7 A. Correct.

8 MR. KELLAHIN: We tender Mr. Strickler as an
9 expert petroleum landman.

10 EXAMINER STOGNER: Mr. Strickler is so qualified.

11 Q. (By Mr. Kellahin) Mr. Strickler, let me ave you
12 take a moment, let's turn to Tab 1 of the exhibit book.
13 The first page is your certificate of notification where
14 you believe you've complied with the notice requirements,
15 correct?

16 A. Yes.

17 Q. Turn past the certificate, and let's look at the
18 land summary. On the land summary you have provided Mr.
19 Stogner with the names and the spacing of the 40-acre tract
20 in which each of the pilot wells is located?

21 A. The 160-acre tract.

22 Q. I'm sorry, the 160-acre tract in which they're
23 located?

24 A. Yes, sir.

25 Q. All right. Is it your understanding that four of

1 these wells are off-pattern wells?

2 A. That is correct.

3 Q. And that the fifth well is on pattern, but it
4 will be the second well in its GPU?

5 A. That is correct.

6 Q. Is it also your understanding that these wells
7 meet the footage requirements for wells in the pool?

8 A. Yes, they do.

9 Q. Let's turn now -- skip the rest of the
10 information in that section for a moment, and let's turn to
11 Tab 3 and look at the first display. What are we looking
12 at here?

13 A. We have a San Juan Basin locator map. You can
14 see the five wells in question highlighted in red, and that
15 represents a nine-section area.

16 Q. The five pilot areas are displayed by the red
17 code, and then there is a well name associated with each of
18 the pilots?

19 A. That is correct.

20 Q. For each of those five areas, do you have
21 individual land plat displays that will show us the
22 offsetting operators that might be affected by that
23 increased density well or off-pattern well?

24 A. Yes, sir.

25 Q. Turn past the Basin locator map. What's the next

1 display we're looking at?

2 A. What you see is an outline of the Basin-
3 Fruitland Coal Gas Pool, San Juan, in purple. You'll also
4 notice in the north end of that pool is the Fruitland Coal
5 overpressured area, which was developed by the New Mexico
6 Oil and Gas Commission out of Aztec.

7 Q. All right. The pool boundary shows an adjustment
8 there on the eastern edge. You have re-examined this
9 boundary to see if it is consistent with the acreage
10 described in the Division orders for the pool?

11 A. Yes, sir.

12 Q. And you've made the necessary correction on that
13 display?

14 A. We did make the necessary correction.

15 Q. All right. Let's go now to how you satisfied the
16 notice requirements for each of the five wells. Starting
17 first, if you'll turn to the next page, let's look at the
18 plat that shows the Davis 505S. Do you have that one?

19 A. Sure do.

20 Q. All right, sir.

21 A. The Davis 505S is located in the east half of
22 Section 12, Township 31 North, Range 12 west. You'll see
23 it's crosshatched for your convenience. Burlington's
24 acreage is colored in yellow, and the well spot is located
25 in Lot 9 or the northeast quarter of the southeast quarter

1 of Section 12.

2 Q. Are there special notice rules set forth in the
3 pool rules concerning the parties to be notified for an
4 increased density or an off-pattern well?

5 A. Yes, sir, Rule Number 4.

6 Q. And what does that rule provide?

7 A. We need to -- Burlington is required to notify
8 all the offset operators and/or working interest owners,
9 which we have complied with.

10 Q. All right. Rule 4 says if there is an offset
11 operator, you notify the operator?

12 A. That is correct.

13 Q. If it's an undrilled tract, then you have to find
14 the interest owners?

15 A. Find out the interest owners, yes, sir.

16 Q. Is that rule different than Rule 1207 concerning
17 well location?

18 A. It's slightly different. Rule 1207 requires that
19 the offset operator, in this case Burlington, would also
20 notify its working interest owners, the --

21 Q. All right, if Burlington is an offset operator,
22 then you're required to notify the working interests?

23 A. And we did so.

24 Q. All right, so you complied with both rules?

25 A. Yes, we did.

1 Q. Behind this display of 505S, do you have a
2 tabulation of the parties that received notice that was
3 applicable for this well?

4 A. Yes, sir.

5 Q. Show me that.

6 A. You'll see there it's Amoco, Hallador Petroleum
7 and Merchant Resources.

8 Q. All right, let's continue through the book then
9 and look at the others. The next one is the Turner Federal
10 210S?

11 A. The Turner Federal 210S is located in the north
12 half of Section 13, Township 30 North, Range 10 west. This
13 particular well is located in Lot 4, the northwest quarter
14 of the northwest quarter.

15 Again, you see Burlington's acreage colored in
16 yellow.

17 Q. Are you the operator of the offsetting wells in
18 this area?

19 A. Yes, sir.

20 Q. Did you notify the working interest owners?

21 A. Yes, we did.

22 Q. And who are they?

23 A. In this case it's Amoco and Conoco.

24 Q. All right. Turn to the next color display, it's
25 the Huerfano Unit 258S well.

1 A. This well is located in Section 36, the east
2 half, Township 26 North, Range 10 West. The test well is
3 located in the northeast quarter.

4 This particular well falls in the Huerfano Unit,
5 and we've notified the Huerfano Unit Fruitland Coal owners
6 and also the north offset owners, and you see those
7 companies listed on the next page, a little over a dozen
8 companies and individuals.

9 Q. In order to find the last two wells it will be
10 necessary to move to a different tab section, will it not,
11 Mr. Strickler?

12 A. Yes, sir.

13 Q. All right, let's turn to Tab 8. If you turn to
14 Tab 8, there's a foldout display which is the first one.
15 Let's look at the San Juan 28-and-6 Unit Well 418S. Where
16 is it?

17 A. This well is located in the west half of Section
18 28, Township 28 North, Range 6 West. The test well is
19 located in the northwest quarter. This well falls entirely
20 in the 28-6 Unit. The Fruitland Coal owners were all
21 notified, and this is in the Fruitland Coal PA. Those
22 owners are Burlington, Conoco, Four Star, Williams, Bolack
23 and Phillips Petroleum.

24 Q. Okay, let's cover the last well now. If you'll
25 turn behind Exhibit Tab 9, let's look at the San Juan 28-

1 and-5 Unit well 201S. Find the well and tell us who you
2 sent notice to.

3 A. This well is located in the north half of Section
4 15, Township 28 North, Range 5 West, Rio Arriba County.
5 This falls within the San Juan 28-5 Unit. This is on a
6 drillblock basis, and Burlington owns 100 percent of this
7 interest.

8 Q. Who did you send notice to?

9 A. We sent notice to the San Juan 28-5 working
10 interest owners, Fruitland Coal.

11 Q. To your knowledge, Mr. Strickler, has Burlington
12 received any objection from the parties to whom notice was
13 sent concerning their Application today?

14 A. No, sir.

15 Q. Direct our attention to where we're going to find
16 the first executive summary that you prepared concerning
17 the project. Where is that set forth?

18 A. Are you referring to the land summary?

19 Q. No, sir, I'm referring to the first summary
20 behind Exhibit Tab Number 2. Do you and the other
21 technical members of the coal gas study group --

22 A. What you see is the meetings summary. As you
23 mentioned in your introduction, Mr. Kellahin, the Fruitland
24 Coal committee was formed back in July of 1999. It was
25 chaired by Ernie Busch of the Oil Conservation Division in

1 Aztec, New Mexico. A series of meetings have been held
2 since July of 1999, actually ten meetings have been held.

3 Q. And this summary behind this exhibit tab shows
4 the various participants at these meetings and the date of
5 the various meetings that --

6 A. Yes, sir.

7 Q. All right, sir. Go back now to Exhibit Tab 1.
8 Let's talk about the balance of the information behind
9 Exhibit Tab Number 1. You've talked about the certificate,
10 you've given us the land summary. The balance of this is
11 the copies of the green card, the Application and a total
12 list of the parties to whom notice was sent?

13 A. Correct.

14 MR. KELLAHIN: Mr. Stogner, that concludes my
15 examination of Mr. Strickler. At this point we would move
16 the introduction of the exhibits behind Exhibit Tab 1, 2
17 and 3.

18 EXAMINER STOGNER: Exhibit 1 -- between Tabs 1,
19 2, 3 -- how about the one over in that -- 8 and 9, do you
20 want those?

21 MR. KELLAHIN: I'm going to ask those to be
22 admitted later, when we've finished our discussion about
23 all that data.

24 EXAMINER STOGNER: Okay, the portion of Exhibit
25 Number 1 behind Tabs 1, 2 and 3 will be admitted into

1 evidence at this time.

2 EXAMINATION

3 BY EXAMINER STOGNER:

4 Q. I'm trying to get a placement here. I'm
5 referring to the locator map behind Tab 3. The Davis 505S
6 well. Where is that well located in reference to the Cedar
7 Hills-Basal Fruitland Coal Pool?

8 A. This well, sir, is located in 31-12, Section 12.
9 I do have a copy of the Order Number 8768-A, and I believe
10 the Cedar Hill Pool is listed there. If I may refer to it,
11 I don't know it by memory.

12 Q. Please refer, yes. And you're referring to what
13 order number again?

14 A. This is Order Number R-8768-A.

15 MR. KELLAHIN: That's for Basin-Dakota, isn't it?

16 THE WITNESS: It's Basin-Dakota.

17 MR. KELLAHIN: He was asking you about the Cedar
18 Hills Pool.

19 THE WITNESS: That is a Fruitland Coal pool, is
20 it not?

21 MR. KELLAHIN: Yes, sir, and it's different from
22 this one.

23 THE WITNESS: It is different from this one. It
24 did have -- One of these orders did have that location in
25 there, and I think it might have been the original 8768.

1 Q. (By Examiner Stogner) Now, on page two behind 3
2 there is another locator map. I don't remember you talking
3 about it that much. It's showing the Fruitland Coal
4 overpressure area. But there's also a little square in
5 there that points to the Cedar Hills --

6 A. Ah.

7 Q. -- Fruitland Basal Coal. How about if we refer
8 to that one and where this 505S well is in relationship to
9 that?

10 A. Okay. The location of the Cedar Hill Gas Pool is
11 in Order Number R-8768, and it's located in Sections 3
12 through 6, Township 31 North, Range 10 West, and Sections
13 19 through 22 and 27 through 34, Township 32 North, Range
14 10 West, San Juan County, New Mexico. And then our well is
15 in 31-12, Section 12, which would be a couple townships
16 over.

17 Q. Over to the west; is that correct?

18 A. I believe so.

19 Q. Okay.

20 A. South, I'm sorry.

21 Q. Oh, south.

22 A. Southwest.

23 Q. Okay. Behind Tab Number 1, showing the
24 notification, and then on page two behind Tab Number 1,
25 "Land Summary", and over on the far column to the right,

1 that's "Working Interest Owners and Company Approvals".

2 A. Yes, sir.

3 Q. When I see this, this is all the offsets around
4 these individual pilot wells; is that correct?

5 A. No, sir, these are the owners for these five
6 infill wells. As you can see, the first three, the Davis,
7 Turner and San Juan 28-5 are owned or controlled by
8 Burlington 100 percent. The San Juan 28-6 Unit is owned by
9 the Fruitland Coal PA owners, and you see those owners
10 there, Burlington, Conoco, Four Star, Williams, Bolack and
11 Phillips. And in the Huerfano Unit it belongs to
12 Burlington and Cross Timbers. And these are the owners of
13 the five infill wells in question.

14 Q. Okay, and the interest underlying that half
15 section?

16 A. Yes, sir, and we have sufficient approval for all
17 five.

18 Q. Okay, when I refer to Exhibit -- I'm sorry, Tab
19 8, and I look at the second page, there's a map over there
20 that shows the Fruitland Coal participating area in gray --

21 A. Yes, sir.

22 Q. -- and then a sort of a teal blue as the
23 nonparticipating area --

24 A. That is correct.

25 Q. -- the proration unit is surrounded by both

1 participating and nonparticipating wells; is that correct?

2 A. That is correct.

3 Q. Okay. Now, where do I see -- or where do I go to
4 to look up the difference of that ownership or percentages?
5 Is that in here?

6 A. In the 28-and-6 Unit, the Fruitland Coal owners
7 are listed on the land summary. The gray area, those
8 owners are again Burlington, Conoco, in those percentages,
9 Four Star, Williams, Bolack and Phillips, in those various
10 percentages, and I'll refer you to the land summary.

11 Burlington owns 19.38, Conoco 35.79, Four Star --
12 or Texaco 31.84 --

13 Q. Okay, I'm looking for that land summary. Where
14 is that?

15 A. Oh, I'm sorry, it would be Tab 1 -- I'm sorry,
16 Tab 2 --

17 Q. Tab 2.

18 A. -- the -- right behind the certificate of
19 mailing.

20 Q. Tab 2. All I find behind Tab 2 is about the
21 meetings they were having.

22 A. This is -- I'm sorry, it would be Tab 1. We had
23 the hearing summaries in the front, so it would be Tab 1,
24 it would be the second page. There it is.

25 Q. Okay. Okay, when I go to that column, now you

1 refer down there in parentheses, "(Fruitland PA owners)" --

2 A. Yes, sir.

3 Q. -- is that referencing to all the people up
4 above?

5 A. Yes, sir.

6 Q. Okay. Now, is there a difference, other than
7 percentage, between that gray area and teal blue area?

8 A. Yes, sir, there would be. The gray area
9 represents everybody's ownership as listed in the land
10 summary, and the teal acreage is on a drillblock basis. So
11 whatever -- You know, and that varies from drillblock to
12 drillblock.

13 Q. Okay, now where do I find those interest owners
14 in that drillblock to drillblock that surrounds this
15 proration unit? Where do I find that those were notified?

16 MR. KELLAHIN: We may have to break those out for
17 you, Mr. Stogner, because they got notice under Exhibit 1,
18 but I don't have a separate tabulation, and I'll have to do
19 that after the hearing for you.

20 EXAMINER STOGNER: Okay. Yeah, if you would --

21 MR. KELLAHIN: Yes, sir.

22 EXAMINER STOGNER: -- now you see where I'm
23 getting at --

24 MR. KELLAHIN: Yes, sir.

25 THE WITNESS: Yes, sir.

1 EXAMINER STOGNER: -- I need to find out who
2 those are, identified --

3 MR. KELLAHIN: The non-PA owners and the PA
4 owners all got notice, I just didn't give you a list of the
5 non-PA owners.

6 Q. (By Examiner Stogner) Okay. Now, are there any
7 interest owners that have not ratified this unit? Is this
8 100-percent participation for the Fruitland Coal in the San
9 Juan 28-6 Unit?

10 A. Yes, sir.

11 Q. It is --

12 A. Yes, sir.

13 Q. -- that's 100 percent?

14 A. Yes, sir.

15 Q. There's no unratified interest owners?

16 A. No, sir.

17 Q. Okay. Now, I'm looking at the Huerfano Unit.
18 I'm looking at the 28-5 Unit, Well Number 201. Okay, when
19 I turn to Tab 9, page one, this shows that the only
20 Fruitland Coal participating area is to the west; is that
21 correct?

22 A. Yes, sir.

23 Q. Okay. Now, there is some Fruitland Coal, but
24 they're nonparticipating in the unit; is that correct?

25 A. That is correct.

1 Q. And then the rest in white, or the area in white
2 on page 2, these are undeveloped acreage?

3 A. Correct.

4 Q. Okay, now how does the interest vary between
5 these three colors?

6 MR. KELLAHIN: Once again, I'm going to have to
7 break that out for you, Mr. Stogner, because we didn't give
8 you that table.

9 Q. (By Examiner Stogner) Okay. Is the San Juan
10 28-5 Unit, is that 100-percent participation with all
11 mineral owners?

12 A. Yes, sir.

13 Q. Okay. Now, I'm looking behind page three at the
14 Huerfano Unit 258S well. Now, this is in a unit area?

15 A. The well does fall in the Huerfano Unit, but on
16 the northern border of the Huerfano Unit.

17 Q. Okay. Now, how about participating and
18 nonparticipating? I show -- it's a leasehold. I don't see
19 the unit map. How is this different than the other two
20 units that we talked about?

21 A. The other two wells were totally within those
22 prospective units, the 28-5 and the 28-6. We show this
23 much like a drillblock area, because it's on the north end
24 of the Huerfano, and we had to notify the folks on the
25 north end of the Huerfano Unit. So it was a point of

1 information for you.

2 Q. Okay.

3 A. We did not list the Huerfano PA map.

4 MR. KELLAHIN: We did put that in a different
5 section, Mr. Stogner. If you go to Tab 7 --

6 EXAMINER STOGNER: Tab 7. Okay, I have Tab 7.
7 You maybe -- Do you want to examine him on this? Maybe
8 that will probably speed things up?

9 FURTHER EXAMINATION

10 BY MR. KELLAHIN:

11 Q. Mr. Strickler, let's look behind Tab 7 to follow
12 up on Mr. Stogner's discussion. What are we looking at
13 here?

14 A. We show the Fruitland Coal participating area
15 colored in gray, and it surrounds the --

16 Q. You're looking at the second map.

17 A. The second map, right. The first map is the
18 location map which we showed previously. The second map is
19 the PA map.

20 Q. All right. And again, the PA is colored in gray,
21 and the nonparticipating area is shown in blue?

22 A. Correct.

23 Q. Have you yet broken out for Mr. Stogner the
24 ownership for each of those categories within the unit?

25 A. No, sir.

1 Q. But you sent notice to all the categories --

2 A. Yes, sir. And I'd like to refer you to a
3 spreadsheet that might answer that question, Mr. Stogner's
4 question. It's a summary of all the parties that we've
5 notified and the wells affected, and this is on -- this is
6 Tab 1.

7 Q. If you flip past the Application and you find the
8 attachments to the Application, there's a tabulation of
9 parties notified.

10 A. Yes, sir.

11 Q. All right, how can we read this and figure it
12 out?

13 A. Well, you see all the parties listed in
14 alphabetical order. There's about 43 owners. And adjacent
15 to each party is the well that they offset, or the well
16 that they're a particular offset owner.

17 Q. So this list would be comprehensive and would
18 include a party, whether he was a participating party in a
19 PA or in a nonparticipating drillblock?

20 A. Yes, sir. And it also would answer the two
21 wells, the 28-6 well and the 28-5 well. It lists all those
22 owners.

23 MR. KELLAHIN: Mr. Stogner, I'm still more than
24 willing to separate these out for you and subsequent to the
25 hearing provide you separate tabulations for responding to

1 your questions.

2 FURTHER EXAMINATION

3 BY EXAMINER STOGNER:

4 Q. Okay, let me -- before I respond to that, let me
5 make sure I get this straight on this Huerfano 258. Now,
6 when I look at the second page behind Tab 7, we have a
7 cross-hatched red area showing the spacing unit. Is this
8 currently in the gray area or the blue area or the white
9 area?

10 A. It's a nonparticipating area.

11 Q. So it would be blue?

12 A. Yes, sir.

13 Q. Okay. Now, is this unit, the Huerfano Unit, is
14 that 100-percent participation by all mineral interests?

15 A. Yes, sir.

16 Q. Okay, so there's no unratified royalty interest
17 anywhere in this unit?

18 A. That is correct.

19 Q. So with these three wells in these three units,
20 whether they be in nonparticipating areas or participating
21 areas, they are represented in that list behind Tab 1 --

22 A. They land summary.

23 Q. -- the land summary?

24 A. Yes, sir.

25 Q. There's no interest that is not represented here;

1 is that correct?

2 A. We have all the correct interest owners there,
3 yes, sir, on the land summary.

4 Q. You just don't have the percentages broken down?

5 MR. KELLAHIN: That's right.

6 EXAMINER STOGNER: As long as we have been
7 notified and listed, I will accept that. So no additional
8 work is needed at this point, as long as we have them all
9 listed.

10 Q. (By Examiner Stogner) Okay, behind Tab 2, this
11 is the comprehensive list of all the meetings of this
12 committee -- what, since 1999?

13 A. July of 1999 is when it started.

14 Q. That's when it re-started, I guess this --

15 A. Re-started, you're right, because they had one in
16 the late 1980s.

17 Q. Okay. Now, do you -- It looks like Burlington is
18 represented by several people in most of these instances.
19 Are you one of those? You are, aren't you, in at least
20 some of them?

21 A. On the Fruitland Coal Committee meetings?

22 Q. Yes.

23 A. I wasn't able to attend any of those, but on the
24 subsequent meetings you'll see on the back pages, the May
25 4th meeting with the BLM, with the partners, and also with

1 the NMOCD on May 8th, I was able to attend all those
2 meetings.

3 Q. What's this agenda -- committee agenda for May
4 8th? Is this a meeting that you had with -- or that the
5 committee had in conjunction with another meeting, or are
6 these issues that were brought up during just the committee
7 meeting? I'm a little confused.

8 A. There were two meetings held that day --

9 Q. Uh-huh.

10 A. -- and the morning meeting covered those topics
11 that you see on that -- the San Juan Basin Working
12 Committee Agenda.

13 And then the sheet before that was a separate
14 meeting concerning the infill pilot program. There were
15 two separate meetings held on that day.

16 Q. By the committee, the coal committee?

17 MR. KELLAHIN: No, sir.

18 EXAMINER STOGNER: No.

19 MR. KELLAHIN: One is the coal committee, the
20 other is Burlington's presentation to Mr. Chavez on the
21 five pilot wells.

22 Q. (By Examiner Stogner) Okay, because I wondered
23 what livestock and grazing issues had to do --

24 A. It was a comprehensive meeting. And you'll
25 notice Item E was the Fruitland Infill Update, so I guess

1 that's why we put it in there.

2 Q. Okay. Since this is sort of a -- just a general
3 summary, getting started on this, when I refer to the Tab 3
4 again, the big locator map, some of it extends up in
5 Colorado. Now, does Burlington operate coal gas wells in
6 Colorado?

7 A. Yes, we do.

8 Q. And what's the spacing of the coal gas in
9 Colorado?

10 A. In certain areas 320s, in other areas you're
11 allowed an infill, 160 infill.

12 Q. Okay. Is some of those infills allowed during --
13 in that Colorado-New Mexico state-line area?

14 A. I think there's a -- Yes, sir.

15 Q. Okay. Do you know if any of that technical
16 information is utilized, or was utilized in preparation of
17 this?

18 A. I'd have to refer that to my geologist. He's
19 real up on that.

20 EXAMINER STOGNER: Okay. Mr. Kellahin --

21 MR. KELLAHIN: Yes, sir.

22 EXAMINER STOGNER: -- what we're talking about
23 today, in the next phase, would be -- We're talking about a
24 pilot project, a small area, the technical information, on
25 our way to getting information for increased well density

1 in every other place, other than the fairway; is that
2 correct?

3 MR. KELLAHIN: I'm not sure what the work group
4 or Burlington will decide about the fairway density. I
5 assume it would be docketed for hearing on the entire pool.

6 EXAMINER STOGNER: Oh, on the entire pool. I was
7 under my understanding that the infill phase would not
8 affect the fairway, as it's known.

9 MR. KELLAHIN: Well, I think that's Burlington's
10 position, but that doesn't necessarily represent the
11 position of the work group, and it's a matter to be
12 discussed with all of them.

13 EXAMINER STOGNER: Good point, okay.

14 This is a big pool, a lot of interest, a lot of
15 things going into it. That's why I'm trying to be one step
16 ahead here. It is going to ultimately take in the whole
17 pool, is it not? Is there going to be a buffer zone
18 between us and Colorado? Is it needed?

19 MR. KELLAHIN: Yes, sir, those are all issues
20 being discussed.

21 EXAMINER STOGNER: Okay, wonderful.

22 With that, I have no other questions of Mr.
23 Strickler. You may be excused.

24 THE WITNESS: Thank you.

25 MR. KELLAHIN: We'd like to call our geologist,

1 Mr. Steve Thibodeaux. Mr. Thibodeaux spells his name
2 T-h-i-b-o-d-e-a-u-x.

3 STEVEN M. THIBODEAUX,

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. For the record, sir, would you please state your
9 name and occupation?

10 A. Steven Thibodeaux, and I'm a geologist.

11 Q. And where do you reside, sir?

12 A. Ignacio, Colorado.

13 Q. On prior occasions have you testified before the
14 Division and qualified as an expert petroleum geologist?

15 A. Yes, I have.

16 Q. Have you been involved on behalf of your company
17 as the geologist to study the potential for infill drilling
18 in the Basin-Fruitland Coal Gas Pool?

19 A. Yes, I have.

20 Q. As part of that effort, have you attended various
21 meetings among industry personnel to examine that topic?

22 A. Yes, I have.

23 Q. And you've been the primary geologist responsible
24 for determining the location and how to gather data for the
25 five pilot wells which we've described to be located in the

1 underpressured area of the pool?

2 A. I am.

3 MR. KELLAHIN: We tender Mr. Thibodeaux as an
4 expert petroleum geologist.

5 EXAMINER STOGNER: Mr. Thibodeaux is so
6 qualified.

7 Q. (By Mr. Kellahin) Do the exhibits that we're
8 about to review, Mr. Thibodeaux, behind Exhibit Tab 4
9 represent your work product?

10 A. Yes, they do.

11 Q. In addition, the book is organized so that the
12 geologic information applicable to each of the five pilot
13 wells is also located behind the tab that is specific as to
14 each of those wells?

15 A. That is correct.

16 Q. Finally, did you prepare the written summary that
17 begins behind Exhibit Tab Number 4 to summarize your
18 presentation?

19 A. I did.

20 Q. Is there a key exhibit that we can look at
21 initially to begin to explain to Mr. Stogner what you see
22 and what you're trying to do?

23 A. Yes, there is.

24 Q. Which one would that be?

25 A. It would be the very first map, the cumulative

1 production, a larger version of which is on the easel.

2 Q. The first pocket contains the cumulative
3 production map. Let's take a look at that. You've got a
4 large copy on the display board?

5 A. Yes, I do.

6 Q. Let me take a moment and unfold my copy. What do
7 you call the map we're looking at?

8 A. This is a cumulative gas production map from the
9 Fruitland Coal wells in the San Juan Basin.

10 Q. That microphone doesn't amplify your voice.

11 A. Okay.

12 Q. You'll have to speak up.

13 How do I look at the color code and understand
14 what you're meaning to portray by that color code?

15 A. Basically from blue up until yellow, we get
16 increasingly greater amounts of cumulative production.
17 Blue through green represents about a BCF of cumulative
18 production. Once we get to the yellow colors, we are
19 starting to have cumulative production in excess of 7 BCF
20 per well.

21 Q. On this display can we find imposed on it the
22 five study areas for the five pilot wells?

23 A. Yes, we have a small red square around a nine-
24 section area surrounding each of the proposed five pilot
25 wells, which are marked with a red triangle.

1 Q. The study area, then, would be those wells within
2 the nine-section area?

3 A. The immediate study area, yes, sir.

4 Q. Is there a way to look at this map and determine
5 generally where you believe the fairway or overpressure
6 area of the pool is in relation to the balance of the pool?

7 A. Certainly, we have an original overpressure
8 interpretation line marked in red around the very hot
9 colors or the red and yellow colors. Aside from that, it's
10 reasonably stark contrast between the higher production,
11 cumulative production areas which are all in red or yellow,
12 and the nonfairway coals.

13 Q. This is simply done on a cumulative-production
14 basis?

15 A. That's correct.

16 Q. Is there an observable geologic difference
17 between wells in the fairway and those in the
18 underpressured area?

19 A. Yes, there is.

20 Q. Explain to me what are the various factors of
21 difference between those two areas.

22 A. The primary observable geological difference is
23 that the fairway coals are of higher rank than the
24 nonfairway coals. We have a -- That is observed by
25 measuring vitrinite reflectance in the laboratory, which is

1 the indication of rank and thermal maturity. So the
2 fairway coals are generally of higher rank, which means
3 they're more thermally mature. They're a little more prone
4 to be brittle and fractured, and they have a higher
5 capacity to both store and generate hydrocarbons.

6 Q. Is there an explanation as to why the wells in
7 the overpressured area have been more productive in
8 relation to the other area?

9 A. Yes.

10 Q. And what are the factors that explain that
11 difference?

12 A. Primarily due to their higher rank and higher
13 gas-generating capabilities, because they were buried
14 deeper originally. They also have much greater
15 permeability than the nonfairway coals. And I would say
16 permeability is probably the single most important factor
17 in determining their productive potential.

18 Q. Does Burlington participate with other operators
19 in the San Juan Basin that are interested in the Coal Gas
20 Pool in studying well density in the pool?

21 A. Yes, we are.

22 Q. Can you give me a general list of the kinds of
23 things that might be mapped or analyzed to determine
24 whether there is a need to separate out the fairway from
25 the balance of the pool?

1 A. Sure, there are a number of observable and
2 mappable differences in the production between fairway and
3 nonfairway gases. There are significant differences in the
4 amount of CO₂ produced, the BTU content of the gases, the
5 dry or wet indexes of the gases, the water production from
6 these wells, the initial shut-in pressures from these
7 wells, the maximum rate achieved by these wells, the EURs
8 of the wells, the gas-water production profiles, which
9 typically show an incline in gas production profile on a
10 fairway and an immediate decline or flat production on
11 nonfairway wells, and initial permeability.

12 Q. Do you participate on behalf of the geologic
13 portion of your company with a technical team of Burlington
14 to analyze the reservoir?

15 A. Yes, I'm the senior geologist on a Fruitland Coal
16 team designated to study just the Fruitland Coal.

17 Q. Do other members of the team include reservoir
18 engineers or engineers with expertise in reservoir
19 simulation?

20 A. Yes.

21 Q. And you continue to work together as a team?

22 A. Yes, we do.

23 Q. What has the team currently concluded concerning
24 the well density in what we characterize as the fairway?

25 A. Our team, as well as our company, in general

1 agrees with the NMOCD and industry-sponsored ICF and GRI
2 studies conducted between 1988 and 1991, that indicated
3 that 320-acre spacing is adequate. Those studies were
4 primarily focused on data found in the Cedar Hill Pool,
5 which is within the fairway productive area.

6 In addition, the long-term production we've seen
7 out there, along with POW wells that we have also indicate
8 to us that fairway production is adequately spaced on 320
9 acres.

10 Q. When we look at the underpressured area of the
11 pool, do you have available to you the same type of data
12 that was used to analyze and simulate performance of wells
13 in the fairway?

14 A. At this point in time, no, we do not. And that
15 is why we have proposed our pilot project, because we would
16 like to collect the same type of data that was well
17 represented in the original studies in the fairway for
18 nonfairway coals.

19 Q. Give me an example of a list of the kinds of data
20 that you would gather from your pilot wells.

21 A. Currently we do not have layered pressure data in
22 our pilot wells.

23 Q. Why is that important to you?

24 A. What we are seeing in fairway or nonfairway
25 production is that in a relative term, in a general sense,

1 we have very high recovery factors for fairway production
2 and very low recovery factors for nonfairway coals.

3 What we don't understand is that -- Are those
4 recovery factors representative of the entire amount of
5 coal encountered in a single wellbore, or are we seeing
6 anomalously high recovery factors from a single permeable
7 layer, and the rest of the layers may not be contributing
8 at all to the production.

9 Q. Within each of the five project areas, do you
10 have available data that will supply that information? Why
11 do you need the new well?

12 A. The data that we have in the pilot project areas
13 is not layer specific.

14 Q. And what will you obtain, then, with a new well
15 in each of the five pilot areas?

16 A. With a new well we will be obtaining layer-
17 specific data, we will be developing isotherms by layer and
18 layer-specific pressure data, as well as production-testing
19 data.

20 Q. Why have you and the team recommended to the
21 Division the five different areas for study on a pilot
22 basis?

23 A. We picked five areas that have a good
24 representation of the major coal seams we've been able to
25 map throughout the entire Basin. We want to stay away from

1 areas where there were -- some of the major coals were
2 absent or thinned dramatically, so that we had good
3 representation.

4 And then we -- aside from that, we additionally
5 picked areas where we had -- the coal wells in those areas
6 exhibited both high, medium and low productive
7 capabilities.

8 We were -- believe that the areas that we've
9 picked will be representative of a significant portion of
10 the nonfairway coal production areas.

11 Q. I'm not going to ask you to go through each of
12 the five areas geologically, Mr. Thibodeaux, but I would
13 like you to select one of those. Let's go to the tab that
14 is specific as to that well, and let's describe for Mr.
15 Stogner how you've organized and analyzed the geology for
16 each of the five.

17 A. Sure, we can go to Tab Number 5, which concerns
18 the Davis Number 505 well.

19 Q. All right, let's do that. Let's go behind
20 Exhibit Tab 5. You've got your nine-section area on the
21 first plat. You turn past that one, you have the nine-
22 section area in which only the coal gas wells are located,
23 all right?

24 A. Yes, sir.

25 Q. Behind that is a surface map and then a

1 tabulation of interest.

2 Then we get to your first display. It's a
3 Pictured Cliffs structure map?

4 A. Yes, sir, the first display is a Pictured Cliffs
5 structure map, showing that really structure plays a very
6 minor to insignificant role in selection of these
7 locations.

8 Q. Behind Exhibit Tab 4 is the large structure map,
9 so that if the Examiner wants to see the entire structural
10 interpretation he can look at that map?

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

12 Q. And this would be a portion of that map that is
13 specific as to the Davis well?

14 A. Yes, sir.

15 Q. All right. Have you picked any of the five
16 project wells based upon structure being a critical
17 component?

18 A. No, we haven't.

19 Q. And why not?

20 A. The nonfairway coals are basically located on
21 what is known as the Chaco slope, which is a gently dipping
22 monocline that dips upwards to the southwest. And so
23 structure plays a relatively minor, inconsequential role,
24 to our knowledge, in productive capabilities of these
25 coals.

1 Q. Let's turn past the structure map and look at the
2 green display which is the next map. What does this
3 represent?

4 A. The green display represents a net isopach map of
5 all the coals we expect to encounter in this area.

6 Q. And why is that of importance to you?

7 A. We were looking for areas that obviously did not
8 have any significant thinning coals where some of the major
9 coal layers that we've been able to identify were entirely
10 absent, so that we could relay information that we found in
11 our pilot areas to a larger portion of the Basin.

12 Q. Your geologic summary categorizes each of the
13 five project areas and shows what you conclude to be the
14 geologic differences among that population?

15 A. Yes, it does.

16 Q. Have you determined to your own satisfaction that
17 you have selected an adequate number of pilot areas in the
18 underpressure to subject to study?

19 A. Yes, sir, we believe the five pilot areas we have
20 chosen and the wells that we have chosen to drill will be
21 representative of a significant portion of the nonfairway
22 characteristics.

23 Q. Let's continue with the Davis discussion. If
24 you'll turn behind the coal thickness map and look at the
25 type log, describe for us in a summary fashion this

1 layering of the coal that you're investigating.

2 A. The type log for the Davis 505, on the right-hand
3 side you will notice that designations P2, G1, G2, et
4 cetera -- these are internal designations we've given
5 individual layers that we've been able to correlate and map
6 throughout a very significantly large portion of the entire
7 Basin, whether it be Colorado or New Mexico.

8 Q. When I look at the type log I can see that the
9 lower Coal intervals are closely associated with what
10 appears to be the top of the Pictured Cliff sandstone?

11 A. Yes, they are.

12 Q. What are you and the team doing to assure
13 yourself that your science project is not compromised by
14 having Pictured Cliff gas contributed to the production of
15 your pilot well?

16 A. The five pilot well areas that we've chosen, one
17 of the criteria for choosing these areas, besides the ones
18 mentioned earlier, that we were trying intentionally to
19 stay from high productive Pictured Cliffs areas, so as to
20 not unduly influence pressures we may obtain from our basal
21 section, in particular, from long-term Pictured Cliffs
22 production.

23 Q. Following the type log, then, you have cross-
24 sections that are applicable to giving us a cross-section
25 line in two directions through the pilot area for each of

1 the pilot wells?

2 A. Yes, sir, those cross-section lines were
3 indicated both on the structure map and on the net coal
4 map, and they represent a three-well cross-section through
5 the type log in both the strike and dip directions.

6 Primarily the purpose of these type sections,
7 these cross-sections, was to determine the individual
8 stratigraphic variations that we were seeing in that area
9 so that we could determine how many layers we should be
10 pressure testing for a potential communication.

11 Q. On the cumulative-production map that we began
12 our discussion with, there is a line of cross-section in
13 two directions on that display --

14 A. Yes, there is.

15 Q. -- do you see that?

16 Let's go to those cross-sections. If you go to
17 Exhibit Tab 4, and if you turn past the pocket parts, the
18 first cross-section is a Regional Strike Section. Do you
19 find that?

20 A. Yes, sir.

21 Q. Why is this of significance to you?

22 A. What we're showing in our Regional Strike
23 Section, which runs roughly along the fairway/nonfairway
24 boundary area, is that we have very good coal continuity of
25 the major coal intervals that we've been able to identify

1 and map throughout a 46-mile -- or plus section of rock,
2 from the northwest to the southeast.

3 What I would like to point out is, although we
4 have good coal continuity as a whole for each one of our
5 major intervals that we've been able to map, we do see
6 local discontinuities, and we do see local stratigraphic
7 relationship changes as these coals move up and down the
8 section, as they were influenced by the deposition of
9 clastics from fluvial streams that were active during coal
10 deposition time.

11 Q. How are any of your five pilot projects affected
12 by your analysis of the Regional Strike Section? Of what
13 importance is this when we look at your five pilot areas?

14 A. Of importance to us is the various relationships
15 that we see. If we would notice, briefly, on the third
16 well from the left, we see a large interval where our basal
17 coals -- and there's one called Green 3 -- are associated
18 together. In that instance we would expect those coals to
19 properly behave as a single reservoir and be in pressure
20 communication.

21 If you go to the next well to the east of that
22 location, that association has split and those coals are
23 probably not in pressure communication at that point. And
24 we see these relationships over and over again throughout
25 the entire Basin, where we see different relationships.

1 Sometimes the coals are associated closely with each other,
2 and sometimes they split to form different associations
3 with other coals.

4 Q. Will your study of the five pilot areas provide
5 you a reasonable selection of those variables so that you
6 will have a sample of the changes in order to analyze those
7 changes of coal?

8 A. Yes, they do.

9 Q. Let's look at the last cross-section, which is
10 behind the one we've just described, and you've labeled
11 that a Regional Dip Section?

12 A. Yes, I have.

13 Q. Describe for us the points of information you
14 want to have us understand about this display.

15 A. First off, just as we saw in the regional strike
16 section, we see the coals associated with other
17 differently. So we see that from both the strike and dip
18 direction.

19 Secondly, what we are noticing is that as we go
20 to the landward depositional areas, to the southwest,
21 updip, our coals are beginning to thin out as a general
22 rule, and we're being deposited on the landward side of our
23 major peak deposition areas. As we go towards the
24 northeast or towards the original paleo-shoreline of the
25 Pictured Cliffs, we start getting additional development of

1 all of our coals showing up.

2 One of the things that we are looking at testing
3 in our pilot program, as we reach the landward side of the
4 pinchout edge of some coals that may be well developed to
5 the northeast, but we have the same coal towards the
6 southwest -- once we get towards the edge these coals have
7 a tendency to be of lesser quality, I would say. They have
8 more clastics in them, they're thinner, they're less prone
9 to fracturing, less gas content in them. And so we believe
10 that there's potential that the same coals that may be
11 communicating where they're very well developed to the
12 northeast might not be communicating on 320-acre spacing as
13 we move towards the thinner edges of them, especially
14 towards the southwest.

15 Q. Do you have an opinion as to whether it's
16 necessary to subject the underpressured area to reservoir
17 simulation in order to develop opinions and conclusions
18 concerning the appropriate density of wells in the
19 underpressured area?

20 A. I believe it's critical to do the layer pressure
21 data that we anticipate to gather in our pilot wells in
22 order to properly simulate behavior in the nonfairway
23 coals.

24 Q. Do you believe traditional methods of analysis of
25 gas in place and drainage patterns and well density from a

1 geologic perspective can be done in the absence of the
2 simulation?

3 A. I believe that the traditional methods of
4 estimating drainage areas and recovery factors from coals
5 give you a good indication of the potential that these
6 coals are not effectively -- or these wells are not
7 effectively draining 320-acre spacing, but I do not believe
8 that the traditional methods give us the answer that we're
9 looking for.

10 Q. You could start with conventional analysis, do
11 volumetrics, and get a preliminary indication of what might
12 be the expectation of gas in place?

13 A. Certainly that's true.

14 Q. But to have a more refined, definitive answer as
15 to well spacing in the underpressured area, you would want
16 to subject that area to enough pilot tests for simulation
17 to give you a reliability about density?

18 A. Yes, sir, because of the layered communication
19 and permeability differences that we expect to see in these
20 coals, I believe that we have to have the layer simulation
21 in order to accurately describe what is going on currently
22 in the reservoir.

23 MR. KELLAHIN: Mr. Examiner, that concludes my
24 examination of Mr. Thibodeaux. We move the introduction of
25 his Exhibit 4, plus the geologic displays behind each of

1 the tabs referenced for the wells, which are Tabs 5 through
2 9.

3 EXAMINER STOGNER: That part of Exhibit Number 1
4 behind Tabs 4 through 9 --

5 MR. KELLAHIN: Yes, sir.

6 EXAMINER STOGNER: -- or 5?

7 MR. KELLAHIN: All of Exhibit Tab 4 --

8 EXAMINER STOGNER: All of Exhibit Tab 4 --

9 MR. KELLAHIN: -- and the geologic displays from
10 Exhibit Tab 5 through 9.

11 EXAMINER STOGNER: -- and the geologic displays
12 from 5 through 9 will be admitted into evidence at this
13 time.

14 I'm going to call a five-minute recess.

15 (Thereupon, a recess was taken at 11:38 a.m.)

16 (The following proceedings had at 11:48 a.m.)

17 EXAMINER STOGNER: This hearing will come to
18 order again.

19 I've asked Mr. Steve Hayden, the geologist from
20 the Aztec Office, to join me up front here, and he has done
21 so. As far as -- I don't really have any geological
22 questions except a few.

23 EXAMINATION

24 BY EXAMINER STOGNER:

25 Q. The areas in which you have chosen, the five

1 areas, do they have enough variety, or do they have various
2 minor differences as far as the geological makeup of the
3 coal that represents a good overall portion of the San Juan
4 Basin-Fruitland Coal production up in the New Mexico area?

5 A. Yes, sir, we believe that they do. The primary
6 difference, however, is the production. We try to
7 represent the same coals all over, but however they're each
8 one in a -- possibly a different depositional setting or
9 different group associations or some of them have more
10 propensity to be splitting or thinning. But from obvious
11 production characteristics, we've picked areas that have
12 both low, high and medium production.

13 So we believe that we've represented the majority
14 of the Basin well by these five locations.

15 Q. Okay, the preparation of the cumulative
16 production from 2000, most recent available data, the well
17 spots on this particular map, is that just the Burlington
18 wells?

19 A. No, sir, that is cumulative production from all
20 wells in the state database.

21 Q. Okay, and the well spots themselves are all
22 existing Fruitland Coal wells?

23 A. Yes, sir, they are.

24 Q. Okay, when I look toward the -- in fact, the
25 extreme southwest, the colorful little area there in 26

1 North, 14 West, and 26 North, 13 West --

2 A. Yes, sir.

3 Q. -- I only see one well spot.

4 A. Yes, sir.

5 Q. Okay, and I don't see a well spot in the high
6 cumulative area.

7 A. That's a computer algorithm. You know, these are
8 computer-generated contours, and so we have one high-
9 producing well. And what it is, it was interpreted that
10 since we have low production to the east and there's one
11 high well, we must have even higher contour production to
12 the west of that location. It's a computer algorithm.

13 Q. Okay, so that's the same explanation if I move
14 over to the east, a few miles over in 9 West, 8 West, there
15 seems to be another anomaly show up that has just a few
16 wells in it.

17 A. Yes, sir.

18 Q. One of the things that sort of stands out when I
19 take a look at this map, the northern portion, the stuff up
20 in Colorado, what kind of deposition is that? It appears,
21 first glance, that something's gone on a little bit
22 different than to the south end of this fairway area.

23 A. As a general rule, Mr. Stogner, the northeastern
24 edge of the high fairway area that we can see in the very
25 bright colors on our map, we start getting pinchouts of our

1 basal sections and some of our middle sections. On our
2 type logs that would be the browns -- the B1's, -2's and
3 -3's -- and the greens.

4 Most of the coals that live up in Colorado are
5 starting to be coals, some of them over -- are younger or
6 on top of even the blue coals that we mentioned in our type
7 logs. And so we have a whole different coal system
8 beginning to form up there.

9 As these coals -- Actually, I have an easier way
10 to explain that to you, I believe.

11 EXAMINER STOGNER: Okay, Mr. Kellahin, do you
12 want to explain to me this bigger cartoon?

13 THE WITNESS: You betcha. This is a diagrammatic
14 sketch of the kind of coals that we've been able to map
15 throughout the Basin. The nine coals I've been referring
16 to so far in my testimony have been from the blue on down
17 to the Brown 3, right above the Pictured Cliffs.

18 This is a schematic cross-section that would go
19 and cross the entire Basin. You can see the New Mexico-
20 Colorado border on there. And if you notice, as we go into
21 Colorado, we're starting to lose out on the Brown 1, 2 and
22 3; the Green 1, 2 and 3; and even the P1 and the P2 coals,
23 and we're starting to have dominant coals only in the blue,
24 the yellow and the little O up there, which stands for
25 Orange.

1 Q. (By Examiner Stogner) That does not come across
2 into New Mexico?

3 A. No, sir, it does not.

4 Q. I take that's a highly productive -- the orange
5 is a highly productive interval?

6 A. All of these coals were formed in very similar
7 depositional environments, and those coals were also buried
8 deeper than the nonfairway coals to the west, so I'd expect
9 their rank to be very similar and their productivity
10 potential to be very similar.

11 Q. What kind of depth difference am I looking at
12 between the Orange zone up in the northeast and the gray or
13 the Brown zones, the BR2, the BR3, that's found in the
14 southwest?

15 A. Is this present-day depth or maximum depth of
16 burial?

17 Q. How about both? Give me both.

18 A. Present-day depths are almost identical.
19 Present-day depth is controlled by current structure of the
20 Basin, and so it depends on how far we are towards the very
21 center of the Basin or not.

22 The entire interval, from Orange to Brown 3, is
23 rarely over 350 feet thick. And so that whole interval,
24 these coals, depending on where they're found, are found
25 within that 350-foot interval that is controlled by current

1 Basin day structure.

2 Maximum-depth-of-burialwise, the Brown 3 coals
3 were probably never buried quite as deep as the coals --
4 the O coals, for instance, the orange coals in the
5 northeast, because that part of the Basin was buried deeper
6 than the southwest part of the Basin originally.

7 EXAMINER STOGNER: Okay. Mr. Kellahin, how shall
8 we label that, or should I put this in the book?

9 MR. KELLAHIN: Let's put it in the book behind
10 Exhibit Tab Number 4, and we'll simply refer to it as the
11 Schematic Cross Section, San Juan Basin.

12 EXAMINER STOGNER: This inclusion of the
13 schematic to the northeast-southwest of the San Juan Basin
14 will be included in Tab 4 and is hereby accepted as a part
15 of the evidence.

16 Let's see, I believe Mr. Jim Bruce has a
17 question. Where did you go, Mr. Bruce?

18 MR. BRUCE: Back --

19 EXAMINER STOGNER: You're behind the map curtain
20 there, I see.

21 MR. BRUCE: Heard but not seen.

22 EXAMINATION

23 BY MR. BRUCE:

24 Q. Mr. Thibodeaux, if this is more appropriate for
25 the engineer let me know.

1 A. Okay.

2 Q. Why don't you turn to Tab 6, the first page, Tab
3 5 and Tab 6, the first page of each. Behind Tab 6, the two
4 wells, the existing one and your infill well, are about a
5 half a mile apart?

6 A. Yes, sir.

7 Q. If you go to Tab 5, they're pretty close
8 together. Is there a reason for that?

9 A. Yes, sir, actually there's a couple of good
10 reasons for that.

11 First of all, the 505S, we picked a location --
12 we had an abandoned existing location that was never used.
13 And trying to comply with BLM surface-disturbance rules, we
14 thought it was best to try to figure a location that would
15 have readily approved by the BLM regulatory body by using
16 existing surface disturbance.

17 Secondly, one of the questions that we have about
18 the permeability of these coals is that we do not currently
19 know how far of an interference they have, whether it's
20 permeable or impermeable.

21 These two wells happen to be 995 feet apart, so
22 right now we don't know for both the permeable and
23 impermeable zones that we're seeing in these layers, are
24 they communicating on 900 feet, 500 feet, 1000 feet, 2000
25 feet?

1 We thought this would provide an excellent data
2 point for us to start measuring and comparing if we saw
3 communication 995 feet apart here and not 2000 feet apart
4 on some of our other pilot wells, we could use that
5 information to best determine just what is the extent of
6 communication on these wells.

7 MR. BRUCE: Thank you.

8 EXAMINER STOGNER: Any other questions, Mr.
9 Bruce?

10 MR. BRUCE: No, sir.

11 EXAMINER STOGNER: Mr. Carr?

12 MR. CARR: No questions.

13 EXAMINER STOGNER: Okay, we don't have any
14 further questions at this time, but we may ask Mr.
15 Thibodeaux to resurface if we have some after your next
16 witness's presentation.

17 MR. KELLAHIN: Our last witness is Mr. Leonard
18 Biemer. Mr. Biemer is a reservoir engineer with
19 Burlington. He spells his last name B-i-e-m-e-r.

20 EXAMINER STOGNER: Why is his book thicker than
21 mine?

22 MR. KELLAHIN: He's anticipating all your
23 questions, Mr. Stogner, and he wants to have the right
24 answer.

25 EXAMINER STOGNER: Okay, thank you.

1 LEONARD J. BIEMER, JR.,

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

4 DIRECT EXAMINATION

5 BY MR. KELLAHIN:

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

8 A. My name is Leonard Biemer. I'm a senior staff
9 reservoir engineer.

10 Q. And where do you reside, sir?

11 A. In Farmington, New Mexico.

12 Q. Are you the senior staff reservoir engineer
13 assigned by Burlington to the coal gas team?

14 A. Yes, sir, I am.

15 Q. You and Mr. Thibodeaux worked together on the
16 preparation of the presentation today?

17 A. Yes, sir, we did.

18 Q. Let's focus on Tab 10. When we look at Tab 10,
19 the engineering summary that's been prepared here was
20 prepared by you?

21 A. Yes, sir.

22 Q. And the information and display shown behind
23 Exhibit Tab 10 is your work product?

24 A. Yes, sir.

25 Q. Are you in agreement with Mr. Thibodeaux about

1 the selection of these five project-area wells?

2 A. Yes, sir, I am.

3 MR. KELLAHIN: We tender Mr. Biemer as an expert
4 reservoir engineer.

5 EXAMINER STOGNER: Mr. Biemer is so qualified.

6 Q. (By Mr. Kellahin) I'd like to start, Mr. Biemer,
7 with your executive summary. If you'll look at the first
8 page of 10, I would like you to go down and summarize for
9 Mr. Stogner the information that you and Mr. Thibodeaux are
10 trying to obtain from each of the pilot wells. Describe
11 for us what you're going to do and what you think you're
12 going to get.

13 A. In each of the five areas we plan to drill a
14 well, and as we're drilling a well, in each zone we're
15 going to pull some cuttings, and those cuttings will be
16 used for adsorption isotherms.

17 We're then going to run a RHOB density log, and
18 with that information -- and we'll be able to use the
19 Langmuir volumes to determine Langmuir volumes and both
20 densities. So that's the first step.

21 The second step will be to perforate and break
22 down each zone and to establish some communication with the
23 coal. We'll then set a bridge plug and run pressure
24 isolations into each layer of the geology.

25 So what we have is, we have five areas there.

1 And in the Davis, which is in the northwest, we'll have six
2 pressure bombs there. And the three in the center, which
3 are the Turner, the 28-and-6 and the Huerfano, we'll run
4 four pressure bombs. And in the fifth one, which is into
5 the far southeast, we'll have five pressure bombs in that
6 one. That is to test each of those coal zones.

7 Next, once we -- We'll run those pressure bombs
8 for approximately 14 days to get a pressure buildup by
9 layer. Next we'll go ahead and fracture-stimulate the well
10 consistent with the way the offset wells were stimulated.
11 We'll produce that well for 90 days and then run a spinner
12 survey. Those spinner surveys will be -- we'll get the
13 pressure contribution by layer in each of those zones.

14 We'll then continue to produce that well for
15 another 90 days, and then at the end of 180 days we'll
16 re-run that spinner survey to confirm the production by
17 zone.

18 Q. At that point you're prepared to shut in the well
19 and either seek additional approvals to produce two wells
20 on the spacing unit or arrange to go back and produce just
21 the one?

22 A. Yes, sir, that is correct.

23 Q. Once you have that data gathered after the 180-
24 day test period and you've got the data, what are you going
25 to do with it?

1 A. Once we've determined our pressure by layer, our
2 gas content by layer and our production by layer, we'll be
3 able to put this information into a simulator, and with
4 that simulator we will build -- history match the
5 production from that pilot well. That will be the first
6 step.

7 Once we match the history production from that
8 pilot well, we'll be using those same reservoir parameters
9 into the four offset wells and match the history production
10 from those wells.

11 Q. Once you've done that, then what happens?

12 A. Once we've done that, we'll be able to -- Now
13 we'll have an idea of the reservoir parameters in the three
14 -- in the different areas. And from that we'll be able to
15 determine the well density.

16 Q. Mr. Thibodeaux indicated that you and he had
17 studied on a volumetric basis in order to get a preliminary
18 indication of what might be the potential for the gas in
19 place in each of the five pilot areas. Did you, in fact,
20 do that?

21 A. Yes, sir.

22 Q. And that you could compare it with current
23 production to get a sense as to whether or not there was a
24 range of gas in place that you need to investigate further,
25 right?

1 A. That's correct.

2 Q. In your opinion, can you rely simply on
3 conventional volumetrics in order to determine well spacing
4 for the pool in the underproduced area -- I mean the
5 underpressured area?

6 A. That is precisely the point why we want to do
7 this test. If we had just simply two coal zones and we
8 made our volumetric estimation on that and that gave us a
9 certain value, when we go back and then do our tests and we
10 determine that one of those zones has very low permeability
11 and thus is not producing, then our volumetric number will
12 change, our volumetric numbers will go down, which causes
13 our recovery factor, based on our decline-curve analysis,
14 to go up. That's why it is so important to get, by layer,
15 production and contribution to the volumetrics.

16 Q. And once you have that data, then, you can
17 reservoir-simulate the performance of each of the layers
18 and help you determine well density and gas in place?

19 A. Yes, sir, that is correct.

20 Q. Let's turn behind your summary and let's look at
21 the first display so that Mr. Stogner can have a sense of
22 the ranges of rates being produced in each of the five
23 areas. You've called it a production summary. Do you see
24 that?

25 A. Yes, sir, that's the fourth page behind Tab 10.

1 Q. All right, review that for us.

2 A. What this is showing is the five wells, with the
3 averages -- average initial rate for the four offsetting
4 wells, the current rate for those four offset wells and the
5 average cum production. What this shows you on the far
6 right-hand column, as in the Davis 505S and the Turner
7 210S, those wells have very low cums. The 28-and-5 and the
8 28-and-6 have better cums, and of course the Huerfano has
9 the greatest cum. Those are telling us that there's some
10 different production out there, and they're different
11 areas.

12 Q. Okay, let's turn to the next display where you've
13 tabulated the recovery factor summary. Describe for us
14 what you're showing here.

15 A. The recovery factor -- These wells in the
16 underpressured area have a conventional decline. With that
17 conventional decline we can use rate-time analysis to
18 determine the EUR. Using the volumetrics of what we think
19 are the contributing h and vol- -- we can determine the gas
20 in place, by dividing the EUR by the gas in place, so we
21 can get a recovery factor. This is one of our initial
22 items that tells us that there's something wrong, that
23 we're getting very low recovery factors out there, and that
24 we may need some additional wells in that area to drain the
25 reservoir.

1 Q. With reservoir simulation, Mr. Biemer, you would
2 be provided a more accurate engineering opportunity to
3 determine whether you gas-in-place numbers calculated
4 volumetrically were grossly in error or, if in fact, you
5 did need to increase the well density in that area?

6 A. That is the main point of our study.

7 Q. Okay, let's turn to each of the displays that
8 refer to each of the five pilot areas, and let's start
9 first with the Davis 505S. What have you shown on this
10 nine-section plat?

11 A. On this nine-section plat I will show with a
12 little blue triangle -- that's a Fruitland coal well -- the
13 well name. The second thing is the operator. The third
14 item down is the initial rate of that well, the first
15 ninety-day average rate. The third [sic] item is its
16 current rate over the past ninety days. And the fifth item
17 will be the cumulative production to date.

18 EXAMINER STOGNER: Okay, hold it. Back up a
19 little bit. The first item is the well, second item is the
20 operator, the third item is the well in which it was
21 completed --

22 THE WITNESS: -- the third item is the --

23 EXAMINER STOGNER: -- the year --

24 THE WITNESS: -- year it was completed, I'm
25 sorry.

1 EXAMINER STOGNER: Now, what about the fourth
2 one?

3 THE WITNESS: The fourth one is the average
4 initial rate, the fifth one is the average current rate,
5 and the sixth one is the cumulative production to date.

6 EXAMINER STOGNER: Okay, and you have that in the
7 legend in the far --

8 THE WITNESS: Yes, sir, I do.

9 EXAMINER STOGNER: Okay. Thank you.

10 THE WITNESS: And now this will be the same for
11 all five wells, this production data.

12 Q. (By Mr. Kellahin) Before we leave the Davis
13 505S, once you get that well drilled and tested, then that
14 gives you that data point. And if you decide to simulate
15 this nine-section area, you would then integrate the data
16 you had from each of these existing wells, you would start
17 with the project well --

18 A. Right, we --

19 Q. -- and work out from there, adding data and
20 refining your model?

21 A. Yes, sir. We will history match the production.

22 Q. Behind that tab, then, you have your calculations
23 on the volumetric recovery factor for that well?

24 A. Yes, sir, I do.

25 Q. And that is simply the details that demonstrate

1 what you chose for values. They were then summarized on
2 the prior display?

3 A. Yes, sir, it is.

4 Q. All right. And you've done that in all instances
5 for each of the five pilot wells?

6 A. Yes, sir, I have.

7 Q. All right. Let's turn to Tab 11 and have you
8 describe for Mr. Stogner your anticipated time lines for
9 the science project.

10 A. Behind Tab 11 you see the time line that we
11 developed on the team. Some of those were internal time
12 lines. May 17th is currently where we are. We're here to
13 get approval to drill the pilot wells. We're going to try
14 to get full approval and the rig ready by July 1st. We'll
15 have the wells drilled by September, a simulation done by
16 the end of January of next year, conclusions by February,
17 and back to present it to you in March of next year.

18 Now, this is a fairly aggressive time line.

19 Q. Was this time line discussed with the Basin-
20 Fruitland Coal Gas study group that is being sponsored by
21 the Division's Aztec office?

22 A. Yes, sir, and --

23 Q. This time line was shared with that work group,
24 was it not?

25 A. Yes, sir.

1 Q. And the consensus among that group is, they
2 wanted an aggressive time line and hopefully we could meet
3 their expectations of completing the project within this
4 time frame?

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

6 Q. The plan is to take the conclusions and the
7 summary back to the work-study group for further discussion
8 by that group and trying to form a consensus about what to
9 do?

10 A. Yes, sir, that is correct.

11 MR. KELLAHIN: That concludes my examination of
12 Mr. Biemer. We move the introduction of his exhibits
13 behind Exhibit Tab 10 and 11.

14 EXAMINER STOGNER: Those exhibits behind Tab 10
15 and 11 will be presented in evidence. And make a note that
16 12 and 13 are blank, I assume?

17 MR. KELLAHIN: Yes, sir, we didn't need to use
18 those, but they were in the book.

19 EXAMINER STOGNER: Okay, so we don't need to
20 admit the blank stuff on 12 and 13.

21 Mr. Bruce, any questions of this witness?

22 MR. BRUCE: Yeah, just one.

23 EXAMINATION

24 BY MR. BRUCE:

25 Q. When you do your modeling, you say you're going

1 to test the individual hole stringers, is that right, to
2 see if they produce in the pilot well?

3 A. Yes, sir, we will be collecting the layer
4 pressures and adsorption values from each layer, as well as
5 production from each layer through our spinner survey.

6 Q. Okay. Now, when you're doing your modeling, if
7 you determine that it's not producing from, say, one of the
8 coal seams, will your model assume that it doesn't produce
9 in the four offsetting wells also?

10 A. Yes, sir.

11 Q. Could that have the effect of underestimating the
12 reserves?

13 A. Well, sir, if it's not producing then we wouldn't
14 be underestimating them. And if we find a zone is not
15 productive, then we could not include it into our
16 volumetrics, and in that way it would not be underestimated
17 at all. And the reverse would be, had we included it, we
18 would have overestimated our reserves -- or our gas in
19 place.

20 MR. BRUCE: That's all I have, Mr. Examiner.

21 EXAMINER STOGNER: Thank you, Mr. Bruce.

22 Mr. Carr?

23 MR. CARR: No questions.

24 MR. HAYDEN: I have one.

25 EXAMINER STOGNER: Steve Hayden has a question

1 for you.

2 EXAMINATION

3 BY MR. HAYDEN:

4 Q. I received the time line last week. I wasn't
5 aware that the committee had received it, the Fruitland
6 Coal committee.

7 A. I think that was given -- that time line was
8 given out to the working interest owners and to our meeting
9 at the BLM.

10 Q. Okay, it hasn't been presented to the Fruitland
11 technical study committee yet, as far as I'm aware.

12 A. That may be correct.

13 Q. Okay, I just wanted to --

14 A. I know the working interest owners have it, and
15 the BLM.

16 EXAMINATION

17 BY EXAMINER STOGNER:

18 Q. I'm looking at the Davis 505 Fruitland Infill
19 Pilot Study map. This is a good representation.

20 How will the way that the well was completed and
21 stimulated, if any -- those wells, as you go out with your
22 model, how is that going to affect any of your model
23 techniques? Or is it, the way the well was completed?

24 A. We're going to complete the infill wells similar
25 to the way the offsets were completed.

1 Q. Okay, that was probably the way I should have
2 worded my question, is that the similar completion
3 techniques --

4 A. Yes, sir, we don't want to throw an additional
5 unknown into it. But these wells will be completed in a
6 similar manner that --

7 Q. And it looks like they were completed at about a
8 similar time, in the late 1980s, early 1990s.

9 A. Yes, sir, I can tell you exactly when each one
10 was completed and when they were first delivered.

11 Q. Well, it's all on here, but at that time -- Well,
12 wasn't early on, when the Fruitland Coal was producing and
13 completed, wasn't there some completion problems found with
14 open-hole completions, and then later came back to the
15 perforations?

16 A. The wells in the underpressured area, in general,
17 have always been cased and frac'd. Only the wells in the
18 overpressured area, the fairway coals in that yellow, were
19 the ones that were open-hole completed. But in this area
20 they were normally cased and frac'd.

21 Q. Okay.

22 A. There may be a few exceptions throughout the
23 Basin, but...

24 EXAMINER STOGNER: Okay. Any other questions of
25 this witness?

1 MR. KELLAHIN: Point of clarification, Steve. My
2 understanding is, this actual piece of paper hasn't been
3 distributed to the work group, but there was verbal
4 discussions with the group about an aggressive time line --

5 MR. HAYDEN: Right.

6 MR. KELLAHIN: -- and this is our best effort to
7 get there.

8 MR. HAYDEN: This is true. I just wanted to
9 clarify that.

10 MR. KELLAHIN: Yeah, they didn't give this actual
11 piece of paper, but an aggressive schedule was discussed,
12 is my understanding?

13 MR. HAYDEN: Right.

14 MR. KELLAHIN: That completes our presentation,
15 Mr. Stogner. If it will help you, I'm more than happy to
16 prepare you a draft order.

17 EXAMINER STOGNER: Yes, I will not turn that
18 down. It may be -- I don't know at this point --
19 applicable for us to stay in touch on this matter, maybe
20 through verbal or written communications. After next week
21 I might not have the leeway at that point to pick and
22 choose topics that I need to work on or put one above the
23 other. So that might need some written communications from
24 you to my supervisor, putting this on a fast track. I may
25 not have control of it for Monday.

1 MR. KELLAHIN: Thank you.

2 EXAMINER STOGNER: Okay.

3 MR. KELLAHIN: In addition, Mr. Stogner, we will
4 get ahold of Mr. Chavez about the imaging project and give
5 him the data that will help him fulfill that expectation.

6 EXAMINER STOGNER: And this is a whole -- I
7 consider a whole separate effort --

8 MR. KELLAHIN: It's a different topic.

9 EXAMINER STOGNER: -- but this is, I think, a
10 good representation of what a pool rule, a study, and since
11 everybody's up there together --

12 MR. KELLAHIN: I believe there's statements of --
13 parties that might want to make statements, Mr. Stogner.

14 EXAMINER STOGNER: Yes, I'm getting to that
15 point. And I understand that there was somebody out of the
16 room, and we will get back to that, other than Mr. Carr and
17 Mr. Bruce, that would like to make a statement at the end.

18 Okay with that -- Okay, yes, sir. Why don't we
19 go ahead and start with you, then. Identify yourself.

20 MR. OTTENI: I'm Lee Otteni with the Bureau of
21 Land Management in Farmington, and I'd like to make a
22 statement for the record.

23 EXAMINER STOGNER: You have the floor.

24 MR. OTTENI: Thank you. As everyone knows, the
25 BLM and OCD has worked for many years in cooperation for

1 the development of the San Juan Basin, and I came here
2 today with only a few brief statements to make in support
3 of Burlington on the proposed pilot.

4 We think that it's important from the asset owner
5 that the pilot is put into place so that we can make a
6 further determination of the need for spacing, particularly
7 in light of the resource management plan that we're
8 developing now. We're working with the companies such as
9 Burlington and New Mexico Tech and trying to determine
10 reasonable, foreseeable development. We feel this is very
11 critical in that final analysis.

12 BLM is also requesting other operators to take a
13 look at infill wells under a pilot program such as
14 Burlington, and Lynn Coleman has already come before you
15 for another area in the Basin. We think that having some
16 more information north of the fairway up towards Colorado
17 would be beneficial to the BLM's final analysis as well.

18 There's some concern by the petroleum engineers
19 in the BLM office about potential drainage. However they
20 assure me that these situations can be handled through
21 existing BLM regulations, so we don't really foresee a
22 problem there.

23 Long-term, if this turns out to be as successful
24 as everyone hopes it is going to be, there is a concern
25 about how to manage the Basin on a spacing if it is more

1 than one size.

2 We feel right now that by having a single size or
3 unit would be beneficial in regards to the administrative
4 processes for both OCD and BLM as far as regulations go. I
5 think there's a possibility for increased commingling,
6 particularly with the Pictured Cliff.

7 We also feel that there's an opportunity for the
8 operators to make the economic determination on their lease
9 whether to go with the infill well or not if they have that
10 opportunity. And although I haven't looked at the
11 President's new energy policy that's coming out, I am sure
12 that with the demand of energy across this nation, that the
13 Administration's position would be to maximize development.

14 Thank you.

15 EXAMINER STOGNER: Before I get to other
16 comments, Mr. Kellahin --

17 MR. KELLAHIN: Yes, sir.

18 EXAMINER STOGNER: -- I think we may want to
19 clarify some terminology here.

20 Spacing units -- When this project goes forward,
21 spacing units, the units that a well -- the acreage that a
22 well holds will remain 320 acres. We're talking about
23 optional infills on those 320s --

24 MR. KELLAHIN: Exactly.

25 EXAMINER STOGNER: -- and not talking 320 to 160.

1 MR. KELLAHIN: It would be impossible to change
2 from 320s to 160s because of the tremendous disruption in
3 equity --

4 EXAMINER STOGNER: Right, now --

5 MR. KELLAHIN: -- so we're talking about infill
6 drilling a 320.

7 EXAMINER STOGNER: I wanted to clarify that,
8 because usually -- and I know we're -- We're all in here,
9 we know that. But if somebody was to read the transcript
10 that wasn't aware of this, and they see -- they may
11 interpret it as reducing spacing. That's not what we're
12 talking about. It's the optional infill well, keep it on
13 320, just like the Basin Dakota, with an optional infill
14 well either throughout the pool in New Mexico, with the
15 exception of the fairway or whatever comes out. That's the
16 ultimate.

17 I just wanted to clarify that. I think it was
18 important, so if somebody comes in later that don't know
19 what we're talking about, we'll get that straight. You
20 brought up some very good points, and I appreciate it, sir.
21 Thank you very much.

22 MR. HAYDEN: I might add just a little -- one
23 addition to what you were saying about infill in the north.
24 Williams early on expressed an interest to doing an infill
25 pilot in the Rosa Unit, and these plans were progressing

1 until the Forest Service came up with their new 120-day
2 extra delay on APDs, which means that Williams couldn't do
3 it until next year, because of the closure of the forest
4 after November 1st. So that's why there -- at this point,
5 that there's no pilot project going on in the northeast
6 part of the Basin. Just put it in the record.

7 EXAMINER STOGNER: Thank you, Mr. Hayden, that's
8 good information, actually.

9 Okay, Mr. Jim Bruce, Mr. Bill Carr, who wants to
10 go first?

11 MR. BRUCE: Mr. Examiner, I'm here on behalf of
12 Cross Timbers Oil Company. Cross Timbers supports
13 increased density in the Fruitland Coal formation in the
14 underpressured area of the San Juan Basin. Cross Timbers,
15 through its own gas-in-place analysis, believes that the
16 coals are not being sufficiently drained with one well per
17 spacing unit, and it believes that a second well in each
18 unit is warranted.

19 Cross Timbers supports the gathering of the pilot
20 project data if the Division views it as necessary to
21 change the current spacing rules expeditiously. As I said,
22 Cross Timbers supports a rule change, and Burlington's
23 proposed time frame to acquire and present this data by the
24 second quarter of 2002 is acceptable to Cross Timbers.

25 Thank you.

1 EXAMINER STOGNER: Mr. Bruce -- I mean Mr. Carr,
2 sorry.

3 MR. CARR: Mr. Catan- -- I mean Mr. Stogner.
4 (Laughter)

5 EXAMINER STOGNER: Okay, thank you very much,
6 appreciate that. Anything further?

7 MR. CARR: I'd like to make a brief statement for
8 Williams Production Company and BP Amoco Production
9 Company, and I want it understood we recognize what we're
10 here for today is to review an Application for a pilot
11 project. We believe that we are on our way to rules which
12 will result in a greater density in terms of the
13 development of the Basin-Fruitland Coal Gas Pool, and we
14 think it is important at this time that we move down this
15 path as quickly and as expeditiously as possible.

16 There area two areas. Both of these are matters
17 which I believe will be reviewed with the work-study group,
18 but I'd like to clarify where we stand two matters.

19 First, as to the timing. We certainly don't
20 oppose the pilot project or the effort to collect data. We
21 believe, however, that the data on the Basin-Fruitland Coal
22 Pool today supports going to a greater density, would
23 support infill drilling. In the underpressured area, we
24 have areas where wells are producing as little as 10
25 percent of the gas in place, and we believe in these areas

1 today we're in a position where we should be able to move
2 to an infill development program in, certainly, large
3 portions of this pool.

4 As to the fairway, if in the rules we define a
5 fairway, we think it should be with one line, with no
6 transition or buffer zone. We believe we can draw that
7 line, if we decide it needs to be drawn, well enough that
8 we wouldn't have to get into these multiple zones within
9 the reservoir.

10 And if we do carve out a fairway, we think it is
11 critical that the rules allow for infill development within
12 the fairway, because we believe the data shows there are
13 substantial variations within that fairway, and there need
14 to be procedures that certainly would not preclude infill
15 development in that part of the reservoir.

16 Now, these are questions that need to be taken up
17 with the work group, and while the pilot project is going
18 forward these are the kinds of issues that we think have to
19 be quickly addressed, because we are hoping that we will
20 have a work-study group coming forward with some
21 comprehensive rules in a very short time frame.

22 Thank you.

23 EXAMINER STOGNER: Mr. Carr, thank you for
24 bringing up that point. I think it's good -- I'll tell you
25 what, my congratulations to everybody working with that

1 committee doing this. I think this can be used as a model.
2 I certainly wish some of the operators in southeast New
3 Mexico, in certain pools, have certain items that are --
4 anyway, get together and work such as this, and your
5 statements today and everybody's statements and this whole
6 case keeping us here in Santa Fe informed of what we're
7 looking at, what you guys are questions.

8 My congratulations to everybody. And with Mr.
9 Kellahin's help, I will work very hard on keeping you on
10 this schedule. And again, my congratulations on your work
11 up there. I wish I would have been of it, but work just
12 will not allow. Again, thank you very much.

13 Is there anything further from anybody in this
14 matter today? Anything further, Mr. Kellahin, that you
15 have?

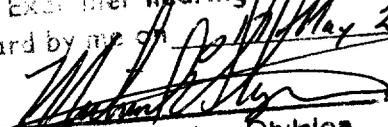
16 MR. KELLAHIN: No, sir.

17 EXAMINER STOGNER: Okay, with that then I'm ready
18 to take this matter under advisement, and Mr. Biemer can
19 take his big book and go home.

20 (Thereupon, these proceedings were concluded at
21 12:30 p.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. 12651,
heard by me on May 2007.


Examiner
Oil Conservation Division

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

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 23rd, 2001.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 14, 2002