

STATE OF NEW MEXICO OIL CONSERVATION DIV.

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
99 NOV 2 11 4:00

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY)
THE OIL CONSERVATION DIVISION FOR THE)
PURPOSE OF CONSIDERING:)
APPLICATION OF BURLINGTON RESOURCES)
OIL AND GAS COMPANY FOR AN UNORTHODOX)
GAS WELL LOCATION AND A NONSTANDARD GAS)
PRORATION UNIT, SAN JUAN COUNTY,)
NEW MEXICO)

CASE NO. 12,253

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

October 7th, 1999

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, October 7th, 1999, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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October 7th, 1999
 Examiner Hearing
 CASE NO. 12,253

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Additional submission by BLM, not offered or admitted:

identified

Letter dated October 6, 1999, from
Stephen A. Jordan, BLM, to NMOCD

57

* * *

A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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By: W. THOMAS KELLAHIN

ALSO PRESENT:

RICHARD E. WYMER
Geologist, NM State Office
Bureau of Land Management
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Santa Fe, NM 87505

* * *

1 WHEREUPON, the following proceedings were had at
2 8:42 a.m.:

3 EXAMINER STOGNER: At this time I will call Case
4 Number 12,253.

5 MR. CARROLL: Application of Burlington Resources
6 Oil and Gas Company for an unorthodox gas well location and
7 a nonstandard gas proration unit, San Juan County, New
8 Mexico.

9 EXAMINER STOGNER: At this time I'll call for
10 appearances.

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

15 EXAMINER STOGNER: Any other appearances?

16 MR. WYMER: I'm Richard Wymer representing the
17 Bureau of Land Management.

18 EXAMINER STOGNER: Mr. Wymer, are you going to be
19 testifying today?

20 MR. WYMER: No, I will not, just entering a
21 letter, I guess, into the record.

22 EXAMINER STOGNER: Okay. Are there any other
23 appearances in this matter?

24 Will the three witnesses please stand to be
25 sworn?

1 (Thereupon, the witnesses were sworn.)

2 MR. KELLAHIN: Mr. Stogner, a brief introduction
3 to what is about to be presented to you.

4 Back in the mid-1955, 1954, the prior owners to
5 Burlington came up with a program for drilling Pictured
6 Cliff wells. Part of the solution for forming spacing
7 units was to create multiple nonstandard proration units
8 consisting of 160 acres but not conforming to the patterns
9 that we are familiar with now of staying within a single
10 governmental quarter section.

11 As a result of that combination of multiple
12 nonstandard proration units, there was a 40-acre tract,
13 being the southwest of the southwest of Section 17, that
14 was never included in any of those old nonstandard
15 proration units.

16 Burlington now has determined there is additional
17 Pictured Cliff gas reserves to be produced out of this area
18 by redrilling some of these Pictured Cliff wells. They
19 have commenced that program, and after conversations with
20 the Aztec office of the Division came away with what we now
21 know was a misunderstanding about whether or not these old
22 nonstandard proration units, once the parent well was
23 plugged and abandoned, continued.

24 That was their mistake, and we're here to explain
25 that to you. They were under the assumption that the

1 original nonstandard proration units continued, and in fact
2 you and I both know they do not.

3 They've examined this issue and have asked you
4 and will ask you to reinstitute the nonstandard proration
5 unit that was originally established for the McDaniel
6 Number 1 well. In doing so, we've notified all the
7 affected parties that might otherwise share in a standard
8 spacing unit, or which would be excluded from this
9 configuration.

10 The only party that we have contacted which has
11 asserted an objection is the Bureau of Land Management.
12 They would like the 40-acre tract that has never been
13 included in any of these spacing units to now be included
14 in the spacing unit for the McDaniel 1-R well.

15 Burlington, in an accommodation to that request,
16 will ask you at the end of this presentation to amend our
17 advertisement, we will send new notifications out and ask
18 that this be re-formed in accordance with the BLM's desires
19 to have that 40-acre tract now participate.

20 I have three witnesses for you.

21 The landman that's done the research had
22 conversations with the various affected parties and can
23 explain to you how he thinks these pieces fit together.

24 I have a short geologic presentation to show you
25 what we think is the opportunity for additional production

1 out of the Pictured Cliff.

2 And finally, we have an engineering witness.

3 There's a component of this case, as you realize,
4 that has an unorthodox well location. And one option is to
5 have the unorthodox location approved. It's a topographic
6 explanation. One choice is to see if it could be
7 economically drilled to a standard bottomhole location.
8 Our evidence is that it is substantially more economic not
9 to spend extra dollars to drill directionally, so I want to
10 cover that issue with you so you have that information.
11 But principally, this is driven as a topographic location.
12 We'll show you the photographs and the displays to explain
13 why the well is proposed where it is.

14 EXAMINER STOGNER: Mr. Kellahin --

15 MR. KELLAHIN: Yes, sir.

16 EXAMINER STOGNER: -- you mentioned something
17 about a readvertisement?

18 MR. KELLAHIN: Yes, sir. I defer to you. You
19 may decide that we need to renotify people because the
20 advertisement as it's now before proposes only a 160-acre
21 nonstandard proration unit, and if we include the
22 additional 40 that the BLM now wants, it's a different size
23 and a different shape.

24 EXAMINER STOGNER: So you're suggesting formation
25 of a 200-acre --

1 MR. KELLAHIN: Yes, sir.

2 EXAMINER STOGNER: -- nonstandard proration unit
3 and an unprorated gas pool? Is that what I'm understanding
4 you to do?

5 MR. KELLAHIN: Well, I don't know how else to --
6 Yes, I guess so. I don't know what else to do.

7 EXAMINER STOGNER: All right. I just wanted to
8 make that clear.

9 MR. KELLAHIN: Yes, sir.

10 EXAMINER STOGNER: Anything else at this time?

11 MR. KELLAHIN: Call Mr. Shannon Nichols.

12 SHANNON NICHOLS,

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

15 DIRECT EXAMINATION

16 BY MR. KELLAHIN:

17 Q. Mr. Nichols, for the record would you please
18 state your name and occupation?

19 A. My name is Shannon Nichols. I'm a landman for
20 Burlington Resources.

21 Q. On prior occasions have you testified as a
22 landman before the Division, Mr. Nichols?

23 A. No, sir, I have not.

24 Q. Summarize your education.

25 A. I have a bachelor of science in business

1 administration from Central Methodist College.

2 Q. And how long have you been a landman with
3 Burlington?

4 A. I've been a landman for approximately two years.
5 And prior to that I've had eight years' experience as a
6 Division Order analyst for Burlington.

7 Q. As part of your responsibilities with regards to
8 this matter, have you and others on behalf of Burlington
9 examined the ownership that's affected in the proposed
10 spacing unit and the adjoining acreage?

11 A. Yes, sir, we have.

12 Q. To the best of your knowledge, have you made an
13 accurate search of that information?

14 A. Yes, sir, we have.

15 Q. Has it been your responsibility to contact the
16 various parties that might be affected by approval of this
17 Application?

18 A. Yes, sir, it has.

19 Q. In addition, have you and others examined the
20 surface use for a potential replacement well for the
21 McDaniel well?

22 A. We have.

23 Q. You have actually been on the surface of this
24 area?

25 A. I have actually been on the surface, yes, sir.

1 MR. KELLAHIN: Okay. We tender Mr. Nichols as an
2 expert landman.

3 EXAMINER STOGNER: Mr. Nichols is so qualified.

4 Q. (By Mr. Kellahin) Mr. Nichols, to aid the
5 Examiner in understanding the current issue, I'm going to
6 ask you to turn behind Exhibit Tab Number 1, and if you'll
7 turn to the third page, there's a plat. Do you find that,
8 sir?

9 A. Yes, sir.

10 Q. And if you'll -- It may be helpful for you also
11 to look behind Exhibit Tab Number 2, and there's a
12 composite plat. Do you see that?

13 A. Yes, sir, I do.

14 Q. All right. Was the composite plat prepared by
15 you based upon information that you have researched and
16 believe to be accurate?

17 A. Yes, it was.

18 Q. Okay. Let's start, then, with the first plat
19 I've referred to. When we look at the four 40-acre tracts
20 that are shaded, what does that represent, Mr. Nichols?

21 A. The four shaded tracts represent the proposed
22 proration unit for the McDaniel 1-R well.

23 Q. Is this the same proration unit that was
24 originally established for the McDaniel 1 well?

25 A. Yes.

1 Q. As part of your research have you determined that
2 back in the mid-1950s there was a solution for acreage
3 dedication that involved multiple approvals of multiple
4 nonstandard proration units?

5 A. Yes, that is what we found.

6 Q. And that is what's described on Exhibit Number 2?

7 A. That is correct.

8 Q. All right, let's start with the first plat, then,
9 and talk about the notice requirements that the Division
10 has for approving a nonstandard proration unit. Okay?

11 A. Okay.

12 Q. Let's start with the southwest quarter of 17, all
13 right?

14 A. Okay.

15 Q. That southwest quarter is currently available as
16 a standard spacing unit for a new PC well, is it not?

17 A. It is available, yes, sir.

18 Q. All right. And that is information different
19 from what you had understood to be the situation after
20 discussion with the District Office in Aztec?

21 A. That is correct.

22 Q. The Division rules require you to notify the
23 parties affected if they're not to be included in the
24 spacing unit; is that not true?

25 A. That is correct.

1 Q. So let's look at 17. In the north half of the
2 southwest quarter of 17, who are the affected parties that
3 would be excluded?

4 A. The affected parties, looking at the plat that
5 you're referring to, are Redfern Enterprises, Herd
6 Partners, Roderick Markham, Manon McMullen, and Christmann
7 Mineral Company.

8 Q. Have you notified all those parties or persons of
9 Burlington's desire to reinstate the old nonstandard
10 proration unit?

11 A. I have.

12 Q. Have you had actual conversations with some of
13 those individuals?

14 A. I have had conversations with Mr. Roderick
15 Markham, personally explaining to him exactly what we're
16 doing and what is driving -- the driving circumstances
17 behind our proposal.

18 Q. All right. Has any of those interest owners in
19 the north half of the southwest quarter objected?

20 A. No, they have not.

21 Q. All right. When we look at the southeast of the
22 southwest, that's a 40-acre tract, and who is the interest
23 owner other than Burlington?

24 A. Other than Burlington, the only other owner in
25 that tract is the BLM, which owns the minerals. Burlington

1 owns 100 percent of the working interest under that
2 particular 40-acre tract.

3 Q. Okay. When you examine how these old nonstandard
4 proration units fit together historically, was that 40-acre
5 tract ever dedicated to one of these nonstandard proration
6 units?

7 A. As far as I can tell from my research, that
8 particular 400-acre tract had not been dedicated to a
9 Pictured Cliffs spacing unit.

10 Q. Okay. Let me turn your attention to the
11 composite plat, Exhibit 2. Let's look at Section 20. Your
12 desire is to reinstate a spacing unit that consists in part
13 of the northwest northwest of 20; is that not true?

14 A. That is correct.

15 Q. All right, let's look at Section 20. Your
16 research shows you what is the status of the northwest
17 quarter of 20?

18 A. The northwest quarter of 20 has a 120-acre
19 nonstandard proration unit dedicated to the well, the
20 Cozzens Number 4 well. The order -- The 120-acre order was
21 established under Northwest Unit Number 81.

22 Q. The Cozzens 4 well is still producing?

23 A. Yes, it is.

24 Q. So your conclusion is, you have a 120-acre
25 nonstandard unit that excludes the northwest northwest?

1 A. That is my conclusion.

2 Q. All right. Who operates that spacing unit?

3 A. That is operated by Burlington.

4 Q. Okay. The inclusion of the northwest northwest
5 into your spacing unit for the McDaniel replacement well
6 would then complete the allocation of acreage in Section 20
7 and dedicate it to some well?

8 A. Yes, sir, it would.

9 Q. Let's look at the circumstances in the southeast
10 quarter of 18. You've taken the southeast southeast of 18
11 and proposed to include it in this reinstated spacing unit,
12 correct?

13 A. That is correct.

14 Q. What happens to the balance of the acreage in the
15 southeast quarter of 18?

16 A. The southeast quarter -- The balance of the
17 southeast quarter of 18 is dedicated to the Cozzens Number
18 7 well. There was NSP Order issued -- or Order 1246,
19 establishing a 120-acre proration unit for the Cozzens 7
20 well.

21 Q. And the Cozzens 7 well is still producing?

22 A. It is.

23 Q. To the best of your knowledge, then, that is
24 still an established spacing unit?

25 A. Yes, sir, that's the best of my knowledge.

1 Q. All right. Let's look down into 19. It's a
2 little more complicated, so bear with me. A portion of
3 Section 19 forms a spacing unit dedicated to a well in Unit
4 Letter C. It's labeled the 2-R. Is that the Cozzens 2-R?

5 A. Yes, sir, that is.

6 Q. That spacing unit consists of the west half,
7 northeast; east half, northwest?

8 A. That is correct.

9 Q. Is that still an established spacing unit for a
10 producing well?

11 A. As far as I know, that is still an established
12 proration unit, yes, sir.

13 Q. So the remaining choice, then, is what happens to
14 the east half of the northeast quarter?

15 A. Correct.

16 Q. That acreage is not currently dedicated to a
17 producing well?

18 A. To my knowledge, that is not dedicated, yes, sir,
19 that's correct.

20 Q. All right. Who is the interest owner affected
21 within the east half of the northeast quarter of that
22 section?

23 A. There are two working interest owners affected.
24 In the northeast northeast, that particular 40-acre tract
25 is Burlington Resources, 100 percent. In the southeast of

1 the northeast, that particular 40-acre tract is owned by a
2 gentleman by the name of Gerry Thames, and to our knowledge
3 he owns 100 percent of the working interest in that 40-acre
4 tract.

5 Q. When we look at the Thames 40-acre tract, there's
6 also other acreage in the southeast quarter of 19 that has
7 the same shading code?

8 A. That is correct.

9 Q. Why is it shaded in that fashion?

10 A. It is shaded in that fashion to simply represent
11 that under Northwest Unit Number 39, which established a
12 159-acre -- let's see, a 159.47-acre unit, nonstandard
13 unit, dedicated to the Cassidy Number 1 well.

14 Q. The Cassidy Number 1 well is shown by the dryhole
15 symbol -- I mean, the P-and-A well symbol?

16 A. That is correct.

17 Q. So that spacing unit is not currently in effect?

18 A. To our knowledge, it is not.

19 Q. Okay. And lastly when we go over to Section 20
20 again, if you look in the northeast quarter of Section 20,
21 the west half of the northeast has a different kind of
22 color-code shading?

23 A. Yes.

24 Q. And why is that done that way?

25 A. That represented the proration unit established

1 under Northwest Unit 76, establishing a nonstandard
2 proration unit for the Cozzens Number 3 well, containing 80
3 acres.

4 Q. Okay. Let's leave the subject of notification
5 and deal with the options concerning the BLM's desire to
6 have the 40-acre tract, the southeast southwest of 17,
7 included.

8 A. Okay.

9 Q. Okay? If that's included, that 40-acre tract,
10 then, would have some share of participation in the
11 McDaniel replacement well, true?

12 A. Yes.

13 Q. Okay. Another option would be to form a standard
14 spacing unit that consists of the southwest quarter of 17,
15 true?

16 A. True.

17 Q. If that's done, then that would leave open the
18 unresolved question of what to do with the McDaniel fee
19 tract that you're proposing to dedicate, true?

20 A. True.

21 Q. In response to the BLM's conversations -- In
22 fact, you had those conversations, didn't you?

23 A. Yes, I did.

24 Q. What is Burlington's preference with regards to a
25 solution concerning acreage dedication?

1 A. Burlington's preference would be to include the
2 40-acre BLM tract into our McDaniel 1-R proration unit.

3 Q. Okay. Let's turn to the topic of where to locate
4 the replacement well. Have you knowledge about that issue,
5 Mr. Nichols?

6 A. I do.

7 Q. Let's turn to Exhibit Tab 3 and look at the first
8 colored display behind Exhibit Tab Number 3. Do you find
9 that, sir?

10 A. Yes, sir.

11 Q. Where did you obtain this color display?

12 A. That was obtained from our surveyor, Mr. Neal
13 Edwards.

14 Q. And what is shown on this display, so we can
15 understand the representation?

16 A. The large outlined area represents the proposed
17 proration units for the McDaniel 1-R. The four smaller
18 boxes within the single outline are the legal location
19 windows within the 160-acre proposed unit.

20 Q. Was Burlington able to locate a standard location
21 for the replacement well?

22 A. We were not.

23 Q. And why is that?

24 A. Due to topographical reasons.

25 Q. The proposed McDaniel replacement well is to be

1 located where?

2 A. It is to be located --

3 Q. I don't mean the footage, but why is it to be
4 located where it is?

5 A. That's the only viable location that we have in
6 the proposed unit.

7 Q. And why is that so?

8 A. Simply due to housing, terrain, irrigation, all
9 topographical matters.

10 Q. The proposed McDaniel replacement well is to be
11 located close to an existing Dakota well?

12 A. It will share the same pad as an existing Dakota
13 well, that is correct.

14 Q. Were you able to explore the possibility of using
15 the original McDaniel pad as a location?

16 A. In our research on the ground, we found that the
17 original location right around the old McDaniel 1 well is
18 habitated, irrigated -- In fact, on my review of the lands,
19 I could not even find the P-and-A marker for the old
20 McDaniel 1 well.

21 Q. Let's quickly go through the photographs that are
22 contained behind Exhibit Tab Number 4.

23 A. Okay.

24 Q. And I'm going to let you simply show us each one
25 in turn and describe for us what you're attempting to

1 illustrate.

2 A. Okay. The first picture behind Exhibit 4
3 represents a display of the proposed location for the
4 McDaniel 1-R. The area outlined in orange represents the
5 outer boundaries of the legal location window.

6 Q. Okay, the next photograph?

7 A. The next photograph, as you can see, down on the
8 left-hand part of the photograph there is an orange
9 outline. This is just an expanded view basically capturing
10 the far north half of the legal location window.

11 Up in the right portion of the picture you'll
12 find a red dot. That is the location of our proposed well.
13 As you can see, it's on the existing pad with the Dakota
14 well.

15 Q. If you go to the third photograph, describe for
16 me what you're illustrating here.

17 A. The third photograph is simply a blown up
18 portion, basically representing the central part of the
19 legal location window.

20 Q. And then the last photograph?

21 A. The last photograph is an enhanced view of the
22 southern portion of our legal location window.

23 Q. Okay. Your last display in this exhibit set, if
24 you'll unfold it, is an aerial photograph?

25 A. That's correct.

1 Q. What's the vintage of this photograph?

2 A. This vintage was taken in 1992.

3 Q. And what are you illustrating here?

4 A. Here we're simply illustrating in the outlined
5 area the proposed 160-acre proration unit for the McDaniel
6 1-R.

7 Q. Okay. In conclusion, then, Mr. Nichols, have you
8 and the individuals responsible at Burlington for finding
9 surface-use locations for wells like this satisfied
10 yourself that the only available location for the
11 replacement well is the location that you've proposed?

12 A. Yes, sir, we have.

13 MR. KELLAHIN: Mr. Stogner, that concludes my
14 examination of Mr. Nichols.

15 We move the introduction of his Exhibits 1, 2, 3
16 and 4.

17 EXAMINER STOGNER: Exhibits 1, 2, 3 and 4 will be
18 admitted into evidence at this time.

19 EXAMINATION

20 BY EXAMINER STOGNER:

21 Q. Mr. Nichols, in referring to Exhibit -- I'm
22 sorry, Tab 2, Exhibit 2, up in Section 17, if I remember in
23 your testimony, you believe that that nonstandard proration
24 unit that was approved by NWU-85 was still in existence?
25 Was that what I heard you say?

1 A. No, sir, that particular proration unit covering
2 the north half of the southwest and the south half of the
3 northwest dedicated to the Barnhart Number 1 well, to my
4 knowledge, is no longer in existence. The Barnhart 1 well
5 is P-and-A'd.

6 Q. Okay. Now, let's go down to Section 19. How
7 about the 160-acre tract that covers the west half of the
8 northeast quarter and the east half of the northwest
9 quarter? That's that Cozzens 2 and 2-R?

10 A. Yes, sir.

11 Q. Now, did I understand you to say that you believe
12 that that proration unit is still in existence?

13 A. That is my belief.

14 Q. And why is that?

15 A. The Cozzens 2-R well was drilled in 1999 as a
16 replacement well for the Cozzens 2. It is on production.

17 Q. Okay, when was the Cozzens Well Number 2 -- when
18 was it P-and-A'd?

19 MR. KELLAHIN: May I clarify something, Mr.
20 Stogner?

21 EXAMINER STOGNER: Yes.

22 MR. KELLAHIN: I've led Mr. McDaniels [sic] into
23 making a mistake. That's my fault.

24 The replacement well was approved by the District
25 under the District's assumption that that old NSP was still

1 in effect. In fact, that's not true under your
2 understanding and mine, Mr. Stogner. That replacement well
3 was drilled, but there is not now a re-established spacing
4 unit. So there's another glitch there. Do you see what
5 I'm saying?

6 EXAMINER STOGNER: Okay, in fact, that Cozzens
7 Number 2-R, wasn't that drilled in May of 1999?

8 MR. KELLAHIN: Yes, sir, and so it would have
9 been drilled, if I understand the paperwork, after the
10 Cozzens 1 had been plugged and abandoned, and then after
11 that NSP had expired because the well was plugged.

12 EXAMINER STOGNER: And that leads us up to when
13 does a proration unit or spacing unit essentially fade
14 away?

15 MR. KELLAHIN: Well, you and I both believe it
16 automatically terminates when the well is plugged and
17 abandoned.

18 EXAMINER STOGNER: That's right.

19 MR. KELLAHIN: The information Burlington got
20 from the District Office, is, Mr. Ernie Busch told them it
21 didn't expire, even if the well is plugged, because you
22 need a subsequent order terminating the prior NSP. I don't
23 believe that to be true. The started on that road under
24 that understanding, and now we need to fix these things.

25 Q. (By Examiner Stogner) Okay, let's go back up now

1 to Section 17. Why can't a standard 160-acre proration
2 unit comprising the southwest quarter of 17 just be formed
3 for this new well?

4 A. There is no reason why it could not be.

5 Q. Then let's take a look at a little bit -- Are you
6 familiar with the history of this pool? When I say "this
7 pool", Fulcher-Kutz-Pictured Cliffs; is that right?

8 A. I am not familiar with the Commission orders of
9 the hearing, no, sir, I am not.

10 Q. Okay. Well, how about the pool rules itself, or
11 the rules that --

12 A. The setback rules and things of that nature, I am
13 familiar with those rules, sir.

14 A. Okay. Under -- What rule is this pool presently
15 under?

16 A. To my knowledge, it's under Order R-565.

17 Q. (By Examiner Stogner) Okay, have you got a copy
18 of that?

19 MR. KELLAHIN: That's not right.

20 THE WITNESS: That's not right. Okay.

21 Q. (By Examiner Stogner) Have you got a copy of
22 that order?

23 A. No, sir, I do not.

24 EXAMINER STOGNER: I'll take administrative
25 notice of Order Number R-565.

1 Q. (By Examiner Stogner) Now, is this a prorated or
2 an unprorated pool?

3 A. I do not know.

4 MR. KELLAHIN: Mr. Nichols and I tried to sort
5 his out, Mr. Stogner, and it appears that this activity to
6 approve the nonstandard proration units was initiated in
7 response to prorating the Pictured Cliff -- some of the
8 Pictured Cliff pools, back in December of 1954, and that's
9 Order R-565.

10 And so these were approved to have various
11 acreage dedications, some 160 acres, some as little 80,
12 some 120s. And the Pictured Cliff pools, including the
13 Fulcher-Kutz, were prorated up until April of 1974, when
14 the pool prorationing was terminated, and that was done by
15 Order R-1670-R. The terminated, so we had a period of 20
16 years there where this was prorated gas. And then
17 afterwards, we currently have reverted back to the
18 statewide spacing rules as I understand them, 160 acres and
19 the 790 setbacks from the outer boundary and so forth.

20 So it appears to me from my research that these
21 nonstandard proration units were prepared and approved in
22 response to prorationing.

23 EXAMINER STOGNER: Well, it's my understanding
24 that this particular pool now is under the general rules;
25 is that your understanding?

1 MR. KELLAHIN: Yes, sir, that is our research and
2 our opinion.

3 EXAMINER STOGNER: So the answer to that question
4 is, it's unprorated; is that correct?

5 MR. KELLAHIN: Right, yes, sir.

6 Q. (By Examiner Stogner) Let me ask you a question
7 about the Cozzens Well Number 7. That's in Section 18 in
8 the southeast quarter. Now, there is a reference, and I
9 believe there is a -- to an NSP order, nonstandard
10 proration unit, Administrative Order 1246, that approved a
11 120-acre nonstandard proration unit; is that correct?

12 A. That is correct.

13 Q. Okay. Do you know if the C-102 on that file
14 reflects that information?

15 A. I do not know if the C-102 reflects that
16 information.

17 Q. Do you know if the payments on that production is
18 reflective of that 120-acre nonstandard proration unit?

19 A. It is, yes, sir, it is reflective of that 120-
20 acre unit.

21 Q. Okay, to clarify the record, let's go into
22 Section 19 then. The old McDaniels well Number 1, when was
23 that drilled and when was it plugged and abandoned? That
24 was the original well that held this 160-acre proration
25 unit that covered these four sections.

1 A. Yes, sir. Mr. Stogner, the completion date that
2 I have on my information is September 25th, 1941. I do not
3 have the spud date in my information.

4 Further, the well was plugged and abandoned in
5 November of 1988.

6 Q. Do you know who originally drilled it?

7 A. No, sir, I do not.

8 Q. Do you know who owned it whenever it was plugged
9 and abandoned?

10 A. At the time it was plugged and abandoned it was
11 owned by Burlington Resources or their immediate
12 predecessors in name, Meridian Oil.

13 Q. In your review of this area out here, have you
14 ran into any circumstances where one of these old
15 nonstandard proration units, either in the immediate area
16 or outlying an area out here that had one of these old
17 nonstandard proration units and the well was plugged and
18 abandoned, that it was replaced by a well that had -- or
19 was rededicated to standard spacing pursuant to the 160
20 rules?

21 A. I do not have firsthand knowledge of that
22 circumstance.

23 Q. Do you have any idea why they might have formed
24 these proration units like they did back in 1954?

25 A. From a review of our study on it, it appears that

1 the operators, the working interest owners at the time,
2 simply compiled their best 160-acre lease picture and
3 applied for the nonstandard proration units that would give
4 them the maximum benefit of the proration unit.

5 Q. Kind of confusing, isn't it?

6 A. It is confusing, yes, sir.

7 EXAMINER STOGNER: That's all the questions I
8 have of this witness at this time.

9 Are there any other questions of Mr. Nichols?

10 MR. KELLAHIN: Yes, sir, I had a follow-up
11 question.

12 FURTHER EXAMINATION

13 BY MR. KELLAHIN:

14 Q. Mr. Nichols, help me find that base lease map in
15 your exhibit book that shows the --

16 A. Mr. Kellahin, if you'll turn behind Exhibit Tab
17 5 --

18 Q. Yes, sir, that's what I'm looking for. Behind
19 Exhibit Tab 5, let's explore Mr. Stogner's question. When
20 you look at Section 20, for example, look in the northwest
21 quarter, doesn't it appear as if the solution for that 120-
22 acre NSP was to consolidate a single lease into a spacing
23 unit?

24 A. Yes, sir, that is my conclusion.

25 Q. So the McDaniel fee lease is carved out?

1 A. That is correct.

2 Q. And the entire McDaniel fee lease of these 440s
3 becomes a single NSP?

4 A. That is correct.

5 Q. It appears they were doing this to minimize
6 consolidation of leases?

7 A. It does appear in that fashion, yes, sir.

8 Q. Okay. Let's explore another choice. If we don't
9 continue with the historic solution and try to modify these
10 and establish a standard spacing unit in the southwest
11 quarter, let's assume that happens. All right? We're now
12 faced with the issue of what to do with the three remaining
13 McDaniel fee tracts. Do you see those?

14 A. Yes, sir, I do.

15 Q. We'd have to form a nonstandard 120-acre of those
16 three tracts?

17 A. Yes, sir.

18 Q. To the best of your knowledge, is there a surface
19 location for a well, either standard or unorthodox, within
20 any of those three 40s?

21 A. From my review and from the review of our field
22 personnel and our surveyor, there is not a suitable
23 location in any of those 40-acre tracts.

24 Q. So in order to recover the gas that's allocated
25 to those tracts, you'd have to drill a well and figure out

1 where to put it, and it's going to have to be outside the
2 spacing unit somewhere?

3 A. That is correct.

4 MR. KELLAHIN: Okay. No further questions, Mr.
5 Stogner.

6 EXAMINER STOGNER: I have another question.

7 FURTHER EXAMINATION

8 BY EXAMINER STOGNER:

9 Q. Mr. Nichols, were you involved in the original
10 administrative filing in this matter in June of this year?

11 A. I was aware of the filing. I did not help in the
12 preparation of the documents that were filed.

13 Q. Have you seen that application?

14 A. Yes, sir, I have.

15 Q. Okay. Now, I'm going to refer to page 3 of your
16 Exhibit Number 1, and that is the offsetting operator and
17 ownership plat.

18 A. Okay.

19 Q. Okay. Now, when I look at this, I reference the
20 number 2 just immediately the northwest -- I'm sorry, above
21 the southwest quarter of Section 17, and immediately above
22 that I see the little number 2, and indicates to me down
23 there, referencing, five separate working interests; is
24 that correct?

25 A. Sir, that is correct.

1 Q. Okay. And now those represent parties that own
2 an interest in that -- what would be the northwest quarter
3 of Section 17?

4 A. Actually, sir, the number 2, what it actually
5 represents is the ownership of the north half of the
6 southwest quarter. If you could just draw an arrow back
7 down under that line, that is the actual ownership
8 represented by number 2.

9 Q. Oh, okay. Well, how about if I go over, then, to
10 the right of that number 2 and that number 1? Does that
11 represent what's going on in the northeast quarter of 17?

12 A. That number is an accurate representation.

13 Q. Okay. And how about if I drop immediately below
14 that to that number 1? That would represent the southeast
15 quarter of Section 17?

16 A. That is a correct representation, yes, sir.

17 Q. Okay. And there's nothing representing on this,
18 other than from your testimony, as I understand, that is
19 open acreage, or does Burlington own a hundred and -- Maybe
20 I am confused then. What about the acreage in Unit Letter
21 N? That would be the southeast quarter of the southwest
22 quarter? That's that 40-acre tract that seems to be in
23 question.

24 A. That particular 40-acre tract, Burlington does
25 own 100 percent of the operating rights under that 40-acre

1 tract in the Pictured Cliffs formation.

2 Q. Okay. But this plat really doesn't indicate that
3 to me; is that right?

4 A. Well, I think it does, because the number 1
5 that's represented there, being any offset east of our
6 proposed unit, is indeed going to be owned 100 percent by
7 Burlington Resources.

8 Q. Okay...

9 MR. KELLAHIN: It may be helpful, Mr. Examiner,
10 to let us resubmit this to you. I've tried to clarify it
11 with Mr. Nichols' testimony, and it may be easier if we
12 just resubmit this and add in what he's described for you.

13 EXAMINER STOGNER: Do you have a copy, Mr.
14 Kellahin, of the original administrative application?

15 MR. KELLAHIN: I think so. It may be unstapled
16 at this point, but I think I can put it together.

17 You'll have to ignore my doodles, but here's what
18 you're looking at.

19 EXAMINER STOGNER: Yeah, that is what I'm looking
20 at. Does Mr. Nichols have a copy of that?

21 MR. KELLAHIN: No, sir, he doesn't.

22 EXAMINER STOGNER: Could you give him this one,
23 because I have my own copy of that particular document?

24 Okay, for the record, what has been handed Mr.
25 Nichols is a copy of the land ownership plat that was filed

1 by Burlington in June for this Application for just a
2 nonstandard location, never referencing some of the needed
3 information about the surrounding ownership. And this
4 represents what I normally see in my duties as reviewing
5 nonstandard proration unit applications and nonstandard
6 location applications of ownership acreage.

7 Q. (By Examiner Stogner) And when you -- Well, now
8 that you've had a chance to review it, could you point out
9 to me some differences along that northern side and the
10 southern side?

11 A. Yes, sir, I can.

12 Q. Okay.

13 A. At the time the original application was filed by
14 our regulatory group, they did not note any parties except
15 Burlington as being an offset operator or an offset working
16 interest owner. As you can see, there are 1's entirely
17 surrounding the proposed proration unit in the original
18 application.

19 The amended exhibit that is in our exhibit books,
20 what we have done there is gone in and amended the
21 numbering schematic to reflect that, indeed, there are some
22 offsetting working interest owners and operators in the
23 immediately surrounding proration -- or lands immediately
24 surrounding the proposed location.

25 Q. Okay. Can you tell by looking at that plat I

1 just gave you, that was part of the administrative
2 application, who the identifying mineral interests were in
3 the north half of the southwest quarter and the southeast
4 quarter of the southwest quarter of 17, would indicate to
5 me who owned that particular acreage?

6 A. Sir, under the original application, you would be
7 led to believe that Burlington owns those particular lands.

8 Q. Okay. Let's go back into Section 18 and go up --
9 Are you familiar with the northeast quarter of Section 18
10 and the Pictured Cliffs production there?

11 A. Yes, sir, I am.

12 Q. Okay. And would you enlighten me about that
13 acreage?

14 A. Those three wells are all on standard locations.
15 Each of those are producing 160-acre standard locations.

16 Q. Okay, how about the well that's holding that
17 northeast quarter of Section 18? What's the name of it and
18 who operates it?

19 A. The name of that particular well is going to be
20 the Cooper Number 1, and that is operated by Burlington
21 Resources.

22 Q. Now, I'm talking about the northeast quarter of
23 Section 18.

24 A. That's -- Oh, I'm sorry. That particular well,
25 sir, is going to be the Hana Number 1, and I -- to my

1 knowledge, I do not know who the operator of that is. I
2 believe that is going to be, from our map, Dugan Production
3 Company, but our maps may be out of date to that particular
4 non-Burlington interest.

5 Q. Non-Burlington interest?

6 A. The east half of the northeast quarter is not
7 going to be a Burlington-owned lease. The west half of the
8 northeast quarter is going to be a Burlington lease, as
9 represented on our maps behind Exhibit 5.

10 If you will, the number referenced up at the top
11 left center of Section 18, 020259-T, that is a Burlington
12 lease, and as you can see, it covers the southeast -- or,
13 I'm sorry, the northwest quarter of 18 and the west half of
14 the northeast quarter of 18.

15 Q. But from your plats presented today and at the
16 administrative application, who am I led to believe is the
17 operator?

18 A. That would be Burlington, sir, that's what you
19 would be led to believe.

20 Q. When in fact that well was spud on October of
21 1983, it's operated by Dugan Production Company, it is the
22 Hana Well Number 1, API number is 3004525815. It's 790
23 foot from the north line, 1520 foot from the east line.
24 That is that particular well.

25 But would I show Dugan in any of these documents?

1 A. Sir, you do not.

2 EXAMINER STOGNER: No other questions, Mr.
3 Kellahin.

4 MR. KELLAHIN: Our next witness is the geologic
5 witness, Mr. Dave Clark.

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

9 DIRECT EXAMINATION

10 BY MR. KELLAHIN:

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

13 A. David Clark, I'm a geologist with Burlington
14 Resources.

15 Q. On prior occasions, Mr. Clark, have you qualified
16 as a petroleum geologist before the Division?

17 A. Yes, sir, I have.

18 Q. And have you made a study of the Pictured Cliff
19 geology in this particular area?

20 A. Yes, sir.

21 MR. KELLAHIN: We tender Mr. Clark as an expert
22 geologist.

23 EXAMINER STOGNER: Mr. Clark is so qualified.

24 Q. (By Mr. Kellahin) Mr. Clark, give us a general
25 concept of what Burlington is seeking to accomplish with

1 these Pictured Cliff replacement wells.

2 A. We have found that the original Pictured Cliffs
3 wells in this general area, located within Fulcher-Kutz
4 field, have not adequately drained the gas reserves. We
5 have identified certain wells that -- We've identified
6 certain locations to either replace the old abandoned wells
7 or to restimulate existing wells to recover those remaining
8 gas reserves.

9 Q. Among your various geologic displays, I'd like to
10 focus in on just two of them. One, let's start behind
11 Exhibit Tab Number 7. First of all, summarize for us what
12 we're seeing here. What kind of map is it?

13 A. The map within Exhibit 7 is an isopach of the
14 Pictured Cliffs net pay. The basis of that determination
15 is number of feet of sandstone with an SP development
16 greater than 30.

17 The spacing -- The proposed spacing unit for the
18 McDaniel 1-R is shown in red. The proposed location for
19 the McDaniel 1-R is the green triangle overlying the Dakota
20 box. The Pictured Cliffs producers are indicated in the
21 legend.

22 Q. If you show it as a Pictured Cliff producer, the
23 code doesn't indicate whether it's still currently
24 producing or not?

25 A. No, you would need to refer to one of the

1 previously mentioned, previously shown maps.

2 Q. When we look at this display and look at the Unit
3 Letter A of Section 19, it has a Pictured Cliff producing
4 symbol. That is the original McDaniel 1 well?

5 A. That's correct.

6 Q. Okay. And then the replacement well is shown in
7 the far northeast corner of the proposed spacing unit?

8 A. Yes.

9 Q. In your opinion, is it geologically suitable to
10 reinstate the nonstandard proration unit using this
11 configuration?

12 A. Yes. Essentially, the trend is from values on
13 the flanks of the bar trend, the purple shade where you'll
14 see values of 20 feet of pay, to the center of the bar and
15 the McDaniel -- the original McDaniel 1 well is located
16 essentially on the central axis of the bar. The spacing
17 unit is located very favorably within the reservoir trend.

18 Q. If the Division were to deny the Application and
19 require a standard spacing unit consisting of the southwest
20 quarter of Section 17, then is there an opportunity for
21 additional Pictured Cliff gas to be recovered out of the
22 other three McDaniel 40-acre tracts that would then not be
23 dedicated to a spacing unit?

24 A. From a geologic perspective, those other 40-acre
25 locations would be suitable.

1 Q. The issue is how you access them, right?

2 A. Correct.

3 Q. When we look at the relative remaining value of
4 these four 40-acre tracts, are they reasonably comparable?

5 A. Yes, I would say so.

6 Q. Quickly, turn and identify these other exhibits.
7 We won't spend time talking about them, but you've got a --
8 You have a cross-section in the Pictured Cliff behind
9 Exhibit Tab Number 8. What are you representing there?

10 A. That's a log cross-section. Again, the mapping
11 parameter that I've selected is an SP cutoff. That seems
12 to be an effective method of mapping the Pictured Cliffs
13 pay zones. You'll see the cross-section trends from
14 essentially the west flank of the reservoir trend, through
15 the middle of the reservoir trend and off the east flank of
16 the reservoir trend, and you can see the reservoir
17 development thickening and giving, certainly, an enhanced
18 picture.

19 The line is indicated in the small index map on
20 the right-hand side of the cross-section.

21 Q. Let's turn to Exhibit 9, and let's talk about
22 this one. Exhibit 9 is what, sir?

23 A. Exhibit 9 is a contour map. The parameter being
24 contoured is Pictured Cliffs cumulative production, and
25 that's production that -- from a public-information

1 database, Petroleum Information's production figures.

2 The value that are being contoured are posted
3 next to the well symbols. So if, for, example, you go to
4 the old McDaniel 1 well, that's produced 1.488 BCF.

5 Q. The strategy, then, is to do what in terms of
6 using this map to find replacement opportunities?

7 A. Using this map in conjunction with the net-pay
8 map, which is -- there are two different maps that suggest
9 essentially very similar things about the quality of the
10 reservoir. It's our evaluation that those locations with
11 large remaining reserves are often found with original
12 wells that had high cumulative recoveries but were
13 completed in an era with less optimum completion techniques
14 than are available today.

15 Q. And so you're exploring an opportunity to replace
16 the McDaniel 1 well because of additional gas that might
17 otherwise not have been recovered?

18 A. Correct, the McDaniel 1 well, as has been stated,
19 was drilled back in 1941. It was completed open hole over
20 the Pictured Cliffs using a nitroglycerine stimulation.

21 Subsequently, in the 1960s, it was -- casing was
22 set, the well was perfor- -- casing set, cemented,
23 perforated, and a small fracture treatment was applied.
24 That's the type of candidate which our evaluation has shown
25 to be an ideal replacement, well candidate.

1 Q. All right. So this is one of those opportunities
2 where there is remaining recoverable gas under this
3 original spacing unit that has not yet been produced and
4 cannot be produced by the original well, and you need to
5 replace it?

6 A. Correct.

7 Q. Finally, let's look at Exhibit 10, it's your
8 structure map. Is there a structural component that the
9 Examiner should be aware of here?

10 A. No, it's our belief that the Pictured Cliffs
11 production is controlled stratigraphically. The primary
12 factor concerning deliverability seems to be matrix
13 porosity and permeability, and in our opinion structure
14 does not influence the reservoir.

15 MR. KELLAHIN: Mr. Stogner, that concludes my
16 examination of Mr. Clark.

17 We move the introduction of the exhibits he's
18 presented in the exhibit book. They're 6 through 10.

19 EXAMINER STOGNER: Exhibits 6 through 10 will be
20 admitted into evidence.

21 EXAMINATION

22 BY EXAMINER STOGNER:

23 Q. Mr. Clark, in looking at Exhibit Number 10, the
24 well placements shown on this particular map, is that
25 representative of Pictured or -- just Pictured Cliffs

1 producers or what?

2 A. Those, yeah, the map utilized there shows wells
3 used for construction of the map. Probably -- The wells
4 that were used for this map are, for the most part, Dakota
5 producers. The original wells drilled in here, the
6 original PC wells, were, for the most part, not logged with
7 electric logs.

8 And perhaps I should -- Well, perhaps it would
9 have been better to use the same symbols as are used on my
10 net-pay map, which differentiates between the PC producers
11 and the Dakota producers. This lumps all of them together.

12 Q. But this particular structure map, like you said,
13 you got information off the logs --

14 A. Yes.

15 Q. -- the more modern-type logs?

16 A. Yeah.

17 Q. So the well symbols on Exhibit 9, then -- Now,
18 this is a cumulative-production map which, of course, would
19 be limited to the Pictured Cliffs?

20 A. That is correct, yes.

21 Q. And because of what kind of stands out, let's
22 take a look at the wells just immediately in Exhibit Number
23 9, just immediately to the north of your green dot. That's
24 not represented on Exhibit Number 10, but that was because
25 it was an older well and --

1 A. That's correct.

2 Q. -- logs?

3 A. There were no open-hole logs, no logs at all.

4 EXAMINER STOGNER: Mr. Kellahin --

5 MR. KELLAHIN: Yes, sir.

6 EXAMINER STOGNER: -- what's your next witness?

7 What's his specialty?

8 MR. KELLAHIN: He's a petroleum engineer, and
9 he's going to talk about the economics.

10 EXAMINER STOGNER: About the drainage and stuff?

11 MR. KELLAHIN: Not necessarily the drainage, the
12 differential between a vertical well and putting this at a
13 standard location. If that's not an issue for you, then we
14 simply won't present him. He had planned to testify on the
15 issue of vertical-versus-directional to a standard
16 bottomhole location.

17 EXAMINER STOGNER: So he's not going to produce
18 or talk about affected drainage by putting this well in a
19 corner and how much it's going to affect outside of that
20 particular box? That's not his --

21 MR. KELLAHIN: No, sir, that was not the purpose
22 of my preparation with him.

23 Q. (By Examiner Stogner) In the beginning of your
24 testimony, you talked about the original PC wells not
25 having drained reserves. Let's talk about that a little

1 bit.

2 What parameters were you talking about? Are you
3 talking about all PC wells out here, or the old ones,
4 completion techniques? What actually were you -- What
5 wells were you referring to in that opening statement?

6 A. I think that what we have found is that wells not
7 effectively stimulated, regardless of completion date, are
8 the wells that we have targeted for replacement. And
9 examples of those were, for example, wells drilled where --
10 these wells that were drilled in the 1940s, for example,
11 they were drilled down to a few feet into the Pictured
12 Cliffs sand, casing set just slightly above the Pictured
13 Cliffs. They were drilled out with a cable tool technique
14 and then completed open hole, usually with a nitroglycerine
15 type of stimulation.

16 The results of our studies have shown that wells
17 so completed have not effectively drained all of the gas
18 reserves in their respective spacing units. We've looked
19 at essentially wells that were drilled and cased through
20 the Pictured Cliffs, stimulated with fracture treatments of
21 20,000 to 40,000 pounds of sand, and we view those as also
22 not effectively recovering all of the gas reserves within
23 their spacing units. And our program has targeted wells
24 such as those.

25 Does that -- I guess, does that answer your

1 question?

2 Q. I believe it does. Actually, it leads up to my
3 other question.

4 So let's now refer to your map on Exhibit 7, and
5 let's refer in to the box. You show the proposed Well
6 Number 1 -- I'm sorry, the proposed replacement well as
7 being the green triangle. Okay.

8 In the wells -- or completion method in which you
9 described, let's talk about these immediate ones, immediate
10 Pictured Cliffs producers, the wells that show up on this
11 map, if they meet that criteria. From that green triangle,
12 you look up immediately to the north, there's a Well Number
13 1 --

14 A. Yes, sir.

15 Q. -- that's shown. Was that an old well, or would
16 that meet your criteria of not draining adequately?

17 A. Yes, the Barnhart well was drilled, and it would
18 be a candidate based on the criteria I described. We have
19 found that those wells with the highest cumulative
20 production are the most attractive candidates, and we're
21 basing our economics on those being more attractive
22 candidates than wells that have -- say the Barnhart Number
23 1 -- Barnhart Number 1 cumulative production is much less
24 than the cumulative production from the old McDaniel 1.

25 So factor into the criteria that I described

1 before the quality of the reservoir in that particular
2 location, which is reflected by also the cumulative
3 production at those original wells.

4 So yes, the completion technique at the Barnhart
5 1 meets our criteria. The reserves produced by the
6 original well are less than we would normally find
7 attractive.

8 Q. Does Burlington propose to replace that Barnhart
9 Number 1? I'm using the terms in which Burlington is
10 using.

11 A. Yeah, Burlington does not control the north half,
12 southwest of Section 17. Redfern does.

13 Q. Okay. Let's go back to that green triangle again
14 and look back to the east on that Well Number 3. Does that
15 fit your criteria? Do you know the history of that well,
16 when it was drilled? Is it an old well?

17 A. That well is the Bloomfield Number 3. It was
18 drilled in 1985 by the predecessor company of Burlington
19 Resources, predecessor in name. It was drilled, to the
20 best of my belief, on the basis that they viewed that as an
21 attractive Pictured Cliffs location. The results were not
22 successful. The Bloomfield 3 never produced. It was not a
23 poor producer; it never produced out of the Pictured
24 Cliffs. I could go into the reasons, if you would like.

25 The well was subsequently plugged back and

1 completed in the Fruitland Coal and is producing now from
2 the Fruitland Coal. It's approximately a 40- to 50-MCF-a-
3 day Fruitland Coal well.

4 So at that particular location, I think that
5 would not be recommended by me as an attractive PC
6 location, due to the lack of success by the Bloomfield 3.

7 Q. Okay. Now, does Burlington plan to replace that
8 well with a Pictured Cliffs well?

9 A. No.

10 Q. Okay. Let's go down, now, to the southeast, into
11 -- what would that be? Section 19; is that correct?
12 There's a Well Number 3 --

13 A. That would be in --

14 Q. -- down below that orange --

15 A. Section 19 is labeled at the bottom of the
16 section. Are you referring to Section 20?

17 Q. Yes, Section 20 --

18 A. Okay.

19 Q. -- would be -- Thank you. How about that old
20 well, or well?

21 A. That's the Cozzens Number 3. I am not certain if
22 that was planned as a replacement well or not.

23 Q. Okay. How about the one immediately to the south
24 marked Number 4?

25 A. Cozzens 4. The Cozzens 4 was a well that met the

1 criteria that we've described, and that is a well that, if
2 you can -- Let me check my records just a second and make
3 sure that I give you a correct answer.

4 Cozzens Number 4 was a well that was restimulated
5 by Burlington in 1996, and that has proven to be a very
6 successful project. The well is making approximately -- So
7 it was not a plugged and abandoned well, but we went in and
8 worked that well over, and it's making approximately 200
9 MCF a day at the current time.

10 Q. Okay. Let's see, in going around the clock, of
11 course, we know about the McDaniels Number 1, down to the
12 south and west.

13 Now, let's look back mostly to the west, a little
14 bit north. I believe there's a Well Number 7, and that's
15 in Section 17 -- 18, rather, I'm sorry. Is that 7 or 2?

16 A. That would be the Cozzens 7 location.

17 Q. Okay. Is that an old well? Would it meet those
18 criteria?

19 A. Yes, it was. It was, again, not a plugged and
20 abandoned well, and that well was another well -- that was
21 another existing well that Burlington worked over. Let me
22 again get some dates.

23 The Cozzens 7 was restim'd in 1998. Again, a
24 pretty successful project. The well is currently producing
25 at better than 100 MCF a day.

1 Q. Now, in looking at this map again, pulling away
2 from -- You're essentially in the middle of three old
3 wells, or at least three wells there. Would this be more
4 described as an infill or in the middle of some wells that
5 have drained or not drained, as opposed to replacement well
6 to the McDaniels Number 1?

7 A. I suppose that one could call it an infill
8 location. I think that the -- our philosophical approach
9 to this play has been to replace existing producers with
10 new drills, and ideally, we would have liked to place the -
11 - what I've -- what we have called the replacement well for
12 the McDaniel Number 1 in the southwest southwest of Section
13 17, much closer to the McDaniel 1 than we have staked.

14 But the driving mechanism for the distance was
15 the surface problems. So I suppose that based upon the
16 distance, you could -- I guess -- Have I answered your
17 question? I think that we would call it a replacement
18 well. You may wish -- prefer to call it an infill, based
19 on the distance from the McDaniel 1. Philosophically, we
20 would have preferred to have it located closer to the
21 McDaniel 1 but have been unable to find a suitable location
22 to accomplish that.

23 Q. Okay. So because of this distance you had to
24 move further away. That doesn't necessarily mean that the
25 drainage is going to come from that direction; it's also

1 going to affect the Pictured Cliffs to the northeast of
2 you, back to the east and to the north; is that correct?

3 A. I think that this location, being so severely
4 located in the corner of our proposed spacing unit, will
5 more than likely pull some reserves from outside the
6 spacing unit. It's our belief, and the purpose of these
7 maps is to indicate, that we feel the best part of the
8 reservoir and the vast majority of the reserves that the
9 proposed location would draw from would fall within the
10 spacing unit; that's the best part of the reservoir.

11 But to suggest that it's going to not draw from
12 outside probably would not be accurate.

13 EXAMINER STOGNER: No other questions. Thank
14 you, Mr. Kellahin. Next witness. Or do you have some
15 redirect?

16 MR. KELLAHIN: No, sir. And if it's not an issue
17 with you regarding directional drilling/vertical drilling,
18 then I'll defer and will not put Mr. Dobson on, and that
19 will complete our presentation.

20 EXAMINER STOGNER: Essentially, he was just going
21 to -- Well, we may want to hear it now, I guess, to see
22 if --

23 MR. KELLAHIN: Well, let's call Mr. Dobson. It
24 won't take but a minute.

25 EXAMINER STOGNER: Let's call him.

1 MR. KELLAHIN: Mr. Stogner, Mr. Dobson's display
2 is found behind the last exhibit tab. I think it will be
3 Exhibit 11.

4 SCOTT DOBSON,

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

7 DIRECT EXAMINATION

8 BY MR. KELLAHIN:

9 Q. Mr. Dobson, for the record, sir, please state
10 your name and occupation.

11 A. Scott Dobson, I work for Burlington Resources as
12 a production engineer.

13 Q. Mr. Dobson, on prior occasions have you testified
14 as an engineer before the Division?

15 A. No, sir, I have not.

16 Q. Summarize for us your education.

17 A. I graduated with a bachelor of science from
18 Montana Tech in December of 1995 --

19 Q. And what is your --

20 A. -- bachelor of science in mining engineering.

21 Q. All right, sir. What is your current employment?

22 A. What's my current employment?

23 Q. Yes, sir.

24 A. With Burlington Resources as a production
25 engineer.

1 Q. With regards to the production engineering
2 duties, in response to my request to have one of the
3 engineers analyze the cost differential between a vertical
4 well and a directionally drilled well, were you assigned
5 that task?

6 A. Yes, sir.

7 Q. And did you perform that function?

8 A. Yes, I did.

9 MR. KELLAHIN: Mr. Stogner, we tender Mr. Dobson
10 as an expert engineer.

11 EXAMINER STOGNER: Mr. Dobson is so qualified.

12 Q. (By Mr. Kellahin) You've summarized on this
13 display for us your analysis, but let me see if I can lead
14 you to the major points of conclusion.

15 First of all, in analyzing the opportunity for
16 replacement wells in the Pictured Cliff, do you have a
17 general engineering estimate of what you think will be the
18 likely maximum initial rate of gas to be produced by a well
19 like this?

20 A. Yes, we do.

21 Q. And what is that, sir?

22 A. It's 268 MCF per day.

23 Q. And that would be on the upper range of
24 determining the greatest potential rate on a daily basis?

25 A. Yes, sir, wells such as these are our best wells.

1 Q. Okay. In forecasting the remaining recoverable
2 gas, how do you take that initial rate and come up with an
3 EUR value? Give us an example of how that's done.

4 A. We've gone back -- this program's been -- We've
5 done restimulation since 1995, so we've gone back and
6 looked at all the wells we've restimulated in different
7 areas, the different types of wells, and established type
8 curves. So we know based on -- or statistically based on
9 the initial rate or cumulative productions that -- what
10 type curve we assign to it, which in turn generates your
11 EUR.

12 Q. Using that methodology, what do you forecast as
13 the estimated EUR for a well like this?

14 A. 865,000 MCF.

15 Q. Let's talk about the current status of the
16 reservoir. What kind of reservoir pressures do you
17 forecast to encounter in the Pictured Cliff?

18 A. In this area they've been about 120 p.s.i.,
19 surface.

20 Q. So to complete this well for production, you
21 would have to do it under compression, would you not?

22 A. That's right.

23 Q. As part of your analysis, you have come up
24 with -- and let's talk in general terms. The total value
25 of the cost of a vertical well is approximately what?

1 A. It's \$191.5 thousand dollars.

2 Q. And if it is drilled directionally, what is the
3 incremental additional cost incurred?

4 A. \$53.9 thousand dollars.

5 Q. In terms of analyzing this as return on
6 investment or payout time, you've provided Mr. Stogner in
7 the spreadsheet that differential?

8 A. Yes, I have, as far as we base most of our
9 projects or all of our projects on MPB. We use a cutoff of
10 -- Well, we used a cutoff in 1999 of \$45,000. And if we
11 drill this well directionally, that reduces the MPB to
12 \$32.8 thousand dollars --

13 Q. Okay. You're not suggesting that someone --

14 A. -- thousand dollars.

15 Q. All right. You're not suggesting that someone
16 can drill the well?

17 A. No.

18 Q. If it's drilled directionally to a standard
19 bottomhole location, then the likely probability is that it
20 will drop so far down on your list of drilling wells that
21 it would not, in fact, be drilled?

22 A. That's correct, we would choose to do another
23 project with that investment.

24 MR. KELLAHIN: All right. That concludes my
25 examination of Mr. Dobson. We move the introduction of

1 Exhibit 11.

2 EXAMINER STOGNER: Exhibit 11 will be admitted
3 into evidence at this time.

4 EXAMINATION

5 BY EXAMINER STOGNER:

6 Q. Would it be right to say in some cases a
7 directionally drilled well, even though it costs more,
8 would be more successful than not drilling a well at all?

9 A. We've done projects where that's the case. Not
10 in a PC well. In cases where we have naturally fractured
11 reservoir, such as the Dakota, Mesaverde, we've done high-
12 angle directional wells in an attempt to intersect one more
13 vein to natural fractures.

14 EXAMINER STOGNER: Okay, no other questions.

15 Mr. Kellahin, do you have anything further?

16 MR. KELLAHIN: No, sir, that concludes our
17 presentation.

18 EXAMINER STOGNER: Okay. Mr. Wymer, do you have
19 anything to say at this time?

20 MR. WYMER: Yes, I do.

21 EXAMINER STOGNER: And for the record, Mr. Wymer,
22 why don't you state your name and your employment?

23 MR. WYMER: Can I sit there?

24 EXAMINER STOGNER: Yes, please.

25 MR. WYMER: My name is Richard Wymer, I'm a

1 geologist with the Bureau of Land Management here in Santa
2 Fe, New Mexico.

3 EXAMINER STOGNER: Okay, thank you.

4 MR. WYMER: I'm reading a prepared statement
5 dated October 6th, signed by Stephen A. Jordan who is
6 Acting Deputy State Director for the Division of Resource
7 Planning, Use and Protection at the New Mexico State Office
8 in Santa Fe.

9
10 Please consider this a formal protest to the
11 subject application pending before the New Mexico Oil
12 Conservation Division. Barring modification of the
13 proposed proration unit, we believe that the
14 correlative rights of Federal Lease adjacent to the
15 proposed well will be damaged if the application is
16 approved as submitted.

17 Burlington Resources Oil and Gas Company has
18 requested a non-standard gas proration unit consisting
19 of four quarter-quarters lying in four separate
20 sections. The well location is also non-standard and
21 lies very close to the northeast corner of the
22 proposed proration unit. The combination of these two
23 non-standard activities is to place the well
24 immediately adjacent to a Federal lease located in the
25 southeast-southwest quarter of Section 17, 29 North,

1 Range 11 West. The Federal lease covering those and
2 other lands is our New Mexico NM0019405, which is also
3 held by Burlington. If Burlington's proposed well,
4 the McDaniel Well Number 1-R, is completed as a
5 successful gas producer, it is our opinion that the
6 lease NMNM0019405 will be subject to drainage. If so,
7 we would require Burlington to protect the lease from
8 drainage. Burlington would have the option to drill a
9 protective well, pay compensatory royalty or
10 relinquish [sic] all or a portion of the lease.

11 We ask that NMOCD or Burlington modify the
12 proration unit to include the southeast-southwest
13 quarter of Section 17, in order to protect the
14 correlative rights of the nearby leases and avoid this
15 situation from occurring. In the alternative, we ask
16 that Burlington's application be denied.

17
18 EXAMINER STOGNER: Mr. Wymer.

19 Mr. Kellahin, anything further?

20 MR. KELLAHIN: In response to the request from
21 the Bureau of Land Management, Mr. Stogner, Burlington
22 desires to modify its application to include the additional
23 40-acre tract that was just described in this letter.

24 EXAMINER STOGNER: So from what you're saying
25 now, you would like this to be continued and readvertised,

1 requesting a 200-acre nonstandard proration unit in light
2 of the BLM's request?

3 MR. KELLAHIN: Yes, sir.

4 EXAMINER STOGNER: Okay. With that, I'll tell
5 you what. I'm going to do something unique here. I'm
6 going to take a five- to ten-minute recess, at which time
7 I'll come back and either take this under advisement or
8 entertain a motion to dismiss this case.

9 Considering the fact that Rule 104 has changed,
10 this is now a standard location for a 160-acre proration --
11 or well on 160-acre spacing.

12 So at that time I'm going to take a recess, and
13 then I'll come back and open it up to you to direct me on
14 where to go.

15 MR. KELLAHIN: All right, sir.

16 (Thereupon, a recess was taken at 10:05 a.m.)

17 (The following proceedings had at 10:12 a.m.)

18 EXAMINER STOGNER: Call the hearing back to
19 order.

20 Mr. Wymer, we were discussing, and maybe we need
21 some clarification from you -- Do you want to ask him?

22 MR. CARROLL: Yes. Mr. Wymer, in your October
23 6th letter here from Steve Jordan, you refer to a federal
24 lease, the NMNM0019405.

25 MR. WYMER: We don't see that on Exhibit Number 5

1 here. What lands does that lease cover?

2 MR. WYMER: Can I go back and get an ab- -- I
3 have an abstract I can provide.

4 MR. CARROLL: Sure.

5 MR. WYMER: Let's see, that lease covers, based
6 on an abstract printed yesterday, or actually Tuesday,
7 October 5th, the northeast quarter -- Let's see, they're
8 all within Section 17. The northeast quarter, southeast of
9 the northwest, north half of the southeast, and the
10 southwest of the southeast.

11 MR. CARROLL: Okay, repeat that --

12 MR. WYMER: Okay.

13 MR. CARROLL: -- just a little slower.

14 MR. WYMER: Northeast quarter.

15 MR. CARROLL: Okay.

16 MR. WYMER: South half of the southwest, north
17 half of the southeast, and the southwest of the southeast.

18 I think I made a mistake.

19 Northeast quarter, southeast quarter -- Excuse
20 me, southeast of the northwest, the north half of the
21 southeast quarter, southwest quarter of the southeast
22 quarter.

23 MR. CARROLL: Okay, on this map Burlington
24 provided us -- Mr. Kellahin, maybe you can help us clear
25 this up here.

1 MR. KELLAHIN: Sure. Here's our information, Mr.
2 Carroll: We believe that federal lease he's just described
3 is the northeast quarter of 17, the north half of the
4 southeast quarter, the southwest of the southeast quarter
5 and the southeast of the southwest quarter.

6 MR. CARROLL: Which you have listed as NM4560 up
7 there?

8 MR. KELLAHIN: That's an in-house Burlington file
9 number. We'll have to defer to the BLM as to the federal
10 lease number. But in essence, it's the entire east half of
11 17, excluding the southeast southeast. And instead of the
12 southeast southeast, it picks up that 40-acre tract that
13 we've talked about all morning.

14 MR. CARROLL: So the difference between what you
15 two have just said is the southwest of the southwest?

16 MR. KELLAHIN: The southwest of the southwest is
17 the McDaniel fee tract, and it's not a federal least.

18 MR. CARROLL: So Rick, I thought you said the
19 south half of the southwest was part of --

20 MR. WYMER: Southeast of the southwest.

21 MR. CARROLL: Oh, okay.

22 MR. KELLAHIN: All right, we're saying the same
23 thing.

24 MR. CARROLL: All right.

25 MR. WYMER: I can provide you a copy of the

1 abstract for your records.

2 EXAMINER STOGNER: Okay, for clarification, then,
3 Mr. Kellahin, let's talk about the southwest of the
4 southwest of 17. That's a fee tract, correct?

5 MR. KELLAHIN: Yes, sir, and it's the same fee
6 owner, McDaniel, that has the other three 40s that we're
7 talking about reinstating as a spacing unit.

8 EXAMINER STOGNER: So that whole 160 is all fee
9 owned by the McDaniel; is that --

10 MR. KELLAHIN: Right.

11 EXAMINER STOGNER: Okay. Mr. Kellahin?

12 MR. KELLAHIN: Mr. Stogner?

13 EXAMINER STOGNER: What's your -- What do you
14 wish to do at this time?

15 MR. KELLAHIN: I wish I had the perfect solution,
16 Mr. Stogner. Burlington's preference is to reinstate the
17 McDaniel nonstandard proration unit that was originally
18 established. We have satisfied Redfern that they can be
19 excluded. They're the affected owners in the north half of
20 the southwest. And rather than be faced with difficulties
21 with the BLM about their preferences concerning protection
22 and all the rest, we're willing to accommodate their
23 request and add into this spacing unit the 40-acre tract in
24 question and therefore want to amend our Application to
25 include that tract. It then becomes a 200-acre nonstandard

1 proration unit.

2 EXAMINER STOGNER: And you at this time seek to
3 continue and readvertise this case for November the 4th? I
4 believe that would be the earliest we can get it on the
5 docket.

6 MR. KELLAHIN: I think that's correct. If we do
7 that by Wednesday of next week it makes it the November 4th
8 docket.

9 EXAMINER STOGNER: I think it will be necessary
10 at that time on November the 4th to perhaps have a
11 reservoir engineer come in and tell us why such a drainage
12 will not be a violation of correlative rights, especially
13 up there on the north half of the southwest quarter --

14 MR. KELLAHIN: I'm happy to do that, sir.

15 EXAMINER STOGNER: -- and why it is needed to
16 develop such as this, as opposed to forming a standard 160
17 at a standard location under the rules in which this pool
18 is current.

19 Or also, I'd like them to tell us why it should
20 not be prorated again to allow for this, like the Jalmat
21 and the Eumont, which I know that the Burlington people
22 here are not familiar with but I know that Burlington is
23 very familiar with those two pools in which this kind of
24 development is consistent down there.

25 So I'd like to hear from them why this pool

1 should not be prorated to adequately protect, and that way
2 penalties, if needed, could be assessed in a clear and
3 concise manner, and perhaps even come up with a penalty
4 since we are moving real close up there to the northern
5 line of this particular acreage, since we're now requesting
6 a nonstandard proration unit, which in itself creates
7 standards and which obviously has never been done before
8 and is very well discouraged, for obvious reasons.

9 So we need those answers and for Burlington to
10 come in and explain to me why we shouldn't do that.

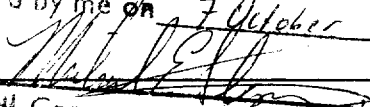
11 So we'll continue and readvertise this matter to
12 November the 4th. And I'll try to make myself available at
13 that particular hearing so we won't get into the problem of
14 having two Examiners coming in and not being adequately
15 prepared, because we want to expedite an order in this
16 instance, we'll quickly -- and perhaps an alternate
17 solution.

18 And with that, this case will be advertised and
19 continued to November the 4th.

20 MR. KELLAHIN: Thank you, Mr. Stogner.

21 (Thereupon, these proceedings were concluded at
22 10:20 a.m.)

23 I do hereby certify that the foregoing is
24 a complete record of the proceedings in
the Examiner hearing of Case No. 12253,
25 heard by me on 7 October 1999.


Oil Conservation Division Examiner
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 October 26th, 1999.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 14, 2002