STATE OF NEW MEXICO

OIL CONSERVATION DIV.

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
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OIL CONSERVATION DIVISION

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

CASE NO. 12,290

APPLICATION OF BURLINGTON RESOURCES OIL AND GAS COMPANY FOR COMPULSORY POOLING, SAN JUAN COUNTY, NEW MEXICO

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

November 18th, 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, November 18th, 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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APPEARANCES

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By: W. THOMAS KELLAHIN

* * *

1 WHEREUPON, the following proceedings were had at 2 8:57 a.m.: EXAMINER STOGNER: At this time I will call Case 3 Number 12,290. 4 5 MR. CARROLL: Application of Burlington Resources Oil and Gas Company to amend the special rules and 6 7 regulations for the Basin-Dakota Gas Pool for purposes of changing well location requirements for Dakota wells, Rio 8 9 Arriba and San Juan Counties, New Mexico. 10 EXAMINER STOGNER: Call for appearances. 11 MR. KELLAHIN: Mr. Examiner, my name is Tom 12 Kellahin and I'm with the Santa Fe law firm of Kellahin and Kellahin. 13 I'm appearing on behalf of the Applicant, and I 14 have two witnesses to be sworn. 15 EXAMINER STOGNER: Are there any other 16 appearances in this matter? 17 Will the witnesses please stand to be sworn? (Thereupon, the witnesses were sworn.) 18 19 EXAMINER STOGNER: Mr. Kellahin? 20 MR. KELLAHIN: Thank you, Mr. Examiner. 21 On behalf of Burlington Resources, Mr. Examiner, 22 we're asking the Division to consider modifying the Basin-23 Dakota Gas Pool rules. It is our purpose to make them 24 operable to the Blanco-Mesaverde Pool rules. 25 I have two witnesses to present.

Mr. Alan Alexander is the first witness. 1 2 one of the petroleum landmen with Burlington, residing in Farmington, and we want to discuss the various rules and 3 why we think it's appropriate to make some changes. 4 5 ALAN ALEXANDER, 6 the witness herein, after having been first duly sworn upon 7 his oath, was examined and testified as follows: 8 DIRECT EXAMINATION BY MR. KELLAHIN: 9 Mr. Alexander, for the record, sir, would you 10 0. please state your name and occupation? 11 12 Α. Yes, my name is Alan Alexander. I'm currently employed with Burlington Resources Oil and Gas Company in 13 14 their Farmington, New Mexico, office. On prior occasions have you testified before the 15 16 Division? Yes, sir, I have. 17 Α. 18 As part of your responsibilities as a landman for 19 Burlington, have you been involved in preparing and 20 presenting the various exhibits and proposed testimony in this matter? 21 22 Yes, sir. Α. 23 Are you familiar with the Blanco-Mesaverde Pool Q. 24 Rules and the Basin-Dakota Pool Rules? 25 Yes, sir, I am. Α.

 $$\operatorname{MR}.$$ KELLAHIN: We tender Mr. Alexander as an expert petroleum landman.

EXAMINER STOGNER: So qualified.

- Q. (By Mr. Kellahin) Mr. Alexander, let's turn to the exhibit book, and within the context of the exhibit book, let me have you identify for us what you did with regards to notifying affected parties of the proposed rule change. What did you do, sir?
- A. Yes, sir, if you would turn behind Exhibit Tab

 Number 2, you will see our affidavit of mailing, and the

 notices were sent out on October the 26th. And then

 immediately behind that affidavit of mailing you will see a

 listing of approximately 152 operators in the San Juan

 Basin. And the top of the list, if you'll notice up there,

 it says "Basin Dakota and Basin Fruitland Coal" operators.

 Originally, we were thinking we were going to hear a case

 this morning on Fruitland Coal, and it was simply just

 cheaper and more efficient to include both advertisements

 in the same mailing. So that's the reason why you see the

 Fruitland Coal listed in that mailing.

Behind the listing of the operators that we notified you'll see copies of the certified receipt green cards that are attached.

- Q. Where did you get the list?
- A. I obtained the list from the Aztec office of the

Conservation Division.

MR. KELLAHIN: Mr. Examiner, the Fruitland Coal gas rule change was inadvertently admitted from this docket, and it will show up on the December 2nd docket, so if you'll simply ignore the Fruitland reference here.

- Q. (By Mr. Kellahin) These, in fact, Mr. Alexander, do include, to the best of your knowledge, what the Division records in Aztec show to be the operators in the Basin-Dakota Pool?
- A. Yes, sir, at a very minimum, and then also we notified other operators that were in the coal pool.
 - Q. All right. Following the notice information, let's turn to Exhibit Tab Number 3 and have you identify for the record what is contained behind Exhibit Tab Number 3.
- A. The exhibit behind Exhibit Tab Number 3 is a summary of the history of the Basin-Dakota Pool rules, specifically dealing with well locations. And Mr. Kellahin did the research for us over here at the Division records to come up with this history for the benefit of the Examiner.
- Q. Let's turn behind Exhibit Tab Number 4 and look at the first foldout display. Identify that for me, please.
 - A. These are maps that I thought would be valuable

in Considering our Application this morning. We requested the pool outlines from New Mexico Tech of the various pools that we thought should be discussed this morning. You'll see down in the legend under the first map that the red outline is the Blanco-Mesaverde Pool, the blue outline is the Basin-Dakota Pool, and the green outline is the Basin-Fruitland Coal Pool.

We would like to illustrate by this exhibit how these pools tend to overlie each other, and I think that will become more important later in the discussion.

Behind that map I have simply included individual maps that show the outline of the Basin-Dakota Pool.

- Q. Let's turn to that display. When we look at the map outline that shows the Basin-Dakota Pool, how was this prepared?
- A. This was also -- all of these -- These are the same outlines, they have just been enlarged, and they also show well spots, but we obtained all of these pool outlines from New Mexico Tech.
- Q. And the first display is the composite one, the second one is Basin-Dakota, and the final one in this exhibit set is the Blanco-Mesaverde Pool?
 - A. Yes, sir, that's correct.
- Q. All right. Subsequent to receiving the pool outline from Socorro, were you aware or did you become

aware that the pool outline may have some clerical errors in it?

A. Yes, sir, we were in communication with Mr. Simmons, I believe it is, from the Ute Mountain Ute Tribe. He was inquiring about the Basin-Dakota Pool. Our initial conversations, we thought we were talking about Barker Dome area that's up on the hogback, is not part of the Basin-Dakota Pool, but he clarified that and he was actually talking about some Basin-Dakota wells that are located in the extreme southeast corner of 32 North, 14 West.

Well, if you look on those maps, the pool outline does not cover those particular wells. However, we looked at those wells and I consulted with our geologist, and in fact they should be included in the Basin-Dakota Pool outline. They are Basin-Dakota wells.

- Q. So the Examiner needs to recognize that there is the opportunity for an error in this display?
 - A. Yes, sir, that's correct.
- Q. Apart from the inquiry by Mr. Simmons on behalf of the Jicarilla Tribe, did you receive any other inquiries from any of the parties to whom you sent notice?
- A. The -- Mr. Simmons is with the Ute Mountain Ute
 Tribe --
- Q. I'm sorry.

25 A. -- just for clarification.

We did talk with Conoco, since they are interested and have been interested in the Dakota formation. I think as the Examiner may be aware, they are pursuing a pilot project in the San Juan 28 and 7 Unit, and so they are very much interested in any rule changes that would affect the Dakota.

We talked with Conoco, and they are in agreement with the setback changes that we are proposing.

- Q. Let me ask you this, then: Did anyone contact you with any objection with regards to the rule change?
 - A. No, sir, no objections had been noted.
- Q. Did you provide Mr. Simmons with a copy of your proposed exhibits?
 - A. Yes, sir, we did.

information.

- Q. To the best of your knowledge, is there any objection by Mr. Simmons or the client for whom he represents?
- A. I have not heard of any.
- Q. Let's talk about the proposed rule change. If you'll turn with me behind Exhibit Tab Number 5, Mr. Alexander, let's illustrate what the proposal is. If you'll turn to the display, help me understand and illustrate for us what you're depicting by this
 - A. Well, this represents the surface area involved

in the current rules and in the proposed rules. I have provided an example in a four-section area. It's a generic example of both laydown and standup units.

The current Basin-Dakota drilling windows are illustrated in the solid blue color, and our proposed rule change is illustrated in the hached green color.

The current rules provide that the drilling windows for the Basin-Dakota Pool are 790 feet from the quarter-section lines and 130 feet from the interior quarter-quarter section lines.

And we would like to change those, in large part, to match the Basin -- the Blanco-Mesaverde Pool so that they would be located 660 feet from the spacing unit and ten feet from the -- any interior quarter-quarter or half-section lines.

- Q. One of the other items that Burlington has requested the Division consider with regards to a rule change for the pool is to provide further flexibility for wells located in federal units?
 - A. Yes, sir, that's correct.
- Q. Describe for Mr. Stogner what is the proposal, and then we'll talk to you about the reasons for that proposal.
- A. We would basically like to adopt the same rules that we have in the Blanco-Mesaverde Pool that would allow

any well drilled inside a federal unit to be located ten feet off of any governmental line in there. We think, as we --

- Q. Well, let me qualify that. That's with regards to interior lines?
 - A. Yes, sir.

- Q. There is still an outer buffer with regards to the exterior boundaries of the federal unit?
 - A. That is correct.
- Q. Now, let me ask you, with regards to any potential correlative-rights violation, a lot of these federal units are divided units where you have participating areas. Describe for me what your opinion is with regards to the potential, if any, for the violation of correlative rights with regards to drillblocks versus participating areas.
- A. I don't believe that will happen, and it will certainly be minimized in any regard, because in the federal units up in the San Juan Basin, we have two basic types up there. We call them the township units, such as the San Juan 28-7 Unit.

We also have what we call named units, and an example of that would be, for instance, the Canyon Largo Unit.

But in these units, they provide for

participating areas so that people share in the production from the wells. Now, if we located one of these wells ten feet from a boundary line inside the unit and it was in the participating area, we see no problem there because all of the parties that would be affected are participating in that well.

Now, the other thing that would happen and can happen is that you would drill a well located outside of the participating area but inside the federal unit boundaries and not on the buffer zone. The well would be drilled initially on a drillblock basis. For instance, for the Dakota it would be drilled on a 320-acre drilling block. And then the well would either be deemed commercial or noncommercial.

Well, if the well was deemed commercial, all the production from that well, beginning with the date of first production, would come into the participating area. Hence, I do not believe that a correlative-rights situation would occur there.

Now, the other thing that could happen is that the well would be deemed noncommercial. And if the well is deemed noncommercial, that means that it's of such poor quality in its production that we would not expect -- we would expect very minimal drainage to occur to the adjoining properties anyway.

The third thing that helps resolve that situation is that in these federal units, in the deeper formations like the Dakota, they -- we can, as operators and the working interest owners, can bring in additional adjoining acreage, and we call that geologic inference.

So in other words, if we had a drilling tract offsetting a tract where we drilled a Dakota well, and it was deemed commercial, we can and many times do bring in the adjoining tracts into the participating area. And that again would eliminate or very much reduce any chance of any correlative-rights problems.

Q. Let me ask you to turn to a different topic. If we'll go behind Exhibit Tab Number 7, we're going to skip 6 for a moment and come back to that later, with another witness. Let's look at 7.

One of the issues under consideration is to minimize the filing of unorthodox well locations for Dakota wells between the 790 footage and the 660 footage. Have you compiled for us, to the best of your knowledge, a list of applications filed by Burlington with regards to unorthodox well locations?

A. Yes, sir, I received this list from our regulatory people, and that is the list you'll see behind Exhibit Tab Number 7, and I thought that would be of interest to Mr. Stogner.

Q. To the best of your knowledge, Mr. Alexander, are you aware of any of the administrative applications that have been filed to move Dakota locations up to 660 but not closer, for which there has been an objection filed?

- A. We have had locations that moved 660 and in that range and a little closer, and I'm sorry, I did not research to see if we had an objection filed on those particular locations.
- Q. All right. Within the context of what you have researched, describe for us what you have done and what you conclude.
- A. The listing that I provided is a listing of the nonstandard location applications that we have submitted to the Division since 1994, with particular inference to the Dakota and the Mesaverde-Dakota, either commingled or dually completed. And I have provided that list.

The activity -- There has been a large activity with Dakota and Mesaverde completions, and this is illustrative of the fact of that activity, and we would expect that activity to continue on in the future.

- Q. As a landman for Burlington, what do you anticipate to be the benefit of the rule change?
- A. I believe it would be largely administrative in terms of time expended on filing for nonstandard locations.

 It would help us to eliminate the filing of those

applications, because a lot of this Dakota, we believe, 1 2 will be developed along with the Mesaverde formation. And since the Mesaverde rules allow us to drill 660 feet from a 3 gas proration unit, the fact that we would like to 4 5 commingle or dually complete that well with the Dakota and 6 recover those marginal reserves, in a lot of instances, 7 would result in the need to file for a nonstandard 8 administrative location, and that is principally what we 9 would hope to alleviate. 10 MR. KELLAHIN: Mr. Examiner, that concludes my examination of Mr. Alexander. 11 We move the introduction of the exhibits he's 12 13 sponsored, which are Exhibits 1 through 5 and then Exhibit 14 7. 15 EXAMINER STOGNER: Exhibits 1 through 5 and 16 Exhibit Number 7 will be admitted into evidence. 17 EXAMINATION 18 BY EXAMINER STOGNER: Mr. Alexander, Exhibit Number 4, the blue, as I 19 20 understand it, what you're telling me is that's the Basin-21 Dakota Pool boundaries as established by the New Mexico Oil 22 Conservation Division? 23 Α. Yes, sir, and again we did derive these from New Mexico Tech. They provided us with these pool boundaries. 24 25 Q. How come you didn't provide -- How come you

didn't check with the Aztec office that this was the pool boundaries? Why did you go to Tech?

- A. They provide that service to the industry, and we have used them in the past, and we're currently using them in the commingling workshop committee that we're working on, and that's -- We already had these from that committee, and I used them since we already had those pool outlines in house.
- Q. You didn't answer my question. Why didn't you verify the pool boundaries with the Aztec office of the New Mexico Oil Conservation Division?
- A. Well, Mr. Stogner, I didn't intend on using the pool boundaries for legal description, I just -- I wanted to show you how these pools tended to overlap between the Dakota and the Mesaverde formations. But I didn't intend on making any legal determinations about them, so I didn't -- I guess I just didn't -- I didn't think that it would be necessary to verify the outline to that degree.
- Q. You're proposing to change special pool rules, and you didn't think it was necessary to check the whole pool; is that what you're telling me?
- A. Well, no, sir. For the Basin-Dakota Pool we are -- we would like to change the setbacks for the pool. I didn't intend this exhibit to show the legal boundaries of the pool.

Q. Why not?

- A. I guess I just didn't provide you with -- I would -- if -- I should have provided you, perhaps, then, with a legal description listed out of the pool boundary.
- Q. How about for notification purposes? Did you just notify the parties within the blue area, or within the blue boundaries as established by the New Mexico Oil Conservation Division?
- A. No, sir, I notified the operators that were on record over in -- and I got the list from the Aztec office of the OCD, and those are the operators that I notified.
- Q. So some of these operators are outside your blue area; is that correct?
 - A. They may be, yes, sir, outside of this blue outline.
 - Q. There seems to be a discrepancy here, Mr.

 Kellahin, because I'm not sure. This does not depict

 correct -- As Mr. Alexander should know, this does not

 demonstrate the actual boundaries of the Basin-Dakota Pool.

So therefore that brings up the notification question, of its being right.

(Off the record)

EXAMINER STOGNER: As I was saying, Mr. Kellahin, there seems to be a little bit of a problem here with notification because that brings it up into question. Also

in the presentation, such as it is, people could be led to 1 believe that these special pool rules are just going to be 2 limited to this particular area, unless that's what 3 Burlington is proposing. 4 MR. KELLAHIN: No, sir, Mr. Examiner. 5 May I 6 respond? 7 EXAMINER STOGNER: Well, I'd like to hear from the witness here. 8 Is that what you're proposing, Mr. Alexander? 9 Q. No, sir. No, sir, we would propose the rule 10 change be applied to the entire Basin-Dakota Pool. 11 Would you be surprised for me to tell you that 12 0. 13 this does not depict the pool boundaries as designated by 14 the Aztec office? 15 Yes, sir. Well, I'm aware of the one area that they didn't include in the pool boundaries, but I did 16 17 assume --18 I'm going to give you plenty of time to get me the pool boundaries, and also to double-check the 19 20 notification issue, because these are for special pool rules and not just a portion of the pool; is that correct? 21 22 Α. Yes, sir. Okay. That should be pretty easy to find from 23 Q. 24 the Aztec office. You're not too far from Aztec, are you?

25

No, sir.

Α.

- Q. And also you probably have the R.W. Byram's and Associate books; is that correct?

 A. Yes, sir, we do.
- EXAMINER STOGNER: Okay. I'm going to continue this matter to January the 6th.
- MR. KELLAHIN: May I suggest a procedure, Mr. 7 Examiner?

EXAMINER STOGNER: Okay.

MR. KELLAHIN: Under the new notice rules, as you know, the requirement is to send notice to the operators of wells in the pool. Regardless of the map, the notice list was compiled based upon the Aztec records. That's as reliable a list as we have. We will reconfirm to make sure that the Aztec office list of operators is as accurate as we can make it.

In addition, when we return at the continued hearing, we will correct this map so that you will then have a map, to the best of our knowledge, that depicts all the acreage in the pool.

I personally think those are two different issues. The issue of notification has been sent to all those parties who are operators of the pool. No one has seen this map until you saw it today, and we have described for you that we are aware that it's a map that has some errors in it. We apologize for that, we will give you a

1 corrected map. If you will allow us, we will finish our 2 3 presentation with an engineering witness, and then we'll return back in January and describe for you if there's any 4 issue has arisen with regards to the change of the map. 5 MR. CARROLL: Mr. Kellahin --6 7 MR. KELLAHIN: Yes, sir. 8 MR. CARROLL: -- the notice requires not only to 9 operators in the pool but within one mile of the pool boundaries. 10 11 MR. KELLAHIN: Yes, sir. 12 MR. CARROLL: Would there be additional operators 13 besides the list you obtained from Aztec? 14 MR. KELLAHIN: Mr. Carroll, we will reconfirm 15 that to make sure that we have not made any mistakes. 16 MR. CARROLL: Okay. 17 EXAMINER STOGNER: I will allow the continuance 18 of this matter today to take on additional evidence, but I 19 still want you to re-verify. 20 MR. KELLAHIN: Yes, sir, I'd be happy to do that. 21 0. (By Examiner Stogner) Okay, back to the 22 participating areas, now, you said something about a buffer 23 zone in these participating areas. What is this buffer 24 zone? 25 Α. Mr. Stogner, I was referring to the buffer zone

That is a that was set up in the Blanco-Mesaverde Pool. buffer between the outside boundaries of the federal units and that acreage that's outside of the federal unit, that would not be involved in the federal unit. Those rules provided for a buffer zone, I believe, of one-half mile, that you could not locate a well as to the 10-foot setback from any governmental boundary line.

- 0. Okay. So that was referring to what the special pool rules recognize as a buffer area, and not what's included in some sort of a participating area buffer zone?
 - Α. Yes, sir, that's correct.

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- ο. Okay. All right, now, I'm not that familiar with these participating areas, so let's say that I have one of these township units and you have joinder with all interest in there, within the township unit. How did the participating area -- Do they single out acreage that's not within a participating area? Does that mean that person's interest, even though they're within the unit but outside of the participating area, they would be a participant in the production?
- The way it starts, Mr. Stogner, is, early in the beginning of these units you don't have any participating And then you would drill a well, for instance, for areas. the Mesaverde formation, and that well was deemed

25 commercial by the regulatory agencies and the operator, then they would constitute a participating area of that 320-acre drilling block. That would be the initial participating area.

Then, as more wells were drilled and those wells are deemed commercial, then those 320-acre drilling blocks are added to the participating area, and all parties in the enlarged participating area share in production. That process continues until you've developed all of the federal unit for that particular formation and all the wells have either been deemed commercial or, if they are noncommercial, they are excluded from that participating area.

- Q. Now, when an exploratory unit is formed, is part of the requirement that you have 100-percent participation?
- A. No, sir, you can have less than 100-percent participation. Sometimes we have some royalty owners that didn't join in the unit, for instance. So you can form a federal exploratory unit without 100 percent of participation.
- Q. How would those tracts be identified or handled, let's say -- Let's take Section 1, for instance, and the well is drilled in the west half, and this nonparticipating acreage or nonunitized acreage is in the east half. So you're proposing that because these new rules would allow for the drilling of that well ten foot to that east-west

line?

- A. Yes, sir, we're proposing that.
- Q. Okay, how would their correlative rights be protected?
- A. Well, for the -- For instance, if we had a royalty owner that elected not to be joined into a federal unit, his acreage, his revenue, is only derived from any well that would be drilled upon his acreage, and he does not share in any surrounding production, since he chose to exclude himself from the federal unit.
- Q. Right. But you still want -- But you're still proposing that you can drill ten foot to that line?
 - A. Yes, sir, that's correct. That royalty owner --
- Q. Is that punishment or something, because he didn't join the unit, or what?
- A. Well, no, sir, not really. I mean, he should have joined the unit, but you can -- that royalty owner can join in the unit at a later date. He can request to be brought into the federal unit, and I believe that offers him some protection in that regard.
- Q. So likewise, that person would be able to produce his acreage if he chose and drill ten foot to your line?
 - A. Yes, sir.
 - Q. And you wouldn't have a problem with that?
- A. No, sir, because the rest of the royalties -- Say

he's not the only royalty owner, but the rest of the royalty owners and the working interest owner have joined in the federal unit, and they would derive that benefit along with him.

- Q. Or if you drilled that well ten foot from that line and you take a downhole survey and it's over on his property, then therefore the ownership of that well reverts to him?
- A. If that well was completed on the adjacent property, yes, sir, I believe that would happen.
- Q. So you all wouldn't have a problem with turning the well over to him and just -- Okay, we don't object because now the well is on his side, even though we drilled it and everything, you're not going to have a problem with that?
- A. Well, the well would still be a federal unit well, because the other working interest owners are in the federal unit. But he would derive the royalty from that well. That's what would happen in that instance, if we did that.
- Q. Oh, the east-half proration unit wouldn't be formed?
- 23 A. Yes, sir --

- Q. That wouldn't be an east-half proration unit?
- 25 A. Yes, sir, it should be formed for that well. But

it would still be a federal unit well. It's just that his royalty wasn't committed, so he would derive the royalty from that well at that point.

- Q. Okay, how about working interest? Does the federal unit require 100 percent working interest participation?
- A. If the working interest owners do not agree to join in the federal unit, that land would have been excluded from the federal unit boundary.

Are you asking me if all of the working interest -- Maybe I didn't respond to you correctly. You can have a portion of the working interest in a lease, not joined in the federal unit, just as you can have for a royalty owner.

- Q. Okay. Now, you talked about a geologic inference, and you said that "we" could take in adjoining tracts. Who's "we"?
- A. The unit operator would normally make that initial decision, and then he would notify the other working interest owners and the regulatory agencies that that acreage was being included by geologic inference, based upon the completion of a commercial well.
- Q. So if one of these wells was ten feet from -into a participating area, but ten foot from a
 nonparticipating area, could there be other parties to

request that that acreage come on in case, oh, the unit operator isn't as prudent as, say, you're referring that Burlington is? Maybe there's another operator out there in the unit that's not as prudent as Burlington, and they either ignore bringing in these adjoining tracts -- how would -- So could some other party or could the BLM or the State Land Office, if it was state land, be requested to be brought in?

- A. Yes, sir, they could, and other working interest owners on occasion have requested that the operator file that type of designation.
- Q. But how would they know if the well was ten feet from their line, if they weren't out there to actually see the spudding of the well?
- A. We notify -- We file a plan of development every year for the federal units, and --
 - Q. Spot well locations, to that degree?
 - A. Pardon me? Yes, sir.
- 19 Q. Really?

- A. And then we also provide the working interest owners with the completion reports and the APDs and the other notices that are filed.
- Q. So you're telling me that every year you've got well spots picked?
 - A. Yes, sir, when we file our APDs we --

Q. No, you told me when you file your annual report you have well spots picked.

- A. Oh, I see your question. We may not -- When we file our report, we may not have -- with the regulatory agencies, our plan of development, we may not have an actual location listed on that plan of development. What we will list on that plan of development is the drilling unit, the spacing unit for that well.
- Q. So I ask again, how does that nonparticipating party, or that party that's in that nonparticipating area, know that they've got a well ten feet from their line?
- A. We do file -- With all of the working interest owners in the federal unit, we have listings of those parties that would like to receive copies of all of the filings, the sundry notices and the APDs. They are entitled to see all of those types of information. Some of those parties have elected not to receive a complete packet on all of that information, but the parties that have elected to receive that, we do furnish them with all of that information.
- Q. So if I elected not to receive this, how would I know a well is ten feet from my line?
- A. Unless you were following through commercial services or otherwise, Mr. Stogner, you wouldn't know that.
 - Q. So if the prudent operator in this instance

failed or didn't want to bring an adjoining acreage in, nor were they unaware of it, could that lead to correlative-rights violations?

- A. Well, the opportunity is there to eliminate that. The other parties do have the right to request that acreage be brought in under geologic inference. And they also have the right to propose the drilling of a well on that adjoining acreage, which would allow them, if the well was drilled and deemed commercial, would allow them to participate in the production from that well and the other wells that are in the participating area.
- Q. Again, I ask that question. Wouldn't that violate his correlative rights?
- A. No, sir, not initially, I don't believe so, because with the formations that we're dealing with here, they're very tight, and he has ample opportunity, I believe, to prevent any violation of correlative rights from happening, because the drainage from these wells, you know, is very slow. And I think that gives him sufficient time to evaluate his position if -- and many times the operator has a program -- For instance, if that well was drilled and deemed commercial, then the operator many times, or the working interest owner, is going to propose another well to be drilled on that offset acreage.
 - Q. So you're proposing two wells within 20 feet of

each other?

- A. No, sir, I don't think that they would have two wells within 20 feet of each other, but I believe they would propose a well on a drilling block at the optimum location to recover the reserves there. And then it becomes -- If the well is commercial, it becomes part of the participating area.
- Q. So we're getting into a situation here where tracts, offset acreage and -- I'm sorry, setback requirements are put in place to make sure that there's an adequate pattern of development. I don't see how this kind of freedom is going to ensure that kind of a pattern and good engineering practices being established out in a pool. Could you maybe talk about that a little bit?
- A. Well, we've experienced some of those problems. As we're drilling in a fairly mature basin, we have a lot of wells already drilled out in the Basin, and the remaining spots to drill and recover these reserves, we're getting into areas where we have a lot of topographical and archaeological concerns that causes us to move these wells around quite a bit. And that was one of the reasons we requested the flexibility in the Mesaverde Pool, so that we would have the ability to locate these wells with regard to those surface constraints.

And also with regard to the drainage patterns

that our studies are indicating to us that exist out there, it gives us the opportunity to move them around to optimize the remaining unrecovered reserves, especially for the -- When we're dealing with Mesaverde wells we have the opportunity to come in and add the Dakota in those kind of wellbores. And the Mesaverde tends to drive many of those situations, because we don't develop the Dakota very much on a stand-alone basis. It tends to get developed, for the most part, in connection with Mesaverde wells that we'll be drilling in the future.

- Q. Do most of these exploratory units take in all formations from the surface down?
- A. Yes, sir, a vast majority of them are unitized all the way down.
- Q. In Exhibit Number 7, you had some tabs back here that's talking about single, commingle or dual-completion wells?
- 18 A. Yes, sir.

- Q. How does this commingling play into what you're trying to show in this exhibit?
- A. I furnished this exhibit just to show the activity that Burlington currently has underway, and a lot of the other operators are also pursuing this type of activity. We're drilling these wells as -- in the three types, as single completions, and you will see some single

Dakota completions that we drilled. But you'll see a majority of those are drilled either as dual completions or as commingle completions, mainly with the Mesaverde formation.

And we would like to match up -- in that regard, we would like to match up with the Mesaverde setback rules, so that we can eliminate or at least greatly reduce the number of nonstandard locations that we would ask the Division to approve.

Q. Okay, how about Pictured Cliffs formations? Now, that's under the new statewide rules that require 660 from the quarter-section line, essentially. That was what I'm kind of leading up to.

Do most of these wells -- are they recompleted uphole after the Basin Dakota or to include in downhole commingling or dual completions the Pictured Cliffs formation?

A. We haven't to date. I've visited with our Pictured Cliffs teams this week, and we are going to propose some Mesaverde PC commingles. And the way that it looks like those are going to be developed is that they would be -- the Mesaverde and the PC would be proposed for commingle, and then initially dually completed with the Dakota.

Or we would do the other thing, and we would do

that to get a baseline production on some of the wells to get a better reservoir handle on them. Or in the instances where we think we have sufficient information, we would even propose to trimingle and include the Pictured Cliffs with the three zones. I didn't list any in this one because in 1999 we didn't do any of those types of wells. But it will be very helpful that the PC is on 660s to combine it with the Mesaverde formation, even if we don't combine it with the Dakota formation.

- Q. Well, wouldn't it still require a nonstandard location application for the PC?
- A. For 660s?
- Q. Yes, 160s. 160-acre spacing for the PC --
- 14 A. Yes.

- Q. -- if you dual-completed one of these wells that's ten feet from a line, wouldn't that still require a nonstandard location?
- A. Yes, sir, it would, if it's ten feet.
- 19 Q. Or anywhere between the ten foot and the 660 20 line?
- 21 A. Yes, sir.
 - Q. And it's been established and being established now that just because the deeper horizon is standard, it is not a reason to drill a shallower zone at an unorthodox location. We're beginning to see that, especially down in

the deep area, and we've seen it here too.

With that in mind, do you think operators -- And this is not just a Burlington application, this is an application to change all the rules in the Basin-Dakota Pool. Having the deepest zone -- Essentially the Basin-Dakota is one of the deeper horizons that produce; is that correct --

A. Yes, sir.

- O. -- in the San Juan Basin?
- 10 A. It's the most prospective of the deeper horizons,
 11 yes, sir.
 - Q. To ensure integrity of these rules and regulations and make sure that we don't get any useless nonstandard locations because somebody drilled to a deeper horizon, perhaps the Basin-Dakota should mirror the Pictured Cliffs as far as the offset from 660 from a quarter-section line and do away with this exploratory waiver in which you're requesting, exploratory-unit waiver, to assure people or at least staying on some kind of a pattern?
 - A. Perhaps, Mr. Examiner, but I think there are remedies available inside a federal exploratory unit, and it would give us some flexibility to match those particularly with the Mesaverde. And we're not opposed to filing for nonstandard locations in there, but we thought

it would be beneficial to both the operators and the 1 2 Division. EXAMINER STOGNER: What's your next witness? 3 4 he a geologist or a reservoir engineer? MR. KELLAHIN: I have a reservoir engineer, Mr. 5 Examiner, to talk about some of the reser- --6 7 EXAMINER STOGNER: Explore --8 MR. KELLAHIN: I'm sorry? 9 EXAMINER STOGNER: -- that aspect, drainage aspect, with that particular, I'm sure that's what 10 11 you're --Yes, sir. 12 MR. KELLAHIN: 13 EXAMINER STOGNER: -- going to talk about. 14 Q. (By Examiner Stogner) Since the Blanco-Mesaverde 15 Pool rules have been adopted, how many geological-inference 16 adjoining tracts has Burlington requested be brought in on these wells that were drilled ten feet from a line or 17 18 somewhere close to a line? How many within the Blanco-19 Mesaverde? Or have you had the opportunity to do that? 20 I don't know that we've had the opportunity. Α. 21 There's two differences there that you might be aware of. 22 In the -- what we call the township units -- for instance, 23 like the 28-and-7 Unit, the Mesaverde is not a geologic 24 inference formation; it's developed strictly on 25 drillblocks. So one drillblock is added at a time as each

well is drilled.

Now, in the named units you can, in fact, do geologic inference on Mesaverde formation. But there is a difference there.

- Q. So we're already allowing this ten-foot -- being ten foot within a proration unit line without any recourse or ability for this geological inference to be included and participating there in the Blanco-Mesaverde; is that what I'm hearing?
 - A. Yes, sir, in some of the units.
- Q. So we haven't seen any -- Obviously, we haven't seen anybody object to their correlative rights being violated?
 - A. No, sir, I have not.
- Q. So this geologic inference that you told me about is only available in those named unit areas?
- A. No, sir, it's available in -- For the Dakota formation, it's available in both of the types of units. For the Mesaverde, it's available in one of the -- It's available in the named units.
- EXAMINER STOGNER: Mr. Stogner, I have no other questions of Mr. Alan Alexander at this time, but I do request you to bring him back on January the 6th --
- MR. KELLAHIN: Yes, sir.
- 25 EXAMINER STOGNER: -- and so that way he can

1	enlighten me of what the pool rules are
2	MR. KELLAHIN: Yes, sir, the pool boundary
3	EXAMINER STOGNER: and I want to make sure
4	that he knows what a pool is.
5	MR. KELLAHIN: Yeah. The pool boundary, you
6	mean?
7	EXAMINER STOGNER: Yes, sir.
8	MR. KELLAHIN: Yes, sir. We'll be here.
9	EXAMINER STOGNER: I'm very disturbed that
10	Burlington has not exhibited that knowledge to me today.
11	But like I said, we'll go ahead and continue this case and
12	re-open it on January the 6th.
13	So next witness?
14	RALPH L. NELMS,
15	the witness herein, after having been first duly sworn upon
16	his oath, was examined and testified as follows:
17	DIRECT EXAMINATION
18	BY MR. KELLAHIN:
19	Q. Mr. Nelms, for the record would you please state
20	your name and occupation?
21	A. My name is Ralph L. Nelms. My occupation is
22	petroleum engineer. I'm currently employed by Burlington
23	Resources in Farmington, New Mexico, as a senior reservoir
24	engineer.
25	Q. Mr. Nelms, you spell your last name N-e-1-m-s?

A. That is correct, sir.

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- Q. Have you testified on prior occasions before the Division?
 - A. I have not.
 - Q. Summarize for us your education.
- A. I have bachelor of science degrees in petroleum engineering and mining engineering from Colorado School of Mines. I have a master's of science degree in petroleum engineering from Colorado School of Mines. I'm a registered professional engineer in the State of Colorado.
- Q. During the course of your profession, Mr. Nelms, have you studied and analyzed the Dakota reservoir?
- 13 A. I have.
 - Q. Is that part of your current employment responsibilities with Burlington?
- 16 | A. It is.
 - Q. At my request, have you made a study of various issues with regards to the Dakota formation?
 - A. I have.
- MR. KELLAHIN: We tender Mr. Nelms as an expert petroleum engineer, Mr. Stogner.
- 22 EXAMINER STOGNER: Mr. Nelms is so qualified.
 - Q. (By Mr. Kellahin) Mr. Nelms, I have asked you to address some issues with regards to the potential impact of the rule changes. And one of the things I asked you to

look at is to characterize for us some of the essential components so that we could compare the Dakota to the Mesaverde reservoir.

A. Correct.

- Q. Before we get into that discussion, generally describe for me what is the concept of your company with regards to using the same wellbore to access both the Mesaverde and the Dakota reservoirs.
- A. We see a very strong economic opportunity to develop the Dakota in areas where the Dakota reservoir is marginal when we drill new Mesaverde wells. In areas where the Dakota would not be justified economically as a standalone well, we can justify developing those Dakota reserves by adding them to an existing new Mesaverde well.
- Q. Mr. Nelms, is it a fair characterization of the Dakota in the San Juan Basin to say that except for limited occasions you would not see a stand-alone Dakota well drilled?
- A. Most of the higher-permeability and higher-EUR

 Dakota reserves have been drilled so far, so the majority

 of the remaining Dakota potential is in this marginal area.
- Q. One of the issues is whether or not the Mesaverde footage rules should be the same as the Dakota footage rules, and when you talk about reducing the Dakota footage setbacks from 790 to 660, one of the issues is whether or

not there is enough similarity in the two reservoirs so that there is not an adverse consequence in terms of drainage or correlative rights?

A. Correct.

- Q. In analyzing that issue, is there a standard that you can describe for us in terms of reservoir permeability that would give us an understanding of whether or not there would be an effect if we changed the rules?
- A. Exhibit 6 shows the average gas permeabilities in the Blanco-Mesaverde Pool and the Basin-Dakota Pool. These are average, representative permeabilities. The Mesaverde formation has an average permeability of about .15 millidarcy to gas. The Dakota has an average permeability of about .05. What this shows is that these both are tight gas sand reservoirs, and they both have similar permeabilities, and therefore their production performance should also be similar in nature.
- Q. If the rules have been changed, then, for the Mesaverde, do you see any permeability distinction of significance that would cause you not to change the Dakota spacing rules to be equivalent to the Mesaverde?
- A. I do not. Since both formations exhibit similar permeabilities, the changing of the spacing rules should not have an adverse or detrimental effect to the production or the way the wells are produced.

Q. Can you generally characterize for us what kind

of initial rates and estimated ultimate recoveries that you are experiencing for Dakota wells?

A. Initial rates on Dakota wells will come in as high in some areas as a million a day. They'll rapidly decline at 60-percent exponential rate down to a rate of several hundred a day. At that point in time they'll decline exponentially at a very low production rate, as low as 4 to 5 percent exponentially, and that rate will continue for 40 to 50 years.

Mesaverde, very similar. Our IPs on our

Mesaverde wells are sometimes as high as 700, 800. They

also will decline very quickly with a one- or two-year time

period, level off at a very low production rate of 150 or

200 a day. They'll then decline exponentially about 5

percent for very extended time periods, 40 to 50 years.

So both reservoirs exhibit these similar tight gas sand production characteristics.

- Q. Can you generally characterize for us the shape of the drainage patterns that you see in the Mesaverde and either compare or contrast that to what you see to be the drainage shapes or configurations for the Dakota formation?
- A. I think it's pretty generally accepted that the Mesaverde drainage shape is elliptical, and this shape is on a strike of approximately north 10 east. The Dakota

drainage shape is also elliptical, as the Mesaverde, and oriented in this same north 10 east pattern. So both reservoirs have similar permeability and also exhibit similar-shaped drainage patterns.

- Q. Let's turn to Exhibit Tab 8. I'm not going to ask you to go through each of these displays, but I want you to generally characterize what your point is in having this information submitted under this exhibit.
- A. Since we have the opportunity when we're going in and drilling 80-acre Mesaverde infill wells to drill to these marginal Dakota areas that have not been exploited, the Exhibit 8 shows what our costs are to do a stand-alone Dakota well.

There's a well presented in Exhibit 8 by the name of the San Juan 30-and-6 Unit 128 A. This is a stand-alone Dakota. The complete drilling cost for this well would be \$608,000. In order to justify an expenditure of \$608,000, we would need gas reserves of approximately 1.2 B's, to make this an economic project.

Also in Exhibit 8 there's an example of a Dakota-Mesaverde dual well, which is entitled the San Juan 27-5
Unit 83 M. The Mesaverde cost for this well would be
\$381,000, the Dakota cost would be \$310,000. Complete cost
for both zones would be \$682,000. As you can see, that
lower cost for the Dakota of \$310,000 enables us to exploit

reserves as low as 600 million, which would not be economically feasible to drill as a stand-alone Dakota.

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The final economic evaluation presented on the Exhibit 8 is for a Mesaverde stand-alone well, that's the Quinn 5 B. To do a Mesaverde by itself is approximately \$500,000.

So what this shows is that by completing these wells in both the Mesaverde and Dakota in the same wellbore, we can recover those reserves from 600 million to 1.2 B's, which would have been waste because it would not have been economically justifiable to develop those reserves as a stand-alone Dakota.

- Q. As a reservoir engineer, Mr. Nelms, who's studied both of these pools and formations, do you recommend that the Dakota well-location rules be similar to the Mesaverde rules?
- A. I do. I think that will present a strong economic incentive to develop those marginal Dakota reserves which now are uneconomic to develop and thereby prevent waste.
- MR. KELLAHIN: That concludes my examination of Mr. Nelms, Mr. Stogner.

We move the introduction of his Exhibits 6 and 8.

EXAMINER STOGNER: Exhibits 6 and 8 will be
admitted into evidence.

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1	EXAMINATION
2	BY EXAMINER STOGNER:
3	Q. Your Exhibit Number 6, those permeability
4	figures, are they in situ, or are you getting these from
5	some core tests in the laboratory, or
6	A. The values used for the Mesaverde were the same
7	values presented in the 80-acre Mesaverde infill
8	application, and there's also a second page in Exhibit 6,
9	which is taken directly from that application. Those
10	permeabilities would be $in\ situ$ effective permeability to
11	gas.
12	Q. How about for the Dakota?
13	A. Those numbers are taken from pressure tests and
14	buildup tests we've conducted and also from analysis of
15	core data that we completed, and I believe that those are
16	also in situ effective permeability to gas.
17	EXAMINER STOGNER: I don't have any other
18	questions, Mr. Kellahin.
19	Does anybody else have any other questions of
20	this witness?

21 MR. KELLAHIN: No, sir, that concludes our 22 presentation. Thank you, sir. 23 THE WITNESS: EXAMINER STOGNER: Mr. Kellahin, since we're re-24 25 opening in January --STEVEN T. BRENNER, CCR

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: -- this discussion that we've had about the participating areas and this geological inference, there's been a lot of data, and there's really nothing written down.

Could you provide me a brief between now and then, or at the January 6th, discussing -- We can even use the Blanco-Mesaverde, because it's already instituted, perhaps what we've already seen out there about the correlative rights in these participating areas, or outside of these participating areas. Is it adequate enough to protect those parties?

And Mr. Alexander brought up -- in fact, he inferred to a lot of -- it gives them an opportunity to protect themselves and drill another well. Of course, that's the whole idea of correlative rights and the development of patterns, is to alleviate the need in that. I'd like to see something within the record in this matter that discusses in detail these participating areas.

I'm not as familiar with the federal exploratory units as I am the previous case that we had today about state exploratory areas down in the southeast, so that might help enlighten me. Also, I think it would make a complete record in this instance, should, in the future, we have a problem with correlative rights, that will be clear

on the record.

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: That would help make sure that we've covered this issue in detail, and it would also, if this comes up in the future, to whatever court case, some kind of -- or if there's a discussion about this, at least we'll have it in detail.

Perhaps we should have done that more so in the Blanco-Mesaverde area. I'd have to look at my records on that. I just wasn't aware that those numbered units out there had the provision for that, or didn't have the provision for it. But now we've got an actual laboratory going on out there in this particular instance.

So could you provide that to me --

MR. KELLAHIN: Yes, sir.

EXAMINER STOGNER: -- on the January 6th?

MR. KELLAHIN: We'd be happy to do that.

EXAMINER STOGNER: At that time I'd also like you to provide me a rough draft order. And in looking at what you have proposed in your Application, I know we have put this in the general rules down in the deep-gas area of southeast New Mexico, about any density variations would require a hearing in those instances.

Now, in this particular instance, in your Application, I didn't see where that occurred. And I think

in the past we have seen where the Blanco-Mesaverde and Basin-Dakota, back in the years previous, where the original intent was to have two wells. But then we have proration units where three and four wells snuck in, where I don't think that was the original intent, but they got started and we had to verify those at one time.

So perhaps something should be -- I think something should be included. At least that's what I'd like to have in my rough draft, something that makes that very clear, that at this time we're only limiting it to one well in each quarter section. If there's any of those that exist out there, they'll naturally grandfather in. But I think that needs to be clear and verified. And I'm afraid if we don't include that in there, then it will be interpreted in the future that, oh, it's okay because the rules are silent on that, until such time as perhaps in the future we'll have this 80-acre infill established in the Basin-Dakota.

MR. KELLAHIN: You may remember, that's part of the Conoco study for that pilot project in the Dakota. It certainly is not our intent to increase well density in a Dakota spacing unit with this Application, Mr. Stogner, and we'll make that very clear in the proposed order.

EXAMINER STOGNER: Okay. But I think we're on the road to that.

MR. KELLAHIN: All right, sir. EXAMINER STOGNER: With that, then this case will be continued to the January 6th -- That's the year 2000. This is my last hearing of the millennium. Okay, let's take a 15-minute recess at this time. (Thereupon, these proceedings were concluded at 10:10 a.m.)

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 November 24th, 1999.

STEVEN T. BRENNER

CCR No. 7

My commission expires: October 14, 2002