

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:)) APPLICATIONS OF BURLINGTON RESOURCES OIL) AND GAS COMPANY FOR THE ESTABLISHMENT OF) DOWNHOLE COMMINGLING REFERENCE CASES FOR) ITS SAN JUAN 27-5, 28-5, 28-6 AND 29-7) UNITS PURSUANT TO DIVISION RULE 303.E) AND THE ADOPTION OF SPECIAL ADMINISTRAT-) IVE RULES THEREFOR, SAN JUAN COUNTY,) NEW MEXICO)	CASE NOS. 11,626 11,627 11,628 and 11,629 (Consolidated)
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ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS
EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

October 17th, 1996
 Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, October 17th, 1996, 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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I N D E X

October 17th, 1996
 Examiner Hearing
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A P P E A R A N C E S

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 By: PAUL R. OWEN

ALSO PRESENT:

MANUEL FERRAN

* * *

1 WHEREUPON, the following proceedings were had at
2 1:08 p.m.:

3 EXAMINER CATANACH: At this time we'll call the
4 hearing back to order, and we will call Case 11,626.

5 MR. CARROLL: Application of Burlington Resources
6 Oil and Gas Company for the establishment of a downhole
7 commingling reference case for its San Juan 27-5 Unit
8 pursuant to Division Rule 303.E and the adoption of special
9 administrative rules therefor, San Juan County, New Mexico.

10 EXAMINER CATANACH: Are there appearances in this
11 case?

12 MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of
13 the Santa Fe law firm of Kellahin and Kellahin, appearing
14 on behalf of the Applicant.

15 EXAMINER CATANACH: Additional appearances?

16 MR. KELLAHIN: We'd like to consolidate all four
17 of these reference cases, Mr. Examiner. Mr. Owen, I think,
18 has an appearance in one or more of the other cases.

19 EXAMINER CATANACH: Okay, do you want to
20 consolidate --

21 MR. KELLAHIN: All four of them.

22 EXAMINER CATANACH: Okay, let's go ahead and call
23 the remainder of these cases, 11,627, 11,628 and 11,629.

24 MR. CARROLL: Application of Burlington Resources
25 Oil and Gas Company for the establishment of a downhole

1 commingling reference case for its San Juan 28-5 Unit, San
2 Juan 28-6 Unit and San Juan 29-7 Unit, pursuant to Division
3 Rule 303.E and the adoption of special administrative rules
4 therefor, San Juan County, New Mexico.

5 EXAMINER CATANACH: Okay, are there additional
6 appearances in any one of these cases?

7 MR. OWEN: Yes, Mr. Examiner, Paul Owen of the
8 Santa Fe law firm of Campbell, Carr, Berge and Sheridan,
9 appearing on behalf of Vastar Resources, Inc., in Case
10 Number 11,629.

11 I have no witnesses.

12 EXAMINER CATANACH: For the record, Mr. Kellahin,
13 we have received a -- the Division has received a letter
14 from a Virginia Martinez from Dulce, New Mexico, who claims
15 that she is a royalty interest owner in the San Juan 28-6
16 and San Juan 27-5 Unit, and she states in her letter that
17 she is unable to attend the hearing, but she requests that
18 that -- she asks if she might receive some exhibits from
19 your presentation.

20 Is that something that you can take care of?

21 MR. KELLAHIN: Yes, sir, I'm more than happy to
22 send her the exhibit books for those two cases. And we'll
23 contact her. Ms. Donohue and I have both received numerous
24 calls from royalty and overriding royalty owners, mostly
25 because they're confused about what we're doing. And so I

1 think we've satisfied every concern that's been addressed,
2 and we will undertake to contact Ms. Martinez, explain to
3 her what we're seeking to accomplish, and if there's any
4 appearance that she objects to what we're doing, then we'll
5 continue to send her notice of these commingling
6 applications. I guess that's where we head with this.

7 MR. CARROLL: Mr. Kellahin, we also have a letter
8 from Tim Burrell, with Sturm and Associates, an accounting
9 firm here in Santa Fe, and he also asks for a copy of the
10 transcript, and he carbon-copied both you and Mr. Alexander
11 on that letter.

12 MR. KELLAHIN: I have the letter. I'll provide
13 him the exhibits. I don't propose to give him a transcript
14 of the proceeding, but we'll communicate with him as well.

15 MR. CARROLL: All right.

16 MR. KELLAHIN: I have three witnesses to be
17 sworn.

18 EXAMINER CATANACH: Will the witnesses please
19 stand and be sworn in?

20 (Thereupon, the witnesses were sworn.)

21 MR. KELLAHIN: Mr. Examiner, by way of
22 introduction to this group of cases, I want to express to
23 you that it is not our intention by these cases to make
24 this process for you and others at the Division more
25 complicated than it already is. It is our effort to find a

1 way to expedite the processing of commingling applications.

2 As you know, the Rule 303 with downhole
3 commingling rules were substantially modified by the
4 Commission in March of 1996, and in entering that order
5 they adopted the concept that you and I have discussed on
6 numerous occasions of using a reference case.

7 What we would like to do this afternoon is give
8 you an opportunity to explore how those might function, and
9 if there is not a practical way to make a reference case
10 usable to you and to the Division, then we'll simply stop
11 doing this. We want to give you a chance to examine with
12 the technical people who have been involved, particularly
13 in this entire process Scott Daves, specifically, is here
14 to testify, not only on these cases but the general
15 concept, so that we're all talking about the same thing.

16 From my perspective, I assumed a reference case
17 could operate on several levels. It was never my
18 understanding that a reference case would cause the
19 Applicant to not complete the Form C-107, the commingling
20 form, other than as it's shown on the face of the form.

21 For example, on the face of the form it asks the
22 Applicant to check a blank or disclose whether there is a
23 zone that's marginal. That obligation would continue.

24 What you would achieve with a reference case, if
25 you decided to use it, is, either you or the Applicant or

1 anyone in the industry could use a reference case to
2 satisfy everyone that there is a database available to the
3 public on file here to check the reliability of the
4 representation that a zone is marginal.

5 For example, in all four of these units you're
6 about to see presentations to show you that the Pictured
7 Cliff is a marginal zone. The applications, when Peggy
8 Bradfield files them for Burlington, are going to show the
9 Pictured Cliffs as a marginal zone.

10 What it allows us to do is to avoid attaching
11 supplements to the form where we continually show you the
12 same information to show the PC is marginal. We would like
13 to use the reference portion of the form to fill in the
14 order for one of these cases to say, that's our
15 representation that this zone is marginal; if you want to
16 check it here's a place to find it.

17 It also may be useful in terms of pressure
18 information. It was never our intention to omit pressure
19 data from the form. You would get original bottomhole
20 pressure information as best we could forecast it, and you
21 would get current bottomhole pressure information. You
22 would not have to do our homework for us. We would put it
23 on the form and disclose it to you.

24 If you desire to check its reliability and the
25 basis upon which we have given you that pressure number,

1 you would have the ability to look in your own files here
2 at the Division and check that number.

3 And so that's what we were seeking to do, is not
4 to change the reporting information but to avoid filing
5 duplicative information in each individual case, repeating
6 the same information with regards to pressure and
7 marginality of a zone, or an allocation formula. It would
8 simply save us the work, and there it is in the file. If
9 that is not a useful way for you to process these things,
10 then we'll simply do it another way.

11 The one thing we would like you to pay attention
12 to is that in these four cases, plus the one that's pending
13 before you that was heard in August, where we have units,
14 Ms. Donohue is about to tell you, as we've told you
15 already, that these units involve participating areas, the
16 circumstances of which are, every single commingle
17 application involves a question of ownership that is
18 different between the zones to be commingled. In every
19 instance, it will require us to notify hundreds of people.

20 And we continue, then, to flood the mailboxes of
21 people like Ms. Martinez, the judge in Florida, the lady
22 that called me from California, the people in Chicago, the
23 lady in New Jersey, wanting to know what in the world are
24 we doing.

25 We would like to explain it to them once and,

1 with your permission, avoid the necessity of continually
2 repeating these notifications to these individuals.

3 Vastar has contacted us. They have an interest
4 in some of these units, particularly the one with 11,629.
5 They are interested in how we propose to allocate
6 production on those wells involving the Fruitland Coal gas
7 and how that allocation would function. And we have agreed
8 with them to continue to put them on the notice list for
9 those wells in which they have an interest, and they'll
10 continue to get the data.

11 Now, if any of the rest of these people want
12 that, they need to come forward and tell us at this time.
13 And if they're not here to tell us and haven't submitted
14 the letter, we would like you, because they have simply
15 waived the objection, to relieve us from the administrative
16 burden of sending out hundreds of notices, certified mail,
17 every time we want to do one of these things.

18 And if the only think we walk away from today is
19 that, we're relieved, quite frankly. That's, you know --
20 We need it, it's a burden to us. The rest of them were
21 simply done in an effort to help us develop a new system
22 here at the agency so that your workload is made most
23 effective and efficient in the processing of these
24 applications.

25 So with that introduction, then, we would like

1 you to engage these experts in some discussion, and let's
2 just talk our way through some of these things and see if
3 there's a way to help you perform your job and for us to
4 get these things processed in a way that accommodates all
5 our interests.

6 EXAMINER CATANACH: Mr. Kellahin, as I recall, we
7 -- Didn't we do some of these already where we established
8 administrative procedure, where the applicant didn't have
9 to notify the interest owners?

10 MR. KELLAHIN: That's right, we did it on a
11 unitwide basis. I may not be able to pull them up right at
12 the moment, but I can get you the list.

13 Mr. Alexander and I have done some of the
14 unitwide -- we called them areawide --

15 EXAMINER CATANACH: Yeah.

16 MR. KELLAHIN: -- commingling applications where
17 we have adopted a generic allocation formula, we have come
18 to a conclusion that at least the Pictured Cliff was
19 marginal, and we have avoided the repetitive nature of the
20 notification. So there's precedent for these.

21 EXAMINER CATANACH: These are not repeated of
22 those other cases --

23 MR. KELLAHIN: No, sir, these are --

24 EXAMINER CATANACH: -- these are different areas?

25 MR. KELLAHIN: These are new units --

1 EXAMINER CATANACH: I've got you.

2 MR. KELLAHIN: -- as opposed to the ones you've
3 processed.

4 EXAMINER CATANACH: Okay.

5 MR. KELLAHIN: And we've brought them to you not
6 as an areawide commingling, but as a reference case. The
7 basic concept is the same. For the unit area as an entity,
8 then, we're seeking modification of the typical processing
9 rules.

10 EXAMINER CATANACH: Okay.

11 MR. KELLAHIN: All right. I've handed out the
12 exhibit books. You have an exhibit package for each of the
13 four cases.

14 There is, between the two sets of exhibits, a
15 stack of notifications. Ms. Donohue and Meridian
16 personnel, Burlington personnel, have sent all these out
17 certified mail, return receipt, and you have before you,
18 then, the composite of all those green cards, if you will.

19 They are -- They're constructed in this fashion,
20 so it's not confusing to you, is that if Amoco had an
21 interest in all four, then there's one certified notice
22 letter, but in that letter they got four copies, one for
23 each Application. So that's how we've covered all those
24 notifications.

25 The way to track the parties notified per case is

1 to look in each exhibit book. The last attachment behind
2 Exhibit 1 is the actual list --

3 EXAMINER CATANACH: Okay.

4 MR. KELLAHIN: -- and that will help you track
5 who got notified where.

6 LINDA DONOHUE,

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

9 DIRECT EXAMINATION

10 BY MR. KELLAHIN:

11 Q. Ms. Donohue, for the record would you please
12 state your name and occupation?

13 A. Linda Donohue, senior landman.

14 Q. Ms. Donohue, as a senior landman were you asked
15 to assume the responsibility for tabulating the parties
16 entitled to notice with regards to all four of these cases?

17 A. Yes.

18 Q. And as a result of allocating that responsibility
19 to you, did you undertake to do that?

20 A. Yes.

21 Q. Is that the kind of thing that you would be able
22 to do within the course of your responsibilities and
23 experience as a landman with Burlington?

24 A. With the assistance of computers, yes.

25 Q. All right. And are you familiar with the general

1 way these four units are constructed contractually?

2 A. Yes, I am.

3 MR. KELLAHIN: We tender Ms. Donohue as an expert
4 witness.

5 EXAMINER CATANACH: Ms. Donohue is so qualified.

6 Q. (By Mr. Kellahin) Without going through each
7 individual exhibit book, let's take one off the top. Let's
8 use the 11,626, if you will. That's the exhibit book for
9 the San Juan 27 and 5 Unit.

10 Contractually, are all these units put together
11 in the same general fashion?

12 A. Yes, they are.

13 Q. There will be a unit agreement, and there's a
14 unit operating agreement?

15 A. And an Exhibit B that sets forth the ownership.

16 Q. Do these units function in a way where you have
17 participating areas that are expanded and contracted based
18 upon particular formations within the unit that are proved
19 productive?

20 A. That is true.

21 Q. When we look at the Pictured Cliff, the
22 Mesaverde, the Dakota and the Fruitland Coal gas in each of
23 these units, are all those reservoirs or formations that
24 would in each of these units be operated and managed under
25 a participating-area concept?

1 A. That is correct, and that each developed on
2 various stages.

3 Q. So if Burlington desires to commingle production,
4 either in an existing wellbore or in a new well in any of
5 these units, and they involved any of those four
6 reservoirs, then the circumstances are, the ownership is
7 different per formation?

8 A. That is correct.

9 Q. And that's a function of the fact that the
10 participating area for each is not identical?

11 A. That is correct.

12 Q. All right. We would have difference of ownership
13 in each instance, then?

14 A. Unless -- There's a situation if all of the
15 acreage had been brought in and they owned interest in both
16 Mesaverde and Dakota, then you could have identical
17 ownership. But it's very rare for that to happen where it
18 would have gotten to that point.

19 Q. In dealing with that kind of contractual
20 arrangement, describe for us how you went about tabulating
21 an accurate list for notification purposes so that we could
22 send out certified notice to all parties that would share
23 in commingled production.

24 A. Okay, based upon the current rulings, we went in
25 and we pulled from our computer system everyone that's on

1 pay or in our records and notified all the overriding
2 royalty, royalty and working interest owners by certified
3 mail.

4 Q. If there were offsetting operators adjacent to
5 the unit area, were those offsetting operators notified as
6 well?

7 A. Yes, they were.

8 Q. Were all those notifications in each of the four
9 cases sent out certified mail, return receipt, at least 20
10 days prior to the hearing today?

11 A. Yes, they were.

12 Q. And have you attested to that fact and tabulated
13 true and accurate copies of those notification return
14 receipt cards and presented them under your certificate to
15 the Examiner?

16 A. Yes, I have.

17 Q. Okay. As a result of that notification, describe
18 for us in a general way the kinds of responses and
19 inquiries you've received with regards to these
20 applications.

21 A. I have received phone calls, as has Peggy and
22 Alan Alexander, in regards to the nature of why we're
23 sending this information to them, wanting to know if they
24 need to sign it. It's caused quite a bit of confusion to
25 the owners in getting these multiple mailings, because we

1 have done quite a few of them through the new process
2 underneath the C-303, and it's just going to be a lot
3 easier if we can eliminate that burden of having to send
4 these out. It's a real large expense to the operator and
5 to the working interest owners, having to bear on the well
6 costs right now from following this procedure.

7 Q. Give us a general example. If you and Ms.
8 Bradfield are sending out a commingling application and
9 sending it to the interest owners for a particular well,
10 what's the approximate number that you're going to have to
11 send out? Do you have any idea?

12 A. Right now, an aggregate for the four units that
13 were sent out, and taking into account that some of these
14 were duplicate over -- because they owned ownership in each
15 of the units, there were almost 500 owners that were
16 contacted by certified mail.

17 Q. And that would be for all four of these units?

18 A. That would be for all four of them.

19 Q. If we were going to take a single example of a
20 commingled application in just one of the units, can you
21 give us a general range of how extensive the notification
22 would be?

23 A. Well, I counted in 29 and 7 Unit, I think there
24 was 182 owners.

25 Q. And if we had to do commingling in that unit

1 every individual time with a separate mailing, then it's
2 the 180 every time?

3 A. That is correct.

4 Q. Okay. As a result of sending out the
5 notifications, have you received any objection from these
6 parties after you've talked to them about what you're
7 trying to do?

8 A. No, I have not. They're not objecting; they're
9 just trying to understand.

10 Q. I made mention of Vastar desiring to have
11 additional information as you proceeded with commingling of
12 wells, particularly those that involved Fruitland Coal gas.
13 Are you aware of their request?

14 A. Yes, I am, I talked at length the other day to
15 their engineer and explained to him that he would still be
16 getting his AFE and proposal and be aware that a commingle
17 application would be underway, and he seemed to understand
18 that as long as he knew that that was going to happen, it
19 would be okay with him, you know, if we just sent him the
20 C-107 form.

21 Q. All right. Vastar is what? The new name for
22 ARCO?

23 A. That is correct.

24 Q. All right. ARCO is operating their properties
25 within these units as Vastar; is that it?

1 A. That is correct, they are known as Vastar
2 Resources.

3 Q. And they would have a working interest in that
4 one particular unit and maybe others?

5 A. They would. And one thing that they didn't
6 realize at the time is that they also owned Pictured Cliff
7 rights. So we're going to do a commingle of Fruitland and
8 Pictured Cliff rights. They only thought that they owned
9 Fruitland rights, and when I explained to him that he also
10 still owns Pictured Cliff rights, it seemed to alleviate
11 some of his concern.

12 Q. Did he understand as a working interest owner, as
13 the operator proposes these wells in the unit to all the
14 working interest owners within that spacing unit, then he
15 gets to make certain elections and --

16 A. Sure. Yes, he does.

17 Q. All right. So once you explained it to him, you
18 believe you've satisfied Vastar's concerns about the
19 commingling application?

20 A. I think so.

21 Q. And they will continue to get interest notices
22 because they, in fact, are working interest owners?

23 A. They are working interest owners, and even if
24 they're not involved in a well, say, as far as the drill
25 block and owning interest in a particular one, they'll

1 still get notification underneath the plan of development
2 on any new drills that are being done, which are sent to
3 the regulatory agencies and all working interest owners.

4 So there is that additional notice too, that can
5 happen, just so they're aware of it.

6 Q. Did you have any individual or entity contact you
7 and demand to continue to receive individual commingling
8 applications under the existing 303 rules?

9 A. No.

10 Q. Describe for us how the Examiner might identify
11 in each of the exhibit books the actual interest owners
12 involved in that unit. Where does he find that
13 information?

14 A. Okay, let me see if I can find it. It's going to
15 be underneath Exhibit 1, the very last page, right before
16 Exhibit 2 tab.

17 Q. And while these are the names, the actual
18 addresses would show on the return receipt certificate?

19 A. That is correct.

20 Q. All right. Let's turn behind the exhibit, then,
21 and talk about the information contained behind Exhibit Tab
22 Number 2. What are we seeing there?

23 A. Okay, this is a depiction of just a locator where
24 the San Juan 27-5 unit resides that's depicted in yellow.

25 Q. And each of the exhibit books will have a similar

1 plat showing where that particular unit is located?

2 A. That is correct.

3 Q. Behind the first plat, what do we see as the next
4 plat?

5 A. The next plat is a depiction of all the wells
6 that are currently drilled within the San Juan 27-5 Unit,
7 as would it be in all the other units also.

8 Q. To the best of your knowledge this information is
9 true and accurate?

10 A. I sure hope so. I rely on it.

11 Q. Okay. And you've done the same thing with all
12 the other three exhibit books?

13 A. Correct.

14 Q. From your perspective in the land department,
15 what do you hope to obtain by approval of this Application,
16 Ms. Donohue?

17 A. From the land department's perspective, just the
18 elimination of the notice is going to be of great
19 assistance to us. And Scott and Bill will go into more
20 detail as far as the marginal qualifications that we would
21 also like to see.

22 MR. KELLAHIN: Mr. Examiner, that concludes my
23 examination of Ms. Donohue.

24 We move the introduction of Exhibit 1 and 2 in
25 each of the exhibit books.

1 EXAMINER CATANACH: Exhibit 1 and 2 in each of
2 the exhibit books will be admitted as evidence.

3 EXAMINATION

4 BY EXAMINER CATANACH:

5 Q. Ms. Donohue, exactly what did you send to these
6 interest owners?

7 A. They were sent the application -- you mean prior
8 to -- If we were to just send it normally right now, they
9 would get a cover letter that would be coming to the OCD
10 office, plus the C-107 form.

11 Q. Okay, but for the purpose of this hearing, you
12 sent them a copy of the --

13 A. -- of the Application --

14 Q. -- Application --

15 A. -- for hearing.

16 Q. -- which is found behind Exhibit Number 1?

17 A. That is correct.

18 MR. KELLAHIN: And they also got this notice
19 letter, which is the first page of Exhibit 1.

20 THE WITNESS: That is correct.

21 EXAMINER CATANACH: Mr. Kellahin, in the -- on
22 page 3 of the Application, in paragraph number 5, that's
23 basically where it explains to the interest owners what you
24 guys are seeking in terms of notice; is that correct?

25 MR. KELLAHIN: It appears in two parts. We're

1 asking in paragraph 4 on page 2 that there's now sufficient
2 data available in which we can adopt a reference case for
3 the following items. 4(c) is notification.

4 And then we come over on the following numbered
5 paragraph 5 and advise them specifically that we not have
6 to provide notification to them in instances where the
7 ownership is different.

8 EXAMINER CATANACH: Do you feel like that's
9 sufficiently clear to an interest owner of what you're
10 asking for and what your intent is?

11 MR. KELLAHIN: Well, I certainly hope so, Mr.
12 Examiner. I think those parties that have taken the
13 opportunity to call one of us and ask for an explanation
14 certainly understood when they receive a certified mail
15 return receipt that has the formality of a notice like
16 this, that the burden shifts to them to make an inquiry.
17 And for those that have, we've provided a further
18 explanation.

19 I think if any of these people, even
20 unsophisticated ones, take the time to read the
21 application, they can recognize what we're asking to do.

22 EXAMINER CATANACH: Okay. Just -- In reading
23 through this, I just had a question which doesn't concern
24 notice, but in paragraph 12 on page 4 --

25 MR. KELLAHIN: Okay.

1 EXAMINER CATANACH: -- your request insofar as
2 that paragraph, can you elaborate on that? Is that
3 something that you're still asking for?

4 MR. KELLAHIN: I think we pick this up as part of
5 the format used in the other unit in which you gave us an
6 areawide exception, and I think in subsequent discussions
7 with you and the Division, the idea of commingling
8 applications being processed in the district office is
9 nothing more than a continuation of the current practice,
10 which is for the Division to issue an administrative
11 commingling order, with the actual allocation to be worked
12 out with the Aztec office.

13 In other words, after the well is drilled and you
14 get the rates, we go see Frank Chavez or Ernie Bush and
15 work out the actual mechanics of the commingling, and
16 that's what we're talking about here. It's nothing
17 different than you already do.

18 EXAMINER CATANACH: All right.

19 Q. (By Examiner Catanach) Ms. Donohue, the interest
20 owners that you notified, are these the -- are these all of
21 the interest owners in these units, or are these just the
22 interest owners that are currently sharing in some kind of
23 production revenue?

24 A. They are either in our records -- Well, all of
25 them are receiving revenue; they're off of our revenue

1 records.

2 Q. So --

3 A. They share in production. They just share in
4 different percentages because of the way the PAs are
5 structured.

6 Q. Okay. So the list that you've got, that takes
7 into account of every interest owner in each of these
8 units?

9 A. To our knowledge, it does, yes, the best of our
10 knowledge, just in our records.

11 Q. So you're saying every interest owner in these
12 units in some for or fashion gets revenue from you?

13 A. Uh-huh.

14 Q. Okay. Have you ever had an interest owner object
15 to a downhole commingling application?

16 A. No.

17 Q. Do you ever get much response to -- from royalty
18 or overriding royalty interest owners, like when you send
19 them a copy of a Form C-107?

20 A. Just recently, because, you know, this was just
21 enacted earlier this year, and we've received a lot of
22 inquiries just trying to figure out why they're getting
23 mailings that they never historically have received because
24 it's not a normality, you know, to send them
25 correspondence.

1 They're just used to being on the revenue-check
2 side of things, so -- which is the way -- They just want to
3 know if they're going to get more, and I've been telling
4 them probably so, if things work out well.

5 Q. Did you mention that you had notified offset
6 operators of this Application?

7 A. If they were -- If they offset, yes.

8 Q. If they offset the unit?

9 A. Right, if we do have offset operators.

10 Q. That's all the way around each of these units?

11 A. That is correct.

12 Q. Okay.

13 A. It looks like Phillips and Amoco would have been
14 notified as offset operators, which I'm sure they would
15 like the same ability.

16 EXAMINER CATANACH: Okay, that's all we have of
17 this witness.

18 MR. OWEN: I have a --

19 EXAMINER CATANACH: Oh, sorry.

20 MR. OWEN: Forgot all about me here, so quiet.

21 EXAMINATION

22 BY MR. OWEN:

23 Q. Ms. Donohue, I just have a couple questions.

24 As you know, Vastar holds an interest, holds
25 varied interests in the San Juan 27-9 [sic] Unit, which is

1 the subject of Case Number 11,629.

2 A. That's correct.

3 Q. And I just want some clarification as to the
4 notice, and you've covered some of this already in Mr.
5 Kellahin's examination, but I want some clarification of
6 the notice that you're going to provide to Vastar for
7 future downhole commingling.

8 A. Okay, I have agreed with Joe Candela, who works
9 with Vastar, that we will be sending him a proposal showing
10 him what the well cost and our plan is for the well, and
11 then we will send him a copy of the 10C [*sic*] form at that
12 same time, so he's aware of it.

13 Q. By "your proposal" --

14 MR. KELLAHIN: The 107 form.

15 THE WITNESS: Uh-huh, the 107 form.

16 Q. (By Mr. Owen) By "your proposal", you mean the
17 AFE?

18 A. The AFE.

19 Q. And the costs?

20 A. Yeah, he would be getting an AFE for any of the
21 wells that we do plan to commingle.

22 Q. And are you going to provide this -- both the AFE
23 and the C-107 for every well in which Vastar has a
24 interest?

25 A. Yes.

1 Q. Okay.

2 A. They currently do not own in the participating
3 areas. They own outside of the participating areas in the
4 Fruitland. They own in the Fruitland participating area,
5 and then they own drillblock interests in the Pictured
6 Cliffs. So those wells that would involve commingle of
7 those two zones is what they would be getting notification
8 of.

9 MR. OWEN: That's all the questions I have.

10 EXAMINER CATANACH: Can you please identify
11 yourself, sir?

12 MR. FERRAN: Yes, my name is Manuel Ferran. I'm
13 one of the interested parties on this.

14 EXAMINER CATANACH: Okay.

15 MR. FERRAN: And I guess -- My apologies. I came
16 in late, I got detained. But I was here this morning --

17 EXAMINER CATANACH: Uh-huh.

18 MR. FERRAN: -- and I guess I am one of those
19 unsophisticated people that don't understand the
20 explanation, so I wonder if in a few questions you can tell
21 me what commingling means.

22 EXAMINATION

23 BY MR. FERRAN:

24 Q. Are you going to take a section and other wells
25 in the section and put them together and then divide them

1 up or what?

2 A. Okay, just the commingling itself on how that --

3 Q. Yes.

4 A. -- is done? What they do is that usually when
5 there's a -- what they call a dual well, there's two
6 strings of tubing going down the wellbore. What they
7 intend on doing is just running one string of tubing and
8 doing an allocation between two different formations, so
9 they only have one meter house that's being used.

10 It kind of eliminates the necessity for a bunch
11 of equipment to be sitting out on location, and it's just a
12 simplification of being able to operate the well more
13 efficiently and probably longer than they would have
14 otherwise, because a lot of the wells that they're
15 commingling with would not be drilled as a single well, as
16 it is.

17 So you're really getting the benefit of having
18 more production come out of the wellbore from multiple
19 completions, and they call that commingling when they do
20 that.

21 Q. Let me see if I understand.

22 A. Okay.

23 Q. You have a well, and right now you allocate to
24 interested parties for various formations, so you have
25 meters in different locations?

1 A. Well, we only have one meter on that location,
2 but based upon the pressure basis and what the engineer
3 sets as that allocation, that is how the revenue is then
4 disbursed out to the owners of each participating area.

5 Q. And so what you're going to do now is, you're
6 just going to take the total production and divide it among
7 the different owners according to the percentage?

8 A. That they own within that formation, that is
9 correct.

10 Q. And so some people could benefit and some could
11 not?

12 A. Well, they all should benefit, because they're
13 going to be allocated a portion of that, based upon really
14 what that formation is contributing to that well.

15 MR. FERRAN: Okay, thank you.

16 Thank you, sir.

17 EXAMINER CATANACH: You bet.

18 EXAMINATION

19 BY MR. CARROLL:

20 Q. Ms. Donohue, okay, so as I understand it you've
21 agreed with Vastar to provide them information regarding
22 each well that you intend to commingle?

23 A. That involves their interest.

24 Q. That involves their interest. And you won't
25 provide that information to any other interest owner unless

1 they request that; is that correct?

2 A. If they want it we will send it to them.

3 Q. But they'd have to request it?

4 A. Uh-huh. Right now that's what our preference
5 would be.

6 MR. CARROLL: Thanks.

7 FURTHER EXAMINATION

8 BY EXAMINER CATANACH:

9 Q. But under the unit agreement, you're still
10 providing notice to the interest owners in the drill block
11 when you --

12 A. That is correct.

13 Q. -- actually commingle the well?

14 A. There will be notification out there through plan
15 of developments, AFE proposals and...

16 EXAMINER CATANACH: Okay, that's all I have.

17 WILLIAM BABCOCK,

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

20 DIRECT EXAMINATION

21 BY MR. KELLAHIN:

22 Q. Mr. Babcock, for the record would you please
23 state your name and occupation?

24 A. My name is William Babcock. I'm a senior
25 geologist for Burlington Resources in Farmington, New

1 Mexico.

2 Q. Mr. Babcock, are you familiar with the geologic
3 displays that are set forth in each of the exhibit books
4 that are the subject matter of these four cases before the
5 Examiner today?

6 A. Yes, I am.

7 Q. In general, are you familiar with the geology of
8 the San Juan Basin so that you can reach opinions and give
9 us conclusions with regards to the feasibility of
10 commingling production in these various units?

11 A. Yes, I am.

12 MR. KELLAHIN: We tender Mr. Babcock as an expert
13 petroleum geologist.

14 EXAMINER CATANACH: He is so qualified.

15 Q. (By Mr. Kellahin) Give us an overview of the
16 geology here, Mr. Babcock. When we look at the opportunity
17 to prolong the life of these units by making them more
18 efficient, to recover additional hydrocarbons out of any of
19 these formations, what is the advantage of commingling as
20 you see it?

21 A. Well, if you can keep the wells on production for
22 a longer time period and at lower rates, you can therefore
23 lower the pressure in the reservoir further and therefore
24 get more gas out of the ground ultimately, prolonging the
25 life of the well and increasing the ultimate recovery from

1 each zone.

2 Q. For each of these formations and for each of
3 these units have we reached the point in development where
4 we are looking for commingling opportunities?

5 A. Yes, I believe we have.

6 Q. Is it reasonably probable to look at the geology
7 in any of these units and have the expectation that you can
8 drill a Pictured Cliff well as a stand-alone Pictured Cliff
9 well to produce only out of that formation, which would be
10 economic?

11 A. Could you please repeat the question?

12 Q. Sure. When you look at the geology for the
13 Pictured Cliff, are you likely to find an opportunity now
14 where you can drill a stand-alone Pictured Cliff well in
15 any of the units and have that be productive enough to be
16 economic by itself?

17 A. I don't believe so. There have been enough
18 penetrations in the units to understand the geology well
19 enough to say no.

20 Q. When we look at the Pictured Cliff in each of the
21 units, do we have enough data points where you can
22 accurately map the distribution of the Pictured Cliff?

23 A. Yes, we do.

24 Q. In a sufficient enough way to recognize that it
25 would be highly unlikely to find one of those untested

1 sweet spots, if you will, in the Pictured Cliff, that all
2 of a sudden we're going to get a very economic well in that
3 zone?

4 A. That is true. It would be very unlikely to find
5 a -- as you called it, a sweet spot that is untested at
6 this point.

7 Q. When we look at the extent of the Dakota
8 development from a geologic perspective, the -- what's
9 occurred in these units in terms of the Dakota development?
10 I believe we have more Mesaverde wells than any other?

11 A. Yes.

12 Q. There are some instances where there are fewer
13 Dakota wells. I think in all instances there are fewer
14 Dakota wells. Do we have enough Dakota data, from a
15 geologic perspective, to give you a generalized sense of
16 the distribution of the Dakota?

17 A. I think that is true. In the Dakota the sands
18 are very predictable in their lateral distributions, so
19 that even if we don't have data points for several
20 sections, you can make a very good estimate of what you
21 would expect to find in those sections.

22 So yes, I would say there is enough data points
23 to predict what you will find in the Dakota.

24 Q. As a geologist, do you find any evidence that is
25 going to be inconsistent with the engineering conclusion

1 that in almost all cases in these units, the Pictured Cliff
2 and the Dakota are in all probability to be marginal zones?

3 A. No, I find the geologic evidence to be consistent
4 with the engineering evidence.

5 Q. When we look at the Mesaverde in each of these
6 units, how does that rank in terms of its likelihood of
7 being a commercial reservoir, as compared to the others?

8 A. I think the likelihood of a commercial Mesaverde
9 is higher, much higher than the likelihood of commercial
10 Pictured Cliffs or Dakota.

11 Q. So in terms of commingling, what do you do as a
12 geologist in picking opportunities to package these
13 multiple reservoirs together in one wellbore? What do you
14 try to do?

15 A. Well, you try and find an area where you can
16 optimize recovery in all three zones, of course, but you
17 would need to have -- be sure that the well itself is going
18 to be economic. And therefore you need to find economic
19 Mesaverde opportunities, and then drill all the way down to
20 the Dakota and -- making sure that that incremental cost is
21 economic as well, to recover the gas in the other zones.

22 Q. From a geologic perspective, how does the
23 Fruitland Coal gas fit into the puzzle? Are there -- Well,
24 let me ask it to you this way: Are there opportunities in
25 each of these units, all of which have Fruitland Coal gas

1 wells in them --

2 A. Uh-huh.

3 Q. -- to take that coal gas production and to
4 commingle it, probably with the Pictured Cliffs, I would
5 think?

6 A. I suspect there would be opportunities to
7 commingle the Fruitland Coal with that.

8 Q. Okay. So in each of the units, the geologic
9 information shows that Fruitland Coal gas is available in
10 all of these units?

11 A. Yes, in varying quantities, but yes.

12 Q. Okay. Let's take one of these exhibit books as
13 an example. Let's start with 11,626, if you have that
14 before you.

15 A. Yes, I do.

16 Q. And let's go through with the Examiner how the
17 geologic data is organized so that he may review that. If
18 you'll start with Exhibit Tab Number 3. And all the books
19 are constructed in the same fashion, are they not sir?

20 A. Yes, I believe they are.

21 Q. All right. Let's start with this one, then, and
22 have you identify and describe what we're looking at with
23 the first display behind Exhibit Tab Number 3.

24 A. The first display that I have is the Paguate net
25 pay map. And what this is, it's in the Dakota formation,

1 and it's the green map, and it's primarily green color.
2 It's in the Dakota formation. It's showing the marine
3 sequence, the marine sandstone sequence. And it's a net-
4 pay map which was constructed using a porosity cutoff of 6
5 percent and a resistivity cutoff of 30 ohmmeters from the
6 logs.

7 And as you can see, there are numerous data
8 points, most of them being in the northeast corner of the
9 unit, with fewer data points as we get to the south of the
10 unit.

11 But what it essentially shows is that there is
12 very little variation in the marine sands within the Dakota
13 formation, the marine sands being generally considered to
14 be the most productive, certainly which contain the most
15 gas in the Dakota formation. So very consistent across the
16 whole unit.

17 Q. As we look at the geology for the Dakota, are we
18 likely to find a Dakota location in the unit that is going
19 to be a highly productive Dakota well?

20 A. I would be surprised. It would be unlikely.

21 Q. That's true of all four of the units, is it not,
22 that the Dakota is really a high-risk reservoir in most of
23 these units?

24 A. Yes, it is.

25 Q. Highly unlikely to get a substantially productive

1 Dakota well?

2 A. Absolutely, yes.

3 Q. Let's turn to the next display. You've got a
4 Pictured Cliff gross isopach as the next display?

5 A. Yes.

6 Q. All these books may not be quite arranged in the
7 same fashion, but...

8 A. That's the map I have.

9 Q. All right. You and I are looking at the same --

10 A. Yes.

11 Q. All right, what are we seeing here?

12 A. This is a map of the gross Pictured Cliffs
13 interval across the unit, and this is from the top of the
14 Pictured Cliffs, which is generally within 10 to 20 feet of
15 the base of the Fruitland Coal, and down to where it grades
16 into the Lewis shale.

17 And what we see is a similar trend. There are
18 some variations within the unit, but there are no
19 significant changes that would grossly affect the
20 productivity of the wells.

21 We also see that we have a large amount of data
22 control in the Pictured Cliffs because of all the wells
23 that have drilled through it.

24 Q. Geologically, what's your conclusion about future
25 opportunities in the Pictured Cliff?

1 A. I think the point to be taken from this is that
2 what we've gotten in the existing wells is what we're going
3 to see in the future.

4 Q. And then the final display, would you identify
5 and describe that one for us?

6 A. The final display is a structural marker, a
7 structural map. It's on a middle Lewis marker, the Lewis
8 shale being between the Pictured Cliffs and the Mesaverde
9 formation. And this shows essentially a consistent dip
10 across the unit, nothing of significance which would affect
11 production in this unit.

12 Q. Is there a structural component to the reservoir
13 such that we're likely to have a highly productive portion
14 of the reservoir based upon structure?

15 A. No, I do not believe so.

16 Q. In fact, that conclusion could be reached for all
17 of these units?

18 A. Yes.

19 Q. Structure is not going to be a significant
20 contributing factor to productivity?

21 A. That would be true.

22 Q. Is there any substantial difference with regards
23 to the information we've just described as we look at the
24 other exhibit books?

25 A. No.

1 Q. You can reach the same conclusions and opinions?

2 A. Yes.

3 Q. Okay, let's turn to Exhibit Tab 4, and for this
4 unit as well as the other units you have a locator map, and
5 it shows a line of cross-section?

6 A. Yes.

7 Q. Let's take the -- out of the pocket. Let's take
8 a cross-section, so the Examiner sees your point and your
9 conclusions from the cross-section.

10 All right, sir, describe what we're seeing here.

11 A. This is a cross-section in the Pictured Cliffs
12 interval. It is hung on the basal Fruitland Coal at the
13 top of the Pictured Cliffs zone.

14 What it represents, three wells stretching all
15 the way across the unit, and essentially it shows that
16 there are -- there's not a significant change within the
17 Pictured Cliffs. We see that the marine sequences are --
18 appear to be different parasequences, different beach
19 sequences, but that their magnitude is essentially the same
20 across the unit.

21 Q. Do we have this relationship in all the units
22 where we have the Fruitland right above the Pictured Cliff?

23 A. Yes. Yes, we do.

24 Q. And is the sequence here such that the Fruitland
25 Coal gas wells are being produced out of the coal interval

1 that would be in proximity to the conventional Pictured
2 Cliff sandstone gas production?

3 A. Yes, I believe so.

4 Q. All right. Is the commingling opportunity for
5 those two zones one in which you can more effectively and
6 efficiently produce these wells if you explore the
7 opportunity for commingling Pictured Cliff with the
8 Fruitland Coal gas?

9 A. Yes, I think in many cases you would not produce
10 the Pictured Cliffs without a commingle.

11 Q. And you have cross-sections for all the rest of
12 the exhibits, do you not?

13 A. Yes.

14 Q. I mean the exhibit books.

15 A. Yes.

16 Q. All right. When we look at the next pocket,
17 there's another pocket with another cross-section. Let's
18 pull that one out and -- and here you're looking at the
19 Dakota relationship?

20 A. Yes.

21 Q. All right. Describe for us what you're seeing
22 here.

23 A. This is once again a cross-section, all the way
24 across the unit in a southwest-northeast direction. This
25 one is flattened on the base of the Greenhorn formation,

1 which is a consistent stratigraphic marker all across the
2 Basin.

3 You can see labeled within the Dakota formation
4 is the marine and a nonmarine sequence. The net-pay map we
5 looked at earlier is the marine sequence, the Paguate
6 portion of that, which is the sand at the bottom of that
7 unit. The nonmarine sequence down lower has lower
8 porosities than the marine sequence.

9 Essentially what we see is that there's a lot of
10 consistency in the marine sequence. It appears to be a
11 mass of sand across the whole unit. The nonmarine
12 sequence, the individual zones seem to come and go, but
13 essentially the total footage of pay in the nonmarine
14 sequence remains essentially the same across the unit.

15 Q. From a cross-sectional perspective then, when you
16 examine the Pictured Cliff and the Dakota, which are
17 targeted to be the two formations in each unit with the
18 greatest possibility of being marginal, you don't see a
19 sufficient variation in the geology to change that opinion?

20 A. That is correct.

21 MR. KELLAHIN: Okay, that concludes my
22 examination of Mr. Babcock.

23 We move the introduction of his geologic
24 displays. I believe they're located in all instances in
25 the exhibit book, being Exhibits 3, 4 and 5 -- I'm sorry,

1 no, it's just 3 and 4.

2 EXAMINER CATANACH: Exhibits 3 and 4 in each of
3 the exhibit books will be admitted into evidence.

4 EXAMINATION

5 BY EXAMINER CATANACH:

6 Q. Mr. Babcock, has the Pictured Cliffs formation
7 been extensively developed in each of these units?

8 A. No, it has not been completely developed in all
9 of those units.

10 Q. What would you estimate to be the percentage of
11 development within these units?

12 A. On 160-acre spacing -- It varies significantly.
13 The 29-7 Unit has scattered tests. I should probably look
14 at the maps in order to assess that.

15 The 27-5 Unit is the most well developed with 87
16 wells; and the 28-6 Unit has 51 wells; the 28-5 Unit, 16 --
17 these are Pictured Cliffs wells I'm referring to, of course
18 -- and the 29-7 Unit only has 13 Pictured Cliffs wells.

19 Q. Do you have those numbers for the Dakota as well?

20 A. Yes, I do. In the 27-5 Unit there are 101 Dakota
21 wells. In the 28-5 Unit there are 67 Dakota wells. In the
22 28-6 Unit there are 90 Dakota wells. And then in the 29-7
23 Unit there are 55 Dakota wells.

24 Q. Okay. The Mesaverde would have been extensively
25 developed in all of the units, probably?

1 A. Yes, yes. There are still some 160-acre
2 locations to be developed within the Mesaverde.

3 Q. But for the most part, the Mesaverde is almost
4 fully developed, do you think?

5 A. Yes, the 28-5 Unit may be the only exception.
6 Probably doesn't -- only has a few of the 160-acre
7 locations developed.

8 Q. In some of these units where you don't have a lot
9 of wells, like the 29-7 Unit where you only have 13 wells,
10 do you think it's possible to make a geologic determination
11 that you're not going to get any good PC wells in the unit
12 anymore?

13 A. There's always the possibility that you might
14 stumble onto something, but particularly in the Pictured
15 Cliffs where we've drilled numerous wells through there and
16 have wireline logs across the interval, we can map the
17 thicknesses of the reservoir across the unit with a fair
18 amount of accuracy.

19 And we have -- Those 13 wells are scattered
20 somewhat through the unit, so we have tested it in a
21 variety of places and found varying results across the
22 unit.

23 I'm not aware of any of the Pictured Cliffs wells
24 that turned out to be exceptionally good wells.

25 Q. So as a geologist, you wouldn't recommend the

1 drilling of a stand-alone PC or Dakota well in any of these
2 units?

3 A. Probably not, no.

4 Q. Okay. The -- You're not attempting to classify
5 the Fruitland as being an uneconomic horizon, are you, in
6 this case?

7 A. I don't believe so.

8 MR. KELLAHIN: Let Mr. Daves respond. My
9 understanding is that it's not, that the Mesaverde and the
10 Fruitland Coal are possibly more economic, and they're the
11 ones that we look for, and package the two others together.

12 EXAMINER CATANACH: I have nothing further of
13 this witness.

14 MR. OWEN: Nothing for this witness.

15 MR. KELLAHIN: Mr. Examiner, our last witness is
16 Scott Daves.

17 SCOTT B. DAVES,

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

20 DIRECT EXAMINATION

21 BY MR. KELLAHIN:

22 Q. Mr. Daves, for the record would you please state
23 your name and occupation?

24 A. My name is Scott Daves. I'm a senior petroleum
25 engineer for Burlington Resources in Farmington, New

1 Mexico.

2 Q. Mr. Daves, on prior occasions before the
3 Division, as well as the Commission, have you testified
4 with regards to downhole commingling applications on behalf
5 of your company?

6 A. Yes, I have.

7 Q. Do you continue to be involved in the commingling
8 procedures so that you are familiar with the pressure
9 information, the economics with regards to drilling these
10 wells and the other components with regards to the
11 technical data involved in the commingling applications?

12 A. Yes, I am.

13 MR. KELLAHIN: We tender Mr. Daves as an expert
14 petroleum engineer.

15 EXAMINER CATANACH: He is so qualified.

16 Q. (By Mr. Kellahin) Let's start in a general
17 sense, Mr. Daves, about the reference-case concept.

18 A. Uh-huh.

19 Q. I know when you testified before the Commission
20 back in January, I think it was, of this year -- Perhaps it
21 was February; I've lost the exact date. But you have
22 presented an extensive presentation with regards to
23 pressure information?

24 A. Yes, I have.

25 Q. On past occasions you have provided allocation

1 formulas, how to allocate production to the parties, to
2 receive the benefit of production, so that everybody gets
3 their accurate and reasonable share of that production?

4 A. Yes, I have.

5 Q. And you've done an economic analysis with regards
6 to the reservoirs involved?

7 A. Yes.

8 Q. Why don't you explain to us what your hope and
9 expectation was in the utilization of a reference-case
10 concept for processing downhole commingling applications?

11 A. Okay, essentially I think the gist of what a
12 reference case would do is, as you take out the form and
13 you look at the data and the questions that are on it, in
14 certain cases where, for instance, a method of production,
15 a type, whether it's oil or gas, those types of things,
16 bottomhole pressures, gas contents, those sorts of things,
17 in a general area, for example, in one of these units you
18 could apply a reference case, supply the data that would be
19 there to establish a common database for public record so
20 that anybody, like the gentleman back here, if he wanted to
21 understand what was going on, would have the opportunity to
22 look at the data yourself, you would be able to.

23 But I don't think that would ever preclude anyone
24 who fills out one of these forms and mails it in from
25 putting in the data that needs to be in there and checking

1 off the appropriate questions.

2 So in other words, it's essentially the reference
3 material that would back the data that they put on there.

4 Q. We submitted to the Commission some pressure
5 maps, if you will, that showed the distribution of pressure
6 data in the Dakota, the Mesaverde and the Pictured Cliff,
7 and subsequently we've been asked by the Division to
8 provide the actual data points --

9 A. Uh-huh.

10 Q. -- that generated those maps.

11 A. Right.

12 Q. Did you bring the data with you today --

13 A. Yes, I did.

14 Q. -- that gives the Division Examiner that data by
15 well, by location and by pressure?

16 A. Yes.

17 Q. All right. And how have you formulated that
18 information? How is it tabulated?

19 A. It's in table --

20 MR. KELLAHIN: Why don't you go ahead and get
21 that, and we'll submit that.

22 Mr. Examiner, subsequent to the hearing, we'll
23 mark the exhibit booklet I've just handed to you with an
24 exhibit number. We'll reference it as Exhibit A to these
25 four cases, just to have a way to label it. But that is

1 the tabulation of data that verifies the maps that were
2 presented to you earlier.

3 Q. (By Mr. Kellahin) Let me give you a for-
4 instance, Mr. Daves. Let's assume that Burlington files
5 one of these C-107 forms, and the blank that's filled out
6 by the applicant is the bottomhole pressure data.

7 A. Right.

8 Q. You would go to your own information, probably
9 the same book that you've submitted to Examiner Catanach --

10 A. Uh-huh.

11 Q. -- find what you expect to be the bottomhole
12 pressure at that location in the pool, if it's a new
13 drill --

14 A. Correct.

15 Q. -- or if it's an existing wellbore, you're going
16 to have a pressure for bottomhole?

17 A. Correct.

18 Q. You're going to fill in the blank?

19 A. Right.

20 Q. Are you going to ask the Division Examiner to
21 have to do any homework in order for you to fill your
22 application in?

23 A. No, sir.

24 Q. If he desires to check the validity of the number
25 you have put in, where can he do that?

1 A. Through that data there. And in my own
2 professional opinion, the map would be better because of
3 the way that it shows you a relationship not only in that
4 specific point but around that point, and it's a visual
5 relationship.

6 Q. All right, so -- You've put in the bottomhole
7 pressure information under row 5, and down under reference
8 case, you could simply reference the order that -- or the
9 case number that's got the data as to pressure in that
10 area?

11 A. That's correct.

12 Q. And if he chose to check the accuracy of your
13 number, he could go to that source or choose not to?

14 A. Correct.

15 Q. All right. Let's go to the method by which you
16 have made a decision that the zone is marginal. If you'll
17 look down on the form under 7, if you'll look at the next
18 row below that it asks you if production is marginal. How
19 are you going to fill that blank in?

20 A. I would look at the reference cases that have
21 been submitted in the past, or for a specific area you may
22 need to do that for that specific area.

23 Q. In past individual commingling cases before the
24 rule change, where we had a difference in ownership --

25 A. Uh-huh.

1 Q. -- we came in on an individual case and we showed
2 a marginal example --

3 A. Uh-huh.

4 Q. -- and that was usually a curve that showed
5 initial rate versus an EUR?

6 A. That's correct.

7 Q. All right You've made a judgment in how to
8 determine that zone is marginal?

9 A. That's correct.

10 Q. If there's a reference case for this area that's
11 relevant and you have already submitted an example that the
12 Pictured Cliff, for instance, is marginal, using your
13 criteria --

14 A. Uh-huh.

15 Q. -- would that serve as the reference --

16 A. Yes.

17 Q. -- for your assertion that that zone is marginal?

18 A. Yes.

19 Q. Okay. And instead of attaching to the
20 application that kind of confirming information, he could
21 simply look at the reference case?

22 A. Correct.

23 Q. All right. What do we do about the allocation
24 formulas?

25 A. Those would need to be attached. I think you

1 would need the allocation formulas, specific. If it's a
2 new drill, there's going to be key pieces, like a Fruitland
3 Coal-Pictured Cliffs new drill, where you're going to need
4 key data out of your logging suite, out of your analysis
5 that you do on the well, out of your flow tests that are
6 going to drive how that allocation formula is there. So
7 that's going to need to be on a case-by-case basis,
8 typically.

9 Q. The general-form engineering calculation --

10 A. Uh-huh.

11 Q. -- will have various values that can be
12 substituted to make it specific to that application?

13 A. That's correct.

14 Q. But the general choice of an allocation procedure
15 could be generic as to that unit?

16 A. That's correct.

17 Q. And we've done those in the past, haven't we?

18 A. Right.

19 Q. And if the Division chose to do so, that could be
20 a point of reference to at least see the methodology --

21 A. Right.

22 Q. -- and have a transcript that shows in detail
23 your testimony with regards how to do it?

24 A. Right, that is correct, because there are --
25 There's two pieces to that. There's a methodology, just

1 like you stated, whether it's a subtraction methodology or
2 a percentage allocation or, in the case of -- it may have
3 already had a zone there and you could allocate it out that
4 way. But the data that you're going to need to support
5 that methodology would still -- would need to be there --
6 on a case-by-case --

7 Q. And if it's not there, it could be found in the
8 reference case?

9 A. Right.

10 Q. Let's turn to the topic of the data that you've
11 supplied today with regards to the kinds of information
12 shown in the exhibit book. Let's -- Oh, I know what I was
13 going to ask you.

14 How do you do the calculation of an allocation if
15 you're involved in the Fruitland Coal gas?

16 A. The preferred method that I professionally prefer
17 is the subtraction method, because the Pictured Cliffs and
18 any formation you may commingle with -- or I mean the
19 Fruitland and any formation you may commingle with it
20 perform differently over the life of the well. So you need
21 to be going after the known historical set of data, which
22 is typically the Pictured Cliffs, and then whatever the
23 total production is, minus that allocated production, would
24 equal the Fruitland Coal production.

25 Q. Is that a methodology that we have submitted to

1 the Division that's been approved in the past?

2 A. Yes.

3 Q. And that's what you would recommend in those
4 examples where we propose to commingle the Fruitland Coal?

5 A. Yes.

6 Q. Would be the subtraction method?

7 A. Uh-huh.

8 Q. All right. Let's turn now to the data in the
9 exhibit books. If you'll look behind Exhibit Tab Number
10 5 -- I'm looking at Exhibit Case Book 11,626 -- let's start
11 at that point. Identify for us what we're looking at and
12 what's its significance.

13 A. In Exhibit 5?

14 Q. Exhibit Tab 5. I've got some pressure data on
15 the PC.

16 A. Right. What I have here is, I have initial
17 conditions and current conditions, and this is just
18 essentially a state of what the reservoirs have done, and I
19 have it tabulated for each of the respective units. I have
20 initial shut-in wellhead pressures, calculated bottomhole
21 pressures, Z factors, a P/Z, which would give you the basic
22 correction you need for gas compressibility.

23 And then I also have current conditions that
24 we've gathered and averaged over the last several years to
25 get what would be a representative pressure for the entire

1 unit.

2 And then I also have gone back in and shown what
3 the average cumulative production is for each of the wells
4 within the unit, and a reserve index, which is an MMCF per
5 p.s.i. In other words, you could multiply the current
6 reservoir pressure times the MMCF per p.s.i., and you would
7 be able to calculate what the remaining reserves are. In
8 this case for the 29 and 7 Unit it's approximately 76
9 million cubic feet.

10 And the average Q_i that we had in that area is
11 the last column, which is -- that was an initial production
12 out of those wells, and that was 238 MCF a day.

13 Q. What's the point of this information?

14 A. What this is telling you is essentially what kind
15 of -- if you went out and were going to attempt to find
16 another spot in the Pictured Cliffs to drill a well, how
17 much in terms of reserves you could expect and what kind of
18 an initial rate you could expect on each of these.

19 Q. Okay, so what's the point?

20 A. I'll go ahead and move along. What I also showed
21 was costs to do each of the various scenarios, and we'll
22 use these numbers that came up on that first page, on the
23 graph on the third page.

24 Q. All right. You're beginning to build the example
25 to show that in all probability in the Pictured Cliff for

1 each of these units we're going to see a marginal zone?

2 A. Right, statistically, you should expect a
3 marginal zone. In the Pictured Cliffs for each of the
4 units, you can look -- A good example would be the 27-5
5 Unit. You would have approximately 400 million cubic feet
6 of gas, if you plan to drill an undeveloped block, and you
7 would be looking at an initial rate of approximately 63 MCF
8 a day.

9 And you can go into this curve and see that even
10 as a commingle you would be very unlikely -- because, one,
11 your reserves and your rate are -- your rate is actually
12 off the scale. But your reserves at 460 million, you can
13 go across and you can see basically that at any rate it
14 would be uneconomic to go and drill even a commingle well
15 out there.

16 Q. This is a consistent methodology that -- It's a
17 methodology that's consistent with our past presentations
18 on this topic to the Division?

19 A. That's correct.

20 Q. First of all, you estimate an initial rate?

21 A. Uh-huh.

22 Q. You have calculated in a conventional engineering
23 fashion what you expect to be the ultimate gas recovery on
24 the first page, and so you know what this well is likely to
25 do?

1 A. Right --

2 Q. You then turn over --

3 A. -- a good idea.

4 Q. You turn over to the PC and you see, as to the
5 cost attributed just to the Pictured Cliff --

6 A. Right.

7 Q. -- you're going to see what it's going to cost to
8 get that resource?

9 A. Right.

10 Q. You then have plotted those components --

11 A. Uh-huh.

12 Q. -- on the graph --

13 A. That's correct.

14 Q. -- to help us decide what kind of an initial rate
15 and what EUR you're going to have to achieve in order to be
16 able to do a PC stand-alone, dual or a commingle well?

17 A. That's correct.

18 Q. All right. Let's find an example.

19 A. Okay.

20 Q. If I have a rate, initial rate of 500 MCF a day,
21 and I have calculated that it's only going to get me 2500
22 MMCF --

23 A. Uh-huh.

24 Q. -- how am I going to get that resource?

25 A. In that specific case -- and that would be an

1 extraordinary success in the Pictured Cliffs -- you could
2 afford to drill that as a stand-alone.

3 Q. Okay. Because when I take those two points, read
4 them together --

5 A. Right.

6 Q. -- I come up above the blue line?

7 A. That is correct.

8 Q. If I get a typical Pictured Cliff well as to
9 rate, where is my rate likely to be?

10 A. In each of the units I have plotted what that
11 rate would be: For the 29-7 Unit, 238 MCF a day. For the
12 San Juan 28-6 Unit, 216 MCF a day. For the 28 and 5 Unit,
13 136 MCF a day. And for the 27 and 5 Unit, 63 MCF a day.

14 And in each of the cases, you could match that
15 with what the average remaining -- and why I would say
16 average remaining is that over time, with the number of
17 points that you have, you have depleted the entire
18 reservoir. I think Mr. Babcock stated that they are fairly
19 continuous. So the kind of reserves you would be looking
20 at is most likely something along the lines of what these
21 average remainings are for the wells out there.

22 So a typical example, you may have a half a B or
23 500 MCF, or even a million or a BCF, and it would take,
24 even to be economic, as a commingle, approximately 200 MCF
25 a day at an initial rate. Or as a dual, it would take

1 almost 500 MCF a day for that to be economic.

2 Q. Can you make judgments about whether a zone is
3 going to be marginal just by looking at the initial rate
4 itself?

5 A. No, I think I've gone on record as stating that
6 in the past. It's a function of both things. You have to
7 have reserves there, and you also have to have rate.

8 And without reserves, even a million-a-day rate,
9 if there are no reserves -- and I think the example in the
10 29 and 7 Unit, these wells came on real hard, but they die
11 off quickly. So even though you have the highest initial
12 rate, you also have what is the lowest reserves that can be
13 expected out there.

14 So -- And I think that explains why you don't see
15 that many wells in the unit. It's a very risky-type thing
16 to go out and even attempt, and our geologic data kind of
17 confirms that.

18 Q. Based upon this information, what are you asking
19 the Division Examiner to do on this topic in terms of a
20 reference case?

21 A. To identify and recognize that in each of these
22 areas the Pictured Cliffs is a marginal horizon.

23 Q. Let's turn to the Dakota and have you go through
24 the analysis of the Dakota information, behind Exhibit Tab
25 Number 6.

1 A. Okay. Exactly the same methodology was used for
2 this. I gave statistical initial conditions, statistical
3 current conditions, average cum productions, a reserve
4 index, an average EUR and an average remaining, and also an
5 initial rate, expected initial rate.

6 Q. Okay.

7 A. I also showed what statistical costs would be to
8 go out and drill a Dakota well as a stand-alone, a dual or
9 a commingle, and then again the same type of curve.

10 Q. All right, let's take examples using the curve,
11 then --

12 A. Okay.

13 Q. -- to show us how we would combine rate and EUR
14 on the curve to see where we would be in order to afford to
15 do this as anything other than a commingled well.

16 A. Okay, a good example would be the San Juan 27-5
17 Unit, which you could expect approximately 600 million
18 cubic feet for your reserves and an initial rate of almost
19 400 MCF a day. And you can see that if you went at the 400
20 MCF a day, if you went up and you found where 600 MMCF came
21 across there, you would see that it is basically marginal,
22 even as a commingle.

23 Q. Yeah, we could hardly do it as a commingle
24 case --

25 A. Correct.

1 Q. -- you're right on the line?

2 A. Another good example would be -- Well, although
3 you have some fairly nice reserves, the San Juan 28-5 Unit,
4 number -- or the San Juan 28-5 Unit, approximately 300 MCF
5 a day and approximately 1.2 BCF there. You could almost
6 make a case for a dual, but now -- There again, these are
7 all unrisks numbers, so if you looked at it in a risks
8 sense, you probably wouldn't do that project as a dual; it
9 would be uneconomic.

10 Q. All right. If I had three-quarters of a BCF of
11 reserves and if I had a rate of 400 MCF a day, I'm just
12 barely above the pink line?

13 A. Correct.

14 Q. I can just barely afford to do this as a
15 commingle well?

16 A. That is correct.

17 Q. And so if I fall below this pink line with either
18 rate or EUR, I can't afford to get it --

19 A. That's correct.

20 Q. -- even with a commingled well?

21 A. That is correct. And I think in past testimony
22 that I showed that statistically that's what's going on in
23 the San Juan Basin. People are not attempting these kind
24 of wells, because the reservoirs are now at a marginal
25 state that they cannot afford to do that.

1 So essentially for -- if you wanted to look -- I
2 think the 27 and 5 Unit was a good example where for the
3 Dakota -- Yeah, on the map in Exhibit 4, if you look at how
4 many Dakota wellbores are out there, you'll notice there
5 are quite a few undeveloped Dakota drill blocks all through
6 this unit.

7 Well, you know, nobody's going to do that,
8 because they are marginal, and nobody has done that. We're
9 not continuously adding in new drill wells through here in
10 the Dakota, because they are uneconomic, and whatever
11 capital we would spend to do these is going somewhere
12 outside of this unit.

13 Q. What's the future for each of these four units in
14 terms of how to further manage them in order to maximize
15 recovery?

16 A. The only current economic method that we see is
17 to use the commingling approach to do that.

18 Q. I'd like you to make these gentlemen comfortable
19 over here about the allocation methodology and the concept
20 of what it means for the operator to reduce the expenses
21 for the well by commingling, yet to do it in such a way
22 that they or you or any of us should be comfortable that
23 we're receiving our fair share of revenues from the
24 appropriate formation in which we have an interest --

25 A. Okay.

1 Q. -- and we're not giving it away to somebody else.

2 A. Okay, let me first explain -- The gentleman had
3 asked what is a commingled well. Basically -- Probably
4 ought to back up and explain.

5 When you drill a well, typically, to the Dakota,
6 which is the deepest of all of these formations, the
7 deepest sandbody, you have to pass through all these other
8 formations, so you already have a feel for what's there.

9 But what happens is, if you drill it as a dual
10 well where you have multiple strings and you have
11 mechanical packers in there to keep the zones isolated,
12 that gets very expensive, because you have to drill a
13 bigger hole, you have to have bigger bits, you have to have
14 bigger casing, more cement, all of that type.

15 So that makes it more expensive in the surface,
16 instead of having -- You've probably seen a gas well out
17 there. You'll have a meter running and all these other
18 little pieces of equipment out there. On the surface, that
19 -- all those things add up to considerably higher cost.

20 But what's happened is, all of that cost to be
21 able to do that has gotten to the point where to invest
22 that money to do that, it doesn't pay out, so you don't do
23 it. So in other words, you can't afford to make that
24 investment because it's not going to pay out, and you're
25 not going to, you know, basically make enough money out of

1 that well to pay for the cost of doing it.

2 So what we've looked at is, instead of adding all
3 of those extra expenses in, we can drill a smaller hole,
4 smaller casing, a single string of tubing and a single set
5 of facilities on the location, so all of our costs have now
6 been compressed down considerably over what they were
7 before. So now you're able to lift that gas out of the
8 ground more economically, and then you can afford to invest
9 and do those types of projects.

10 As far as how they're allocated, statistically we
11 have enough data in the San Juan Basin to show and to know
12 what a typical well will do, because, as -- You may want to
13 take out one of these maps. As you can see on the maps,
14 there are numerous wells around it, so you have a good feel
15 for what should occur as you produce that well.

16 So knowing that, you can take the total
17 production, and based off of the data that you have on the
18 offsets and the pressures that you've taken, you can
19 allocate the production fairly effectively to each of the
20 horizons that would be producing in the wellbore.

21 Q. If you personally had an ownership in the
22 Mesaverde --

23 A. Uh-huh.

24 Q. -- and none of the other zones to be commingled,
25 would you be satisfied to be paid under this system?

1 A. Yes.

2 Q. No problem?

3 A. No.

4 Q. Do we have enough science and accuracy of
5 measurement and reporting that the production can be
6 allocated back to the proper parties?

7 A. Yes.

8 MR. KELLAHIN: I have no further questions.

9 We move the introduction of Mr. Daves' exhibits;
10 in each exhibit book they're the same numbers. They're
11 Exhibits 5 and 6.

12 EXAMINER CATANACH: Exhibits 5 and 6 in each of
13 the exhibit books will be admitted as evidence.

14 Mr. Owen, do you have any questions?

15 MR. OWEN: I have a few questions, Mr. Daves.
16 You'll have to pardon my voice.

17 EXAMINATION

18 BY MR. OWEN:

19 Q. I'm -- Vastar is particularly interested in the
20 allocation as to Fruitland production. It's my
21 understanding that Fruitland -- the production curve from a
22 Fruitland well doesn't follow a nice, steady decline curve;
23 is that correct?

24 A. It can vary from area to area, depending on what
25 the reservoir is. So in other words, the -- depending on

1 water saturations, pressures, adsorption, isotherm
2 behavior, numerous other things can cause that to vary.

3 But what you typically see is, in a lot of cases,
4 in particular in the 29-7, you'll see a slight incline in
5 production, and then a specific dropoff of production or a
6 decline. But it does not necessarily match up with what
7 you would see in a conventional reservoir like a Pictured
8 Cliffs or a Dakota or a Mesaverde. So they are different.

9 Q. So it's my understanding, based on Mr. Kellahin's
10 examination, that as to wells in which there is production
11 from the Fruitland, you'll be using the subtraction method;
12 is that correct?

13 A. That's correct.

14 Q. Could you just go through the subtraction method
15 again so we -- I just want to highlight exactly how you do
16 that.

17 A. Sure, sure. Typically, in an area -- For
18 instance, say a Pictured Cliff-Fruitland commingle, as
19 we've testified before, the Pictured Cliffs is a much more
20 known behavior. How it's going to produce is much more
21 readily understood than how the Fruitland will behave.

22 So the typical way of doing it is to allocate
23 total production from the wellbore, minus the known or
24 allocated production of the Pictured Cliffs, equals the
25 Fruitland Coal production.

1 Q. So you're going to establish an allocation
2 procedure for those wells which will be applied on a case-
3 by-case basis for the particular allocation -- for the
4 gross production from that well; is that correct?

5 A. That's correct.

6 MR. OWEN: That's all the questions I have, Mr.
7 Examiner.

8 EXAMINER CATANACH: Okay. I'd just like to
9 state, Mr. Kellahin, I think there is a basic
10 misinterpretation of the reference case rule. As I
11 understood the concept of reference case, if you submitted
12 enough -- or if you had enough data on an area, you simply
13 provided that at a hearing such as this, and you wouldn't
14 have to submit it again on the application; you would just
15 cite the case where all that information was submitted.
16 That was my understanding.

17 MR. KELLAHIN: And I think we're saying the same
18 thing. The supporting documents for the data are in this
19 case file.

20 EXAMINER CATANACH: I understand.

21 MR. KELLAHIN: But that doesn't excuse me from
22 putting the number on the form.

23 EXAMINER CATANACH: Well, that's where the
24 problem lies. It's my opinion that the way the rule is
25 stated, that it does excuse you from having to submit -- to

1 actually put a number in that space.

2 MR. KELLAHIN: Well, that's not our intent, Mr.
3 Examiner. We intend that Meridian or Burlington will do
4 their own homework. We're going to put the number on the
5 form.

6 What we'd like to do is be excused from
7 submitting to you the same documents that we're giving you
8 now, and perhaps the order that you write to us could
9 simply do that. I don't know why you can't make a
10 determination that that is an effective way to do it.

11 We're not asking to be excused from the
12 responsibility of reporting the pressures, particularly,
13 but we would like to fill in the form and not present you
14 all the data that we're doing now.

15 EXAMINER CATANACH: Well, I guess my other
16 statement would be that the form doesn't generally require
17 the submission of other data, unless it's -- you know,
18 there's a big question surrounding it. It doesn't require
19 the submittal of attachments for pressure information or
20 anything else.

21 MR. KELLAHIN: Well, I guess that would be up to
22 you as a regulator, if you want to accept the form on face
23 value. You can already see there's a difference among
24 experts here, with the experts at Amoco, about how they
25 will report information to you, and you have to decide if

1 you want to accept those on face value. And if not, here's
2 a convenient way to find our supporting data.

3 EXAMINER CATANACH: Okay.

4 EXAMINATION

5 BY EXAMINER CATANACH:

6 Q. Mr. Daves, on your Exhibit Number 5 for the PC
7 data --

8 A. Uh-huh.

9 Q. -- tell me how you came up with these numbers.
10 Did you take -- Say, on the initial conditions, did you
11 average all of the PC wells in each of these units?

12 A. That's what I did. But let's make sure we
13 understand what part of that I averaged.

14 As the Pictured Cliffs for any of these
15 reservoirs -- There's been several stages of development,
16 so what I did in each of these cases and in the Dakota the
17 same way is, I made a cutoff, a 1963 cutoff of reservoir
18 pressure, because any data after that -- typically, if you
19 drill two wells side by side in the Pictured Cliff -- This
20 well was drilled in 1960 or 1958 or 1954, and this well was
21 drilled in 1970. Chances are that drainage has occurred
22 over time so that the pressure in that second well is going
23 to be lower.

24 Well, if you average those two numbers, you're
25 going to get something less than what true reservoir

1 conditions were.

2 So I made an engineering judgment date as to when
3 I felt like any data after that was a depleted-state
4 initial pressure. So in other words, I looked for the good
5 early data that I had to find out what the real reservoir
6 pressure was of those reservoirs.

7 Q. So this is pre-19- -- What?

8 A. -- -63.

9 Q. How many data points did you have for these units
10 back that far?

11 A. Typically 25.

12 Q. For each unit?

13 A. Yes. Some of them were less. In some cases like
14 29-7, the development in it didn't start till later, so I
15 had to change that in the Pictured Cliffs. Most of the
16 development in the Pictured Cliffs in the 29-7 Unit has
17 been a recent phenomenon, and the success has been
18 marginal.

19 Q. So what you're telling me is, for each of these
20 units, that, say in the 29-7 Unit, the 1000 or -- I'm sorry
21 -- Yeah, 1148 pounds, is a good, representative bottomhole
22 pressure --

23 A. Uh-huh.

24 Q. -- for that whole unit.

25 A. Initial bottomhole --

1 Q. Right.

2 A. Right. In other words, if you looked at the
3 reservoir before anybody penetrated that reservoir with a
4 drill bit and attempted to produce it, that is
5 statistically what you should see.

6 Q. And that number shouldn't vary within that small
7 an area?

8 A. No.

9 Q. It should vary --

10 A. It should be in that range.

11 Q. Okay, got you. Now, what did you do with the
12 current conditions?

13 A. Okay, I looked at the data over the past several
14 years and averaged that. In some cases I had tests in
15 1993, and in some cases I had tests in 1994. So I figured
16 that, you know, the drainage out of those reservoirs
17 between that time frame was small enough that those average
18 pressures should be statistically pretty even.

19 Q. Okay. So you took the existing wells in
20 'ninety -- I'm sorry --

21 A. Yeah. What --

22 Q. The existing wells today, or --

23 A. Today, correct --

24 Q. -- in the recent --

25 A. -- correct.

1 Q. And you got pressures from them?

2 A. Right.

3 Q. And you just averaged those?

4 A. That's right.

5 Q. Okay. The average cumulative production was just
6 basically an average of all the wells?

7 A. That's correct.

8 Q. Okay. Reservoir index...

9 Average estimated ultimate recovery was just,
10 again, an average --

11 A. Uh-huh.

12 Q. -- of what each of those wells should --

13 A. Uh-huh.

14 Q. -- ultimately recover?

15 A. Uh-huh.

16 Q. Okay, and -- Okay, the initial rate, again, was
17 just an average of all the wells?

18 A. No, what I did there is, I took -- because I want
19 to -- the reason I'm using the average Q_i is, I took recent
20 history on those, because those are current reservoir
21 conditions, those are current line-pressure conditions,
22 current completion technologies. So I averaged in the last
23 several years with the completions in each case, where I
24 had to go back -- in some cases I had to go back into the
25 late 1980s, and in some cases I had, you know, mid-ninety

1 data.

2 Q. So recent history would be late 1980s, early
3 1990s?

4 A. Right.

5 Q. Okay. Would the -- Way back in the 1960s, would
6 that have been considerably higher?

7 A. Possibly. And chances are, not likely because of
8 the evolution of completion technology. I think that those
9 would be representative of what you would see even then.

10 Q. All right. So --

11 A. Because you had a higher reservoir pressure.

12 Q. What you're telling me is, if you go drill a well
13 in the San Juan 29-7 Unit today --

14 A. Uh-huh.

15 Q. -- you can probably expect to get -- to have 655
16 pounds of bottomhole pressure?

17 A. That would be very likely.

18 Q. You could probably expect to recover -- Is it 76
19 million --

20 A. Right.

21 Q. -- from that proration unit?

22 A. Right.

23 Q. Okay.

24 A. We've had very -- very limited success in that
25 unit, in the Pictured Cliffs.

1 Q. All right. You can expect to get an average
2 initial rate of 238 MCF per day?

3 A. Uh-huh.

4 Q. Have you -- From your experience, have you seen
5 numbers that vary significantly from these, or very much at
6 all?

7 A. Huh-uh. Let me look back and see what the last
8 four test rates were. The average -- I had -- Out of the
9 four most recent completions, they ranged anywhere from 551
10 MCF a day to 98 MCF a day.

11 Q. Those are your four most recent completions in
12 the 29-7 Unit?

13 A. 29-7 Unit, that's correct. And then they all
14 typically went on a pretty vigorous decline at that point.

15 Q. Okay. Did you do the same thing for the Dakota?

16 A. Yes, I did.

17 Q. Okay. All right, I believe that your economics
18 have changed since the last time?

19 A. What we've gone to, simply because of the funding
20 expectations that we have -- In other words, unless you
21 reach a certain rate of return, you're not going to be
22 funded for a project, and it probably will never be done.

23 Q. Uh-huh.

24 A. So what we did was look back at what hurdle rates
25 are now, and what we've come up with is a 20-percent-after-

1 federal-income-tax rate of return.

2 Q. You used to have 15; is that correct?

3 A. Right, that's correct.

4 Q. Do your numbers change significantly at the 15
5 percent from these?

6 A. 25 to 30 percent.

7 Q. Okay. So you're still saying, okay, that the
8 Mesaverde and the Fruitland are -- We're not trying to
9 classify these as marginal?

10 A. That's correct.

11 Q. Okay. What are we trying to do with the
12 allocation in these cases, Mr. Daves?

13 A. I think on the new-drill types, the allocation
14 methods that we're recommending for the Mesaverde -- or for
15 the Dakota and for the Pictured Cliffs -- well, actually
16 for the Dakota, would be the percentage allocation based
17 off of initial flow tests.

18 I think these have been presented in the past, to
19 where the pitot gauge from the -- Let me look here, make
20 sure I've got the right ones. Okay.

21 Yeah, the -- From the deeper horizon, you would
22 get a pitot gauge from the deeper horizon. And then what
23 you would do is, you would get a final pitot gauge. And
24 then the final pitot gauge minus the pitot gauge of the
25 deeper horizon, divided by the total, which would be the

1 final pitot gauge, would give you a certain percentage of
2 Dakota production. And then the difference would be the
3 Mesaverde production, in the case of a Dakota-Mesaverde
4 type.

5 And that's how we would be doing the Dakota-
6 Mesaverde --

7 Q. Okay.

8 A. -- commingles.

9 And in the case of the Fruitland Coal-Pictured
10 Cliff commingles, those would be the subtraction method.
11 And the first method that I used would work for a commingle
12 of a Pictured Cliff and a Mesaverde too.

13 So in other words, the only subtraction method
14 you would use is in the case of a Fruitland Coal.

15 Q. Now, you would -- Whenever you submitted a
16 C-107-A, you would still --

17 A. -- state that --

18 Q. -- describe to us which one you want to use?

19 A. That's correct.

20 Q. Okay. And we have approved multiple applications
21 with the subtraction method on the Fruitland Coal?

22 A. That's correct.

23 Q. Okay. Now, the allocation with the pitot gauge,
24 those are all based on when you have a new completion?

25 A. That's correct.

1 Q. Okay. What about situations where you have
2 existing production? Are there any of those out there?

3 A. Yes, there are examples of that where you would
4 have historical production and a historical production
5 decline, and the total production minus that historical
6 production decline would equal the allocated portion from
7 the new zone.

8 Q. Okay, run that by me again.

9 A. Okay.

10 Q. You have the existing -- You have one existing
11 zone with a lot of production history --

12 A. Uh-huh.

13 Q. -- commingled with a new zone?

14 A. Right. What you would have is, you would have a
15 decline curve from the original zone.

16 Q. Right.

17 A. Okay, and you could allocate production each
18 month off that. And then the total production minus that
19 allocated production would give you the production from the
20 new zone.

21 Q. So kind of a --

22 A. -- subtraction method, in a sense.

23 Q. Okay. Are there any out there where you have
24 historical production on both zones?

25 A. Where that would probably occur would be a well

1 that may be dualled right now, where you have mechanical
2 problems where you need to go fix the problems. And in
3 that case you would have a certain percentage of the total
4 where -- In that case, you would have two different decline
5 curves and you could allocate percentages. I think that's
6 how these have been done in the past, is a total production
7 based off the two decline curves, and then you would divide
8 each one of those to where it was a percentage at that
9 point in time. So it would be a percentage allocation.

10 Q. Okay. All of these methods have been approved in
11 some form or fashion?

12 A. That's correct, that is correct.

13 EXAMINER CATANACH: Okay, I have nothing further,
14 Mr. Kellahin.

15 MR. KELLAHIN: Okay.

16 EXAMINER CATANACH: Do you have anything further?

17 MR. KELLAHIN: No, sir.

18 EXAMINER CATANACH: Are there any other questions
19 of this witness?

20 Yes, sir?

21 EXAMINATION

22 BY MR. FERRAN:

23 Q. I was just kind of curious, I guess, because of
24 the general economy. You increased the later return from
25 15 to 20 percent. Is that based on risk that is occurring

1 in the fields now?

2 A. It's more a function of where it is. The amount
3 of capital you have to go and do projects is a limited
4 amount, so what a company typically does is, they look over
5 their entire set of choices of things they could go do.
6 There may be wells in Canada, there may be wells offshore,
7 there may be wells in Oklahoma, and they'll typically rank
8 them.

9 And then they say, Well, we have so much money,
10 and what is the cutoff that would be associated with that
11 amount of money? And they'll rank each of their projects by
12 rate of return.

13 So anything that falls below, in this case, a 20-
14 percent rate of return would not get funded. In other
15 words, it would just sit there and it would be a project
16 that never gets accomplished. And it's that cutoff,
17 because they have other things they can spend their money
18 on, that drives where that cutoff is.

19 Q. Once the opportunity becomes constant then --
20 Over what time frame do you look at? What is the -- What's
21 the economic life that you look at for that return?

22 A. In these cases, the economic life of these
23 projects would be anywhere from 20 to 50 years.

24 MR. FERRAN: Thank you.

25 THE WITNESS: Sure.

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EXAMINER CATANACH: Anything else?

Okay, there being nothing further, Case Numbers 11,626, 11,627, 11,628 and 11,629 will be taken under advisement.

And this hearing is adjourned.

(Thereupon, these proceedings were concluded at 2:50 p.m.)

* * *

I do hereby certify that the foregoing is a complete report of the proceedings in the case of Case No. 11626-29 on October 7, 1996.
David R. Catanach Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL October 23rd, 1996.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998