Order No 112-125

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BEFORE THE OIL AND GAS CONSERVATION COMMISSION

OF THE STATE OF COLORADO

IN THE MATTER OF THE PROMULGATION AND ESTABLISHMENT OF FIELD RULES TO GOVERN OPERATIONS IN THE IGNACIO-BLANCO FIELD, LA PLATA COUNTY, COLORADO	)))))	CAUSE NO. 112 Docket 9-7-4

PURSUANT TO NOTICE to all parties in interest, the above-entitled matter came duly on for hearing at the offices of the Colorado Oil and Gas Conservation Commission, Room 801, 1120 Lincoln Street, Denver, Colorado 80203, on Thursday, September 5, 1996.

BEFORE:

CHAIRMAN ALLAN HEINLE

COMMISSIONER BRUCE JOHNSON

COMMISSIONER CLAUDIA REBNE

COMMISSIONER MIKE MATHESON

Richard Griebling, Director

Lori Coulter, Assistant Attorney General

Patricia Beaver, Manager of Commissioner Affairs

Michael J. Wozniak representing Cedar Ridge, LLC

Carleton L. Ekberg representing Burlington Resources Oil & Gas Company

I N D E X

P R O C E E D I N G S

CHAIRMAN HEINLE: All right. I guess we can move on with the second item on the agenda which is Cause Number 112, Docket 9-7-4, Ignacio-Blanco Field, La Plata County. The applicant is Cedar Ridge through their attorney Michael Wozniak, and this is a request to allow the recompletion of the Ute number 1-7 well to the Fruitland Coal.

MR. WOZNIAK: May I ask a question first before we get going?

CHAIRMAN HEINLE: Certainly.

MR. WOZNIAK: I did hear earlier that we were going to quit at five o'clock, no uncertain terms. I know we are going to lose Commissioner MacMillan, but I'm expecting that our presentation will probably get completed by that time, but that we will not get the respondent's or intervener's or protestant's responses done.

In that event, that will necessitate a continuance to next month, and I'm a little concerned about the timing now because it is, in essence, 3:30, and we haven't had a break for the reporter.

I'm concerned. We would rather not put on a case and then wait six weeks and to have you

hear the rebuttal and basically have to redo it.

So I would ask for a couple of minutes to confer with the tribe on their availability and also with my client, because I'm concerned that, first of all, there will only be four commissioners -- who have worked well beyond the call of duty this week -- and also our situation is such that I don't think everything will get done. I'm a little worried about the time.

CHAIRMAN HEINLE: We will take about a five-minute break.

MR. WOZNIAK: Thank you, Mr. Chairman.

(Whereupon, a recess was taken.)

CHAIRMAN HEINLE: Why don't we go ahead and get back on the record.

MR. WOZNIAK: On behalf of Cedar Ridge, we will do our best to get done in very, very short time. To the extent that the commission can indulge us with taking notice of the prior testimony and to the extent that Mr. Ekberg can agree to that, we will give it a shot.

What I hope we can do is avoid going through the first half of it and then getting it continued for the second half. We will do our best.

CHAIRMAN HEINLE: Great. I guess we

don't have to go through opening statements.

MR. WOZNIAK: I have one statement for the four of you to consider, and that is the only difference in this application and the other one is it is also a completion of an existing Mesaverde well in the Fruitland Coal. But this, in our view, does have incremental production that will be captured that otherwise would be wasted without the application being granted, so that is the difference, and we don't have as big of an issue on correlative rights. So subject to those two differences, that is the only statement we have.

CHAIRMAN HEINLE: Mr. Ekberg, do you have anything else?

MR. EKBERG: Nothing.

CHAIRMAN HEINLE: I assume the same sets of witnesses?

MR. WOZNIAK: Same sets of witnesses and same sets of exhibits with very modest changes.

At this point I would like the commission to consider taking judicial notice of the exhibits. The first three exhibits in the booklet are Exhibits A, B, and C which are exactly the same on the land exhibits and which were discussed in the prior application.

And so I would request that the testimony from Mr. Logan would be the same and that we dispense with the land testimony, if that is okay, to the extent a question comes up we can go through it.

Similarly, I believe that the testimony of Mr. Matthews would be substantially the same with respect to Exhibits D through K in the booklet on the geologic testimony. I also believe that the testimony of Mr. Thibodeaux this morning was very similar to that of Mr. Matthews.

And I guess I would also request the commission entertain to take judicial notice of the continuousness of the coals in the area. And if we can get that agreement on the record between the commission and Mr. Ekberg, subject to the fact that of course you have the right to put on anything that you need to as rebuttal, it would seem that those two things would drastically streamline the presentation.

CHAIRMAN HEINLE: Mr. Ekberg, is that agreeable to you?

MR. EKBERG: That is agreeable to us.

CHAIRMAN HEINLE: Commissioners.

MR. WOZNIAK: That would be great. I

would then ask Mr. Logan to come up and sit down and address --

TERRY LOGAN,

having been previously sworn, testified as follows:

EXAMINATION

BY MR. WOZNIAK:

Q All right. Mr. Logan, you are still under oath as you were yesterday and today. I will ask you if you first could generally describe what Cedar Ridge is requesting in this application?

A What we are requesting in this application is to recomplete the Southern Ute 1-7 well which is located in the southeast quarter of Section 7 of -- let's see, 32 north, range 11 west.

Q Okay. If I could direct your attention to Exhibit L in your packet and ask you what is depicted on that exhibit?

A This exhibit is very similar to the one that was previously presented. It is a production location map that basically shows that as you move south the reservoir quality gets poorer based upon production.

Q Does Cedar Ridge own the 5-7 well in the same spacing unit as the 1-7?

A Yes. We own both wells in Section 7,

the well to the north.

Q What is the production from those wells?

A From the 5-7 about 1.7 million a day and from the 6-7 about 700 Mcf per day.

Q What is the cumulative production?

A About one-fourth of a Bcf.

Q Comparing that to the first application you talked about, those are significant decreases; is that correct?

A Much less than what was in Section 5.

Q What do you attribute that drastic reduction in production?

A As you move south you have poor reservoir quality where the coal seams geologically are continuous but the reservoir quality is poor.

Q If you look at Exhibit M, I will ask you if that is the same exhibit, albeit numbered differently. Is that what was in the prior application?

A That is the production, best production, gas production, 1996, Exhibit M. This shows that same basic trend. As you move south you get poor reservoir quality, not only with our wells but with other operators in the area.

Q What does this show you with respect to

the 1-7 well?

A That it's production potential is about one-fourth to one-fifth of what the previous application 2-5 is.

Q Then similarly Exhibit N is a very similar map with respect to pressures that was shown -- I guess this is with respect to cumulative production. Excuse me. That was indicated in the prior application.

A Yes, that is. Again, cumulative gas production showing that same basic trend as you move south, poor reservoir quality.

Q When you get down to the 1-7 and it's offset by the 6-7 and then the 8-2 well, what do the little numbers underneath that represent?

A The cumulative gas production in a million cubic feet of gas.

Q So, again, those are about what, one-quarter of the area in Section 5 we spoke about earlier?

A That's correct.

Q Exhibit O and Exhibit P are both bubble maps. I guess those are the exact same maps we testified about this morning. Could you describe what is shown on those two exhibits?

A Again, it is just a different way to present cumulative gas production with the size of bubbles. The smaller the size of the bubble, the smaller the amount of gas that has been recovered. You can see the location of the 1-7 well.

Q So that the totals again are just underneath the four adjacent wells, I guess; is that right?

A Yes, in the bubble.

Q Then water production is on Exhibit P?

A Cumulative water production is on Exhibit P. I might point out that 4-13 is, again, a bust in the data. That should be 665 versus 885.

Q All right. Your pressure exhibit that we spent a lot of time on in the 2-5 hearing is Exhibit Q. Could you describe what it shows with respect to the 1-7 well?

A We do not have nearly the pressure depletion in the 1-7. As we see up in Section 5, we are at a gradient -- estimated about 0.35 psi pressure gradient from actual measured data in the two offset wells, the 6-7 and the 8-2.

Q So the pressure has stayed higher in that area; is that right?

A There is not as much pressure depletion;

that's correct.

Q If you then compare your Exhibit R -- I know you testified about it this morning -- please describe how it relates to the 1-7 well.

A Exhibit R is gas in-place, water in-place, and reservoir pressure gradients. Again, I'm comparing Section 7 -- which is 5-7 and 6-7 wells -- to the Walker Flats or the Red Willow operated wells, 8-2 and 18-1. It shows a lot less gas recovery, 2 to 3 percent, and that the pressure reductions are about the same in all four of those wells, and so we don't see any anomalies there like we have seen in the 5-5.

Q So that the drainage issue there isn't the same that we talked about this morning?

A That's correct.

Q We will breeze right through to Exhibit S which takes us over to economics and ask if you can briefly tell us if there are any differences on Exhibit S, on your economic assumptions as you made this morning on the 2-5?

A The only differences on these economic assumptions is that they are particular to the 1-7 application. And what we looked at was the entire Section 7, comparing two wells in Section 7 versus

three wells in Section 7.

The other thing that is different is this area has lower reservoir quality based on production and cum gas, and we used roughly a permeability of 25 md. Other costs are actual costs that we experience out there, and we are using the economics as in the previous hearing.

Q Based upon those assumptions, you prepared Exhibit T and Exhibit U. Please take us through Exhibit T, first of all.

A Exhibit T is along the vertical axis value in thousands of dollars in gas recovery and in millions of cubic feet of gas and time along the horizontal axis. The upper graph is gas recovery which shows you recover an additional one-half Bcf of gas with three wells versus two -- tax credits of $1.3 million -- and cash. There was a lot of discussion earlier that, well, this wouldn't make sense without tax credits. Well, a couple hundred thousand dollars in value is still worth a lot of money. That still has a significant value, and we sure look at it without the tax credits of the incremental value.

Q And then Exhibit U on your chart?

A Exhibit U is the minimum incremental

value. Let me point out that I ran all of these at $1.30 gas price without escalation, same format as before. The first box is working interest owner value. What that shows is roughly one-half Bcf of incremental gas recovery of 470 Mcf; life shortened by about 12 years, 30 versus 20 years; cash flow, just the cash value, not including tax credits, of $197,000.

Q That is a discounted number?

A Discounted at ten percent. Tax credits of an additional $1.3 million.

Q If I understand correctly, in 13 years you are recovering an additional one-half Bcf of gas and make additional cash at present value of nearly 200,000 plus tax credits of an additional 1.349, correct?

A That's correct.

Q Go on.

A We also have an incremental net present value to the State of Colorado due to the severance taxes of $24,000 and La Plata County ad valorem taxes of $51,000 also discounted at ten percent.

The mineral owner value is the bottom box which is the Southern Ute Indian Tribe which has an incremental value of $59,000 for tax credits,

royalty cash flow of $117,000, and tax credit monetization -- which is misspelled by the way. I apologize for that -- it should be $308,000 for a total value of $484,000 to the mineral interest.

Q Is that the present value of the additional value of the Southern Ute Indian Tribe?

A Discounted ten percent; that's correct.

Q So in your estimation then, is this an economic proposal?

A Absolutely, without the tax credits.

Q All right. Your next exhibit is the wellbore diagram. Will your recompletion technique be the same as the first well?

A Yes, it is.

Q The next three sets of exhibits -- 1a, 1b, and 1c are evidence of the noneconomic nature of this proposed well.

Do you have an opinion as to whether the well is economic from the point of view of the tribe who wrote this letter?

A I have an opinion that -- I agree with Red Willow that this well is uneconomic, the Mesaverde well.

Q The current production is how much as of August '95?

A Approximately 15 Mcfd.

Q Do you have any ideas as to whether the production has declined since that time?

A It has declined since that time.

Q In your view does the recompletion reduce the potential of waste by utilizing the existing wellbore?

A Yes.

Q As I understand it, you would also plug and abandon the Mesaverde as you testified about this morning?

A Yes.

Q Do you have any concern that granting this application could reduce the quantity of gas ultimately recovered?

A No. In fact, it will increase it.

Q You believe that this application promotes the economic and efficient development of the reservoir?

A Yes, I do.

Q So that in your view there will be reserves that remain in the ground that are not recovered in the event that this second well is not permitted in the 320-acre spacing unit?

A That's correct.

Q So 320 acres is not smaller than the maximum area that can be economically and efficiently drained by two wells in this case?

A That's correct.

Q Then if I recall correctly, Mr. Baughman's exhibit on the gas seep is included again. Do you have any additional comments other than what you and he testified about this morning and yesterday?

A Really no additional comments to what we have previously gone over.

Q So there is a well between the proposed 1-7 and the outcrop currently existing which is the 6-7 well; is that right?

A That's correct.

Q And there is also the 5-13 pressure monitoring well?

A That's correct. And I guess one additional comment is we have not identified any gas seepage in Section 12 east of our 6-7 well.

Q Finally your Exhibit 3 was the same exhibit where the BLM had requested throughout your year and a half of discussions with them and the tribe that you pursue this application before the commission?

A That's correct.

Q Are you aware of the full field Emerald reservoir simulation that is ongoing?

A Yes, as I previously testified.

Q Does the fact that that study is going on have any affect on your application?

A No.

Q How many similarly situated wellbores does Cedar Ridge own or have rights to that are in this situation where you have an existing well that you might want to recomplete in the Fruitland Coal?

A Just the two that we have proposed. This is it; no additional wells.

Q So you believe that the granting of this application will also prevent the drilling of an unnecessary or additional well because you were able to use this wellbore?

A That's correct.

Q Frankly we breezed over the surface impacts, but I believe your testimony earlier was there was an adjacent road, correct?

A That's correct.

Q No additional pipelines necessary?

A That's right. Exhibit 3 is a topographic map that shows where the existing road

and the pipelines are located on that road.

Q Were the engineering and economic exhibits we discussed prepared under your direction and control?

A Yes, they were.

MR. WOZNIAK: I would request that they be accepted.

CHAIRMAN HEINLE: Any objections?

MR. EKBERG: No.

CHAIRMAN HEINLE: So accepted.

MR. WOZNIAK: That concludes my questions for this witness at this time.

CHAIRMAN HEINLE: Mr. Ekberg.

MR. EKBERG: I have questions.

EXAMINATION

BY MR. EKBERG:

Q You have testified that the quality of the reservoir in Section 7 is different than it is north of that. Can you explain what is different about it?

A I believe the permeability is poorer as you move south.

Q Would there be a reason for that, a geologic reason?

A I believe that it has to do -- there

could be a number of reasons why the permeability is poor. It could be that the cleats are not as open. It could be that the cleats are partially filled. It could be that the reservoir quality is less, that the quality of the coal is less. There is a number of reasons why it could be, and it is not inconsistent with the trend that is seen not only here but all the way across the San Juan Basin.

Q I believe that Burlington Resources has a well in Section 10 which is a fairly prolific well. Are you aware of that?

MR. WOZNIAK: This is township 32 north, range 11 west, the southwest quarter of Section 10, identified on Exhibit 2 as Southern Ute FC 32-11, 10-3.

THE WITNESS: What was the question?

BY MR. EKBERG:

Q Are you aware of the production from that well?

A No, I'm not.

Q Is there any reason why -- that well is as far south as the well in Section 7; is that correct?

A Yes, it is.

Q Is there any reason why that you would

see that the reservoir quality in those two wells would be different?

A Yes.

Q Can you explain what that is?

A The orientation of the high permeability fairway in the San Juan Basin is oriented northeast/southwest. Any production maps that have been put out show that trend very distinctly.

As you move south out of that fairway the reservoir quality gets poor. So when you are at the west end of that fairway where we are in Section 7, you only have to move south a little bit and you are outside of the fairway. As you move to the east where the fairway drops to the southeast, you only have to drop a little bit to again be out of the fairway.

So it is not correct making a geographic correlation along the township line that everything is south of a certain line because the orientation of the fairway is northeast/southwest -- northwest/southeast.

MR. EKBERG: May I have one moment, please?

CHAIRMAN HEINLE: You bet.

MR. EKBERG: Okay.

CHAIRMAN HEINLE: Are you ready?

MR. EKBERG: I'm ready.

BY MR. EKBERG:

Q I believe you stated that the two wells will efficiently and economically drain 320 acres.

A Here? In this location?

Q Yes. Did you say that?

A Three wells would be better.

Q Did you say two wells will efficiently and economically drain that 320 acres? Was that your testimony?

A 320 acres, yes.

Q Did you give any data that would support that conclusion?

A The economics, yes.

Q Did you give any kind of data with respect to the characteristics of the coal that would suggest that other than the economics?

A No.

Q Have you done an investigation in that regard?

A Of the coal quality in that area? Yes.

Q Do you have any data that you could present which would suggest why that is the case?

A Not with me, no.

MR. EKBERG: No further questions.

FURTHER EXAMINATION

BY MR. WOZNIAK:

Q Isn't part of your conclusion in that regard based upon the actual production in Section 7 from those wells, not just on some sort of coal quality basis?

A That's correct.

Q So if I understand your testimony correctly -- and I know we went fairly quickly -- for example, on Exhibit O, where it shows production, bubble production, it says there are drastic differences in the capabilities of the wells in Section 7 versus those in Section 5 even more, or any farther north or in the fairway; is that right?

A That's correct.

Q So that your testimony that the two wells can economically and efficiently drain the east half of Section 7 is based not only on the poor production, but also on the reservoir characteristics in that area?

A That's correct.

Q Was it also based upon the pressure information that you provided in the pressure graph map earlier?

A Yes, it was. I confirmed it as well.

Q So, again, your testimony is that if that second well is not permitted to be drilled, that reserves will be left in the ground; is that right?

A That's correct.

MR. WOZNIAK: We have nothing further for this witness.

CHAIRMAN HEINLE: Questions from the commissioners? Commissioner Matheson.

COMMISSIONER MATHESON: The 1-7, did you examine the bond logs on that well?

THE WITNESS: Yes, I have. It has the same good bond all the way to the surface, both the 2-5 and the 1-7. If they are not here for the commission, we will surely get them here.

COMMISSIONER MATHESON: I understand that this is a different situation here with permeability, and I think that is what we are going to be talking about here.

Have you performed any calculations on the radius and performance of the wells within the section that can help us understand what reserves are going to be left in place if you don't have this well? You are telling us that reserves are going to

be left in place, but have you performed any calculations to show us this?

CHAIRMAN HEINLE: Let me piggyback something on that. Have you made any calculations of expected ultimate recovery for the offsetting wells and then determine what the recovery factor would be based on 160-acre drainage or 320 for drainage?

THE WITNESS: On Exhibit R, start with the gas in-place. We made those calculations. We used those numbers to run into a coal gas simulator. The coal gas simulator we bonded it to that section, 640 acres. I don't have it listed here what we believe the ultimate gas recovery would be. It's approximately 65 percent of the gas in-place, and with the additional well we get approximately 3 to 5 percent additional recovery of the gas -- of the recoverable gas. I don't recall exactly what the number is, but approximately 65 to 70 percent of the gas in-place is the ultimate recovery, and we will get approximately 3 to 5 percent more gas with the third well.

CHAIRMAN HEINLE: In other words, when you ran the simulator I assume that you could tell from the simulator the results -- what the expected

recovery was for each of the two wells in that 640-acre section?

THE WITNESS: Yes.

CHAIRMAN HEINLE: If you knew what the ultimate recovery was going to be for the 5-7 well, could you have taken that number and divided it by the gas in-place shown on your Exhibit R to come up with a recovery factor for the 320 acres?

THE WITNESS: Uh-huh, which is about 65 to 70 percent of the gas in-place.

CHAIRMAN HEINLE: Is it equal between the two wells? Was the recovery the same?

THE WITNESS: The percentage was about the same on the recovery between each two. The number -- because there is different gas in-place for the two -- was different, but the ultimate recovery is between 65 to 70 percent for one well for 320-acre spacing.

CHAIRMAN HEINLE: But if the recovery is that high for one well in 320-acre spacing, wouldn't it say that for 160 acres it would be in excess of 100 percent -- which I guess is what you are saying. You are draining beyond 160 acres.

THE WITNESS: What we were looking at was three wells per 640, and we got the incremental

and we added two or three -- it might have been as much as four percent. I forget the exact number, but it was in that range, less than five percent.

CHAIRMAN HEINLE: So the incremental recovery from the third well is --

THE WITNESS: It is about one half of a Bcf of gas -- is what it is. I don't know if that answered your question.

COMMISSIONER MATHESON: It helps, I guess, a little bit with the recovery question. But I'm not sure I'm squared away yet when you talked about the overlap of the influence between the wells, whether or not, in fact, you are going to be looking at the interferences not only with the drilling spacing unit but the adjacent one to the west or the south radius of influence. Let's call it that.

THE WITNESS: We haven't run the calculations on how far out we would see it and how long it would take to see that. With these lower permeabilities, we believe if there is drainage outside of the 640 there could be, but I believe it would be very minor if it does occur at these low permeabilities.

COMMISSIONER MATHESON: For any future

applications, please bring us that information.

THE WITNESS: Yes, absolutely. The adjacent owners here are Red Willow -- the adjacent owner is Red Willow, one.

COMMISSIONER MATHESON: Right.

CHAIRMAN HEINLE: Any other questions from the commissioners?

MS. COULTER: With respect to adjacent owners, that is also continuous fracs around Section 7?

THE WITNESS: Yes. Exhibit B is the lace map that shows the acreage position around this application which is Red Willow and Cedar Ridge.

MS. COULTER: Being somewhat ignorant of some of the symbols used on your map, I notice on Exhibit 2 that the Cedar Ridge well, 5-7, in the northeast quarter of Section 7, isn't colored in as are the other wells. What is the difference there?

THE WITNESS: Excuse me, which --

MS. COULTER: Section 7, Exhibit 2.

THE WITNESS: Exhibit 2 is the tribe -- prepared by Dick Baughman of the Southern Ute Tribe. What they do is they take the data as they get it, put it in here, and I think it is one of those that needs to be colored in.

MS. COULTER: Okay. Thank you.

CHAIRMAN HEINLE: Let me ask you one more question -- and you may have already answered this. But given that the incremental recovery is approximately one-half Bcf based on your calculations, would it be economical to drill a new well to recover reserves in that range?

MR. WOZNIAK: Do you mean versus a recomplete?

CHAIRMAN HEINLE: The question is whether it would be economical to drill a well that had an expected ultimate recovery of one-half Bcf.

THE WITNESS: In this case, yes. And the reason I say that is that the number we used for the recompletion was $200,000 to recomplete it. To drill a well there, as Burlington pointed out, approximately $400,000.

If you look at the net present value of this, it has at least $200,000 discounted at ten percent of this cash flow of roughly $200,000, plus the tax credits, and that is at a flat gas price of $1.30 which we believe is very conservative. So the answer to your question is yes.

CHAIRMAN HEINLE: It would indicate a positive cash flow whether it reached the hurdle

rate -- and by "hurdle rate" I mean the required rate of return for a company to do that, you are assuming it is ten percent. If the company's internal rate of return was 15 or 20 percent --

THE WITNESS: It may not, correct.

CHAIRMAN HEINLE: Director Griebling.

DIRECTOR GRIEBLING: Is that taking into account that drilling a new well would not provide tax credit qualifications?

THE WITNESS: That's right, the new one would not.

DIRECTOR GRIEBLING: So a new well would not be economic to recover one-half Bcf?

THE WITNESS: It would be close. It may not be economic.

CHAIRMAN HEINLE: Again, it goes back to the definition of economics and what internal rate of return you would need for that well.

THE WITNESS: It would be very close. The recompletion is a much more efficient use of the well.

CHAIRMAN HEINLE: Thank you. Are there any other questions?

MR. WOZNIAK: I believe we already had the exhibits admitted. The only other exhibit was

the letter from the Southern Ute Tribe.

Mr. Zahradnik is here, and I believe his testimony would be the same. So unless someone has other questions as to why the tribe is in favor of this application, I won't call him back up here.

CHAIRMAN HEINLE: Commissioner Matheson.

COMMISSIONER MATHESON: I have a question.

MR. WOZNIAK: Okay. We will have him come up here.

BOB ZAHRADNIK,

having been previously sworn, testified as follows:

COMMISSIONER MATHESON: This is a precedent question.

Here we are looking at a different situation: a lower permeability well depleted the Mesaverde reserves, a recompletion of that Mesaverde well to recapture proven reserves.

Why do you think we will be seeing a number of different applications in the future for exactly this? Why would this not be precedent as the tribe has told us in the letter?

THE WITNESS: There seems to be a lot of confusion about how the MOU with the state and the BLM and the tribe actually works. What the state

agreed to back in '91 -- and we spent a long time negotiating this to reach an equitable agreement -- was that if it involves tribal land it wouldn't come before this board unless the BLM approved it first and said, Okay, let's go ahead and have this stay here. So the BLM pretty much has to sign off on it and evaluate it before it comes to you.

Our MOU with the BLM says they are not going to do that until they get a signoff from the tribe. And, in fact, a lot more people have expressed interest in doing this over the past years, and the tribe and/or the BLM have turned them down. So I want you to understand that the tribe and the BLM are both active with restraint on these issues.

The BLM specifically will not allow widespread infill development to occur unless there is substantially increased NEPA documentation -- you know what NEPA is better than I do. But because it is federal land it has to comply with the National Environmental Policy Act. And going out and drilling 100 wells exceeds basically what the BLM interprets the current environmental assessment to allow.

COMMISSIONER MATHESON: Recompleting or

drilling a bunch of new wells?

THE WITNESS: Either way. Drilling a bunch of new wells it clearly would, but any major change in field-wide development -- based on my discussions with the BLM and the regional solicitor for the BLM -- basically is going to require the need for additional documentation which is going to take another one to two years to complete.

COMMISSIONER MATHESON: With significant public input and so on and so forth?

THE WITNESS: Right. We are in the process of looking at that and evaluating what the reasonably foreseeable development is for the next twenty years out there, and we see a number of these over a long period of time will be recompleted.

COMMISSIONER MATHESON: I guess my question was one of process, and I think you answered it.

THE WITNESS: As I stated in my letter, these things have been going through -- counting these applications -- at the rate of one and a half per year. It has not been a stampede. We don't anticipate a stampede, and we won't allow a stampede.

COMMISSIONER MATHESON: If activity

picks up, it is going to have to go through other processes.

THE WITNESS: It has to go through several steps. First, the tribe has to decide that it is in its best interest -- excuse me, the BLM has to decide that it is in compliance with NEPA, then it comes before this board if it involves any tribal land, and so it is not something that can be done offhand.

COMMISSIONER MATHESON: That is exactly what I was looking for. Thank you.

MR. WOZNIAK: In evidence of that, Commissioner Matheson, is that we did start this with the tribe a year and a half ago, and to get these two and to get to this hearing it took us that long to go through all the steps that they needed to go through, their internal review and the BLM review, and the BLM deciding whether it was in the best interest of the tribe, and to satisfy their trust responsibility until they finally decided that we should pursue this matter.

I think that there is that level where you know you are a year and a half away and hopefully not that long every time, but there are a lot of steps that have to happen.

COMMISSIONER MATHESON: I have faith in the tribe. Don't mistake me there. I do see this as a different application as the one previously, and I was wondering about these process questions and that was about it.

THE WITNESS: This one took a year and a half because we had serious concerns about the seep. And over that year and a half as we developed a lot of data and had a much better understanding of it, we felt comfortable with it and we thought it was time to bring it forward.

CHAIRMAN HEINLE: Mr. Ekberg, do you have any questions?

MR. EKBERG: No questions.

MR. WOZNIAK: That concludes our presentation.

CHAIRMAN HEINLE: Mr. Ekberg.

MR. EKBERG: One minute, please.

MS. COULTER: Let me make a quick statement to the interested parties here for Burlington. There has already been testimony that has indicated there is no contiguous track outside of seven that contains an ownership interest for Burlington. So I'm not exactly sure what interest the parties' status is at this point in time, but

I'm deferring to Mr. Wozniak's sense of not pursuing that matter further, but I would just like to state that for the record.

MR. WOZNIAK: I think, Commissioner Coulter, that was reinforced. If I understood the testimony correctly, they believe that the spacing unit is this way so that the contiguous units are followed by Red Willow and the tribe, not Meridian. But again, we don't have any objection to them making any statements.

COMMISSIONER MATHESON: So if it is a lay-down --

MR. WOZNIAK: That is what we had thought it was, and then we were corrected during the 2-5 application that they viewed it as a stand-up. And that being the case, we don't believe they are an interested party but that they are clearly an intervenor. They can present whatever they like, as far as I'm concerned.

MR. EKBERG: We would like to do as Mr. Wozniak with respect to the exhibits that were presented in the earlier docket, at least with respect to the geological matters. I'm not sure, but did your proposal cover our --

MR. WOZNIAK: My feeling was that

everything that you presented with respect to land and geology, we were willing to allow judicial notice to be taken such that none of that had to be restated subject to anything that you felt you needed to clarify. That was fine with us; same with engineering, frankly.

MR. EKBERG: I would like to call our engineering witness back.

CHAIRMAN HEINLE: Go ahead.

MR. EKBERG: Our Exhibits 14, 15, 16, 17, 18, and 19 apply equally to both dockets. Would you like us to go through them again?

CHAIRMAN HEINLE: I don't think we need to go through them again. You can refer to them as we go. I think it is still all fresh in our memories.

JACK V. KEAN,

having been previously sworn, testified as follows:

EXAMINATION

BY MR. EKBERG:

Q You have heard Mr. Savage [sic] testify that he believes that the reservoir quality in Section 7 is different from that to the north? Based on the evidence that you submitted before, do you have an opinion as to that statement?

A Based on the evidence I have submitted before, I don't see a substantial reason why Section 7 should be any different from that of Section 5.

Q Mr. Logan did testify that the production in the two wells in Section 7, 6-7 and 5-7, were substantially lower than the wells in Section 5. Is there any reason you can think of that might be the cause for that?

A Yes. There are two possible reasons why the production in Section 7 may be lower than areas around.

If I may step up here again -- you know how I like to draw up here. We haven't seen any evidence regarding the reservoir. It is very possible that the reason that these wells are less productive than offsets is because they have a low C, a low performance coefficient. A possible reason that they have could have a low performance coefficient is initial completion.

Burlington Resources has an active -- what we call recavitation program. Throughout the entire prolific coal we have identified wells, in our mind, that this number seems to be low relative to offsets.

So what we do is we go in and cavitate these open-hole completions. And what we have actually seen, if I plot C -- somewhat like the example plot we saw before. If I plot C versus time, as I pointed out before, it increases with time.

What we have seen upon recavitation is a distinct increase in the C factor. We have seen generally about a two- to three-fold increase, so that tells us that the initial completion was inadequate.

For example, we recavitated two wells, the Southern Ute 300 and 301, back in 1995. What we saw before we recompleted those wells was that they weren't very prolific compared to their offsets. They were making only around a million a day or so. We recavitated them, installed compression, measured an increase in C and saw rates go up to six million a day, and at the same time we saw our drainage area expand.

So it is very possible that one explanation for the lack of productivity of the wells in Section 7 is because this performance coefficient is low because of the initial completion. As you know, one of those wells was

cased and frac'd.

Another explanation might be, that was not addressed, water loading. These wells generally make quite a bit of water up in this area, and if that water is not properly removed from the wellbore, then that water loading problem will be evidenced by suppressed production rates.

Q Mr. Logan has made much of the fact that he considers the wells in Section 7 to be out of the fairway. Are there examples that you are aware of where you have gone in and recavitated wells outside of the referenced fairway and had a similar result?

A Yes. Along the same strike that we have just referred to, we have recavitated a number of wells earlier on this year in the Cedar Hill area. Now, that is significantly far away, but it is a long strike. And what we have seen is basically what I have described before. We have recavitated page com 100 and took its rates from about 2 million a day up to 8 million a day.

We also recavitated some wells -- the Vanderslice 100 and 101 -- which we thought actually had two problems in that case. We thought we had a low performance coefficient and we also had evidence of loading.

We recavitated those wells and installed compression and got the rates up to 6 million a day also. So we do have examples along the same strike of initial completion as being inadequate and then having the ability to go and remedy that initial completion.

Q Do you have an opinion based upon the testimony that has been presented here today as to what will be efficiently and economically drained by one well -- whether the 320 acres will be efficiently economically drained by one well in Section 7?

A It is possible with a successful completion that one well could drain 320 acres, particularly in light of the geologic continuity of the coal and particularly in light of -- we haven't seen any reservoir data to say otherwise.

Q Would Burlington attempt alternative measures before drilling another well in Section 7?

A Certainly it would be less expensive to try to recavitate the one well that is open-hole, or it would be possible to sidetrack perhaps the well that is cased and frac'd, and I say "perhaps" because I don't know the casing size on it. It may actually not be possible to sidetrack.

But we did go ahead and look at economics -- and I will refer you to Exhibit 20B. The first thing I will point out to you, there is a typo. If you look in the shaded area -- I will give you a moment to find that particular exhibit. Are you all there? If you look at the shaded area where it says Total Section, under the Recomplete it has Section 5; that, of course, should be Section 7; and under the New Drill, Section 4 is listed, and that, of course, should be Section 8.

MR. WOZNIAK: Could I ask you to repeat that? Is this 7 and 8?

THE WITNESS: Yes, sir, that is correct.

MR. WOZNIAK: Thank you.

THE WITNESS: If the additional completion is similar to the existing completion -- I modeled these as an acceleration. They do have low recovery factors.

The first thing I want to talk about is down at the last row, Reserve Adds, and for the recomplete I indicated that Section 7 would lose one-half Bcf of Mesaverde reserves.

The production data that I have which Cedar Ridge has reported -- oh, yes, if you refer to

Exhibit 21B -- the last production data for the Southern Ute 1-7 available to me -- indicates that the well was producing between 40 and 50 Mcf a day. And based on its previous production history, if we decline that out that is about one-half Bcf of the remaining reserves -- actually under one-half Bcf.

A quick calculation shows that this well is economic. If we take 40 Mcf a day, multiply it by -- we will say 30 days in a month -- that gives us our monthly gas production. If we multiply that number by the cost we get for the gas and then we subtract off the previous numbers that I mentioned, the 390 direct cost and also the operating costs which we decided were around 150, that well makes revenue. It makes nearly a thousand dollars [sic] a month of just pure revenue.

So based on the production data that I have available to myself and based on Burlington Resources' costs, this well is economic. If we leave this well right now, we will leave behind a little bit less than one-half Bcf.

So if I could refer your attention back to Exhibit 20B, once again the economics were run based on acceleration, and also they were run as an entire section. So we looked at the wells, all

three wells in Section 7, the two existing wells plus the initial recomplete, and we also looked at a potential two existing wells in Section 8 and a potential new drill because we will have a similar situation to that that we have existing in Section 32 and Section 5. We will have two Fruitland Coal completions offset by only one in Section 8.

Once again, the investment that Burlington Resources would use for a recomplete is about $118,000; for a new drill, once again, $415,000. Initial uplift is probably going to be lower in this area because of our initial completion on the recomplete.

As you can see the result is a positive net present value in Section 7; however, there is a negative impact for drilling a new drill in Section 8. Both of those numbers exclude tax credits, benefit or deficit.

And so because of the loss of reserves in the Mesaverde and because of the negative economics, in particular to Section 8, there really isn't a lot of economic incentive to pursue this particular recomplete.

BY MR. EKBERG:

Q Just to summarize your opinion then, is

it your opinion that abandoning the well in the Mesaverde formation, based on the information available to you today, that gas may be left in place?

A Gas may, indeed, be left in place.

Q Is it your opinion that it would be uneconomic to drill a new well in an offsetting section to Section 7 if it were to become necessary?

A It is my opinion that if a new drill were necessary, it would indeed be uneconomic in Section 8.

MR. EKBERG: No further questions.

CHAIRMAN HEINLE: Mr. Wozniak.

EXAMINATION

BY MR. WOZNIAK:

Q Mr. Kean, I have a couple of questions. I'm sure you have heard Mr. Logan testify that the well is actually producing 10 to 15 Mcf a day, and I know you have other data, but there seems to be a factual question there as to the volume.

I guess you would acknowledge that at 10 to 15 Mcf a day -- assuming the well were producing that -- that it would be less of an economic venture?

A I would agree that if the production were 10 to 15 Mcf a day, it would be marginal.

Q I understand that that well is still operated by the Southern Ute Indian Tribe. I think you said that that data was published from Cedar Ridge, but I think that data must have come from the tribe; is that correct?

A This is the reported data that I have access to.

Q Okay. Another question that I guess I just had some interest in is that it sounded to me like you acknowledged that there was a fairway in this area of the San Juan Basin. Would that be a fair statement?

A The fairway is a fairly generic term that is used to decide or used to include wells that are considered prolific.

Q Did you also testify that wells could be prolific outside of the fairway? Is that a fair characterization of what you suggested?

A I don't recall making that particular statement. If we agree that the definition of the fairway includes prolific wells, then there wouldn't be a prolific well outside of the fairway.

Q Where do you think the fairway is

located in this area? Could you describe it for us?

A Let me check a map.

Q Why don't you look at one of your exhibits that might have a lot plotted on it or any of them.

A Generally the fairway is considered to be an area that is overpressured that produces a lot of water. And in the sections that I'm referring to in Exhibit B, the map that you have, it would likely include the area that includes the 1-7, the 5-7, the 2-5, and so on.

Q So you think the 18-1 is in the fairway?

A Where is the 18-1?

Q That would be in the north half, northeast quarter of Section 18.

A I haven't looked specifically at that well, and I'm not familiar with its production characteristics.

Q Would it be safe to say that the fairway then is not a defined geographic area, it is more of a general description of whether a well is within what some people would call a significant production area or not?

A So you are saying that the fairway as a term is fairly generic?

Q Correct.

A I would agree with that statement.

Q I guess I didn't understand your -- the economics again. On the recompleted in Section 7 that you have, this is based again on Burlington's cost as you described?

A It is indeed.

Q And the new drill for Section 8 -- forgive me for standing up -- that is assuming that you were to drill a new well in Section 8?

A Assuming a new drill in the northwest section of 8.

Q Over here (indicating)?

A Northwest.

Q Oh, there it is. When they get them shaded, these colors -- so if I understand your acreage position, does Burlington own interests in Section 8 there, the northwest quarter?

A Burlington does not, however, the interest owner may be compelled to drill a new drill there. Subsequent to that, our interest is in the southeast quarter. We may also be compelled to drill a new drill.

Q I see. Okay. In the last area that I have written down -- I guess I just didn't understand from your testimony -- was that you saw no -- if I understood correctly -- no substantial reason why Section 7 didn't produce the same as Section 5; is that correct?

A I have not seen substantial evidence -- can you rephrase that question?

Q I think you said there was no substantial evidence as to why Section 7 didn't produce the same as Section 5.

A Very definitely there is a difference in production between Section 7 and between Section 5, and that production difference can be attributed to a number of factors.

Q So you do recognize that there is a difference in the actual data of the production between Section 7 and Section 5 -- at least today?

A Yes.

Q Did you disagree with Mr. Logan's conclusions based upon his testimony that the 1-7 well will generate additional reserves in the range of one-half Bcf?

A I ran the economics and the economic assumptions were based on acceleration.

Q So that means you do disagree with his conclusion?

A His conclusion that --

Q That drilling the additional well, the 1-7, recompleting the 1-7, will generate an additional one-half Bcf of reserves that would otherwise be lost?

A In the Fruitland Coal formation --

Q Correct, just in the Fruitland Coal.

A Based on the previous testimony that I have given, and that is that the coal is continuous, based on the fact that we have substantiated 320-acre spacing, and based upon the fact that I haven't seen anything significant to tell me that the reservoir is fundamentally different in this area, any type of work we do is going to be acceleration.

Q Do you believe the permeabilities are the same in Section 5 -- and let's say in Section 7?

A I have not calculated any permeability data in either section.

MR. WOZNIAK: I have no further questions, Mr. Chairman. Thank you.

CHAIRMAN HEINLE: I have a question. If

permeabilities were different between Section 5 and Section 7, could not that account for the production difference? I'm asking you to make an assumption.

THE WITNESS: Yes. If the permeability was different between the two sections, that would definitely play a role in the productivity of the wells. As I stated before, the C coefficient is in part, a function of permeability. So if we lower the permeability, we lower the C.

CHAIRMAN HEINLE: Thank you. Commissioner Rebne.

COMMISSIONER REBNE: You provided in the last application testimony about some pressure data you have farther to the east in two wells. And my question is, can you provide us with some cumulative production information surrounding those wells where you have pressure information and some connectivity information?

THE WITNESS: Madam Commissioner, I don't have any of the cum data with me.

COMMISSIONER REBNE: Can you venture at a range, one-half B, 2 B's, 10 B's?

THE WITNESS: Between 2 and 10 Bcf.

COMMISSIONER REBNE: But significantly higher than the 0.4, 0.5 Bcf that we have seen --

THE WITNESS: Yes.

COMMISSIONER REBNE: Perhaps on the order at least twice, three times?

THE WITNESS: Yes.

CHAIRMAN HEINLE: Commissioner Matheson.

COMMISSIONER MATHESON: I was going to interject following Commissioner Heinle's question, the permeabilities of the gas in-place are higher in Section 5 and 4, and in the previous matter we discussed how there would be a concern for the correlative rights issue. If you step down between 7 and 8 -- in fact, the permeabilities are lower -- that concern would also be lower, would it not?

THE WITNESS: The correlative rights?

COMMISSIONER MATHESON: Yes.

THE WITNESS: Yes.

COMMISSIONER MATHESON: You don't have any data that you feel you can speak to relative to the permeability differences between Sections 7 and 5 at this point?

THE WITNESS: No, I have not. I haven't even done any C coefficient calculations on the wells in Section 7 or 5.

COMMISSIONER MATHESON: Thanks.

CHAIRMAN HEINLE: Any other questions?

Director Griebling.

DIRECTOR GRIEBLING: I would like to follow up a little more on the potential well in Section 8 that may be compelled to be drilled as a result of the recompletion of the 1-7.

As I understand it, you projected it to be drilled in the northwest quarter somewhere around -- is that the northwest quarter?

THE WITNESS: That is a potential location.

DIRECTOR GRIEBLING: What would that accomplish, that well, given that the 5-7, the 6-5, and the 8-1, and the 8-2 are basically offsets to that location and currently producing, as I understand it, from the Fruitland? Could you explain what that would accomplish?

THE WITNESS: As we pointed out in the testimony regarding the case in Section 5, a pressure sink will be created in that section due to --

DIRECTOR GRIEBLING: In Section 8.

THE WITNESS: I think we can address a potential location at this point for two reasons: the first, of course, would be due to increased recovery to the north in Section 5 because of the

increased density. We are going to increase the rate of withdrawal out of this section. Gas where it is permeable, no matter if it is 10 md or 100 md, will migrate to a lower pressure. So there is potential from here and also by -- the same rationale goes in Section 7. By increasing the number of straws in this area, we can potentially create a pressure sink which will cause migration of gas out of Section 8.

DIRECTOR GRIEBLING: I was curious mainly with respect to the application our commission is currently hearing which is in Section 7.

Without such a well, would it be fair to say that the reserves that are in here would be drained by these surrounding wells?

THE WITNESS: Without a well right here, the gas in this quarter section will be drained by offsets.

DIRECTOR GRIEBLING: And your calculations indicate that such a well would be uneconomic?

THE WITNESS: That is correct.

DIRECTOR GRIEBLING: Thanks.

CHAIRMAN HEINLE: Any other questions?

Any redirect?

MR. WOZNIAK: No cross.

CHAIRMAN HEINLE: Mr. Ekberg.

MR. EKBERG: Maybe just one other question.

CHAIRMAN HEINLE: Go ahead.

FURTHER EXAMINATION

BY MR. EKBERG:

Q Although permeability can be different, was it your testimony that there could be other factors that could result in a lower productivity of these wells? Mechanical, for example?

A There are mechanical factors that may cause lower productivity.

Q So just because these wells don't produce as much, we can't necessarily assume that it is simply permeability?

A That is absolutely correct.

MR. EKBERG: Nothing further.

CHAIRMAN HEINLE: I believe you are finished. Any other witnesses, Mr. Ekberg?

MR. EKBERG: No, sir.

CHAIRMAN HEINLE: Closing remarks.

MR. WOZNIAK: Sure. Thank you, Mr. Chairman.

We believe that the evidence has shown that the coal characteristics, in essence, the reservoir characteristics, as you move south in this area are weaker, and that is shown basically by the less production that has come from the two existing wells.

As a matter of fact, the 5-7, Mr. Logan testified this morning, is an open-hole cavitation, the same completion as was used in Section 5, so we don't believe that is the cause. We believe this is the edge of where -- conventionally people call the fairway. So we believe the testimony is that the reservoir characteristics are less prolific as you move south.

We think that this application has shown that waste is going to be prevented because we are going to be recovering incremental reserves. We utilize current wellbore, so there is no waste there. Again, we recover the additional ad valorem and severance to the tribe and to the state.

We think that the testimony shown in this case is that leaving the well as it is without recompleting this will cause waste. Mr. Logan testified that it is 10 to 15 Mcf a day currently and declining. We understand that published data

disagrees, perhaps not of such a recent vintage, but we think that the tribe and Cedar Ridge's testimony is probably more accurate based upon real-time data.

So we think that this application does promote the economic and efficient development of this reservoir. We think that in this specific 320 that two wells are needed and that it does recover an additional one-half Bcf of reserves.

And I know this area, which is not the area I'm used to in the State of Colorado. People throw around one-half Bcf like it is nothing. But in other parts of our state, we probably drill a number of wells to get one-half Bcf recovery. So I think that there is some real recovery here, and it is incremental recovery, and without it it would be a waste.

I will make the same comments -- and won't repeat them -- about the public health and safety with the gas seep that we talked about this morning

. Again, minimize surface impacts because of the existing wellbore, exiting roads.

As with the prior application, the tribe is in favor of this. This means an additional one

half million dollars to the tribe. It provides them additional reservoir data, and I think they are in favor of it for those reasons. Again, it is not a complete downspacing, but on a case-by-case basis these are going to be entertained.

And finally on the issue of correlative rights, I again state that if Meridian's testimony this morning was that they are actually in the east half of Section 8, then they don't have an adjoining, cornering, or contiguous section. So their comments have to be based upon the public interest. And to my knowledge Pinon and Kukui, which are tribal entities, plus an entity that didn't protest or withdrew theirs, have no objections to the 1-7 well. So those parties towards whom this well is moving have consented under Rule 11260 -- excuse me, Rule 3, and those are the parties that have the right to object.

So we feel that for the prevention of waste and for the recovery of incremental reserves that this application should be granted, and that the 320 acres does support two wells in this area. That is all we have on this matter.

CHAIRMAN HEINLE: Mr. Ekberg.

MR. EKBERG: Once again we have to start

with the premise that the spacing that has been established is one well per 320 acres, and it is the burden of the applicant to prove that it is different. They came in here and said that the wells are low producers, and that the economics suggest that another well should be drilled, but as anything to else they did not bring that data with them.

So I'm submitting here that they have not met their burden of proof to show why, what the nature of the reservoir is that is different that would justify changing the spacing of this particular location.

In the prior hearing the commission looked for alternatives. We have suggested a couple here, that maybe an additional isn't necessary.

Mr. Wozniak said that one of these wells is an open-hole cavitation. And Meridian has found that the initial open-hole completion may not be adequate, but then additional rework and cavitation may have to be done to increase the production. So there may be alternatives before an additional well can be allowed here.

Based on the data that was available to us, we do believe that there may be gas in the

Mesaverde reservoir which is left in place if this completion is allowed -- although we understand that there is some dispute as to that -- but we needed to go where it was available to us when we prepared our testimony. That data showed to us that there would be gas that is left in place if the Mesaverde is plugged at this time, gas that could be recovered economically, at least from Burlington Resources' perspective.

So we think that the applicant has not met its burden of proof to allow an additional well, that allowing an additional well now could result in the drilling of unnecessary wells, and that there may be other ways to complete this reservoir before downspacing. Once you allow this well to be drilled, you can't undue it.

I know the commission has been very cautious about downspacing in the past. The evidence has to be fairly conclusive, in my opinion. We also believe that there will be some waste as a result of abandoning the well before its time. Those are my comments.

CHAIRMAN HEINLE: Thank you. Mr. Wozniak, any rebuttal closing?

MR. WOZNIAK: No. Thank you,

Mr. Chairman.

CHAIRMAN HEINLE: Any comment BLM wishes to make?

MS. THOMPSON: Not at this time. Thank you.

CHAIRMAN HEINLE: This closes our record. Certainly the commissioners are going to ask questions as we go into deliberations, if they have any. Commissioner Rebne.

COMMISSIONER REBNE: Kind of a clarification question. We talked a little bit about the monitor well, the 4-6 in Section 6, and it was my recollection that there really hasn't been any pressure drawdown since that well has been monitored.

MR. LOGAN: There has been maybe 2 psi in the past year, but essentially no drawdown; that's correct. We have a pressure transducer that records it minute by minute, day by day.

CHAIRMAN HEINLE: Commissioner Matheson.

COMMISSIONER MATHESON: Sure. Mr. Logan, did Cedar Ridge drill the wells in Section 6 and 7 and I guess the next one to the south, Section 13?

MR. LOGAN: No. Cedar Ridge did not

drill those. We acquired these wells approximately two years ago. They were drilled either by Amax or by Ladd, depending on the vintage of the wells.

COMMISSIONER MATHESON: I guess what I'm trying to get at is whether the mechanical questions that Burlington brought up are a concern when we had the discussion on Section 5.

Do you have any indications from your reworking or operations of a completion problem or scaling or some darn thing or another that could cause a decrease in production in those sections?

MR. LOGAN: No. Concerning the 5-7 well, that well was a GRI cooperative research well. The completion was performed by me. I completed it as part of the GRI cooperative research project -- and that has an open-hole cavity completion.

As soon as we finished with the 5-7, we moved up to the 5-5 well and started it almost the very next day, drilled and cavity completed using the exact same technique they used on the 5-7.

So as far as the completion technique, they are identical; the 5-5 and the 5-7. They were Amax operated wells, but they were GRI cooperative research wells where I was employed by Resource

Enterprises on a consulting basis.

COMMISSIONER MATHESON: At the 6-7 and the wells in Section 13 and Section 6, do you have any knowledge on those?

MR. LOGAN: Yes, I do. The 5-13 is also an open-hole cavity completion well completed exactly the same way as the 5-7. That well was drilled and completed within a few months of the 5-7.

The 5-13, as you recall, has been shut-in for two years primarily because it hasn't produced more than 15 or 20 Mcfd with exactly the same completion technique -- the 6-7? The 6-7 was drilled and completed by Amax Oil & Gas, and I designed the hydraulic fracture stimulation on that. I tried to convince them to do an open-hole cavity. I designed and implemented the hydraulic stimulation on that which is almost identical to the fracture stimulation that was placed in the 3-6 well in Section 6.

COMMISSIONER MATHESON: Do you think that the fracture completion which you are planning for the 1-7 will be as effective as a cavity completion?

MR. LOGAN: As a cavity completion in

the 1-7?

COMMISSIONER MATHESON: I know you can't do one.

MR. LOGAN: There, I think, a cavity completion would probably be a little better, not tenfold magnitude that you see in other areas, but a little better.

One thing in our studies in this area, this is one unique area where hydraulic fracture stimulations are not that significantly bad compared to an open-hole cavity completion.

COMMISSIONER MATHESON: Is that because of the reservoir itself?

MR. LOGAN: It has to do with something in the reservoir -- the hydraulic fracture stimulations do not appear to be damaging the reservoir as significantly as it does in other areas because the coal is such a -- you have to remember coal is an extremely complex rock. It is not just a big thick nice black thing. It is probably the most complex reservoir that I have ever looked at.

COMMISSIONER MATHESON: That helps me out. I guess I'm still a little perturbed that we don't have some drainage calculations here. I'm not a petroleum engineer. I guess I would like to ask

you, Chairman Heinle and Director Griebling, how disturbed you guys are?

CHAIRMAN HEINLE: I will answer it. I think that should be part of the data set. You are absolutely right. We need to see expected ultimate recoveries by wells, recovery factors based on the different acres of drainage, and it is sort of bred-and-butter-type stuff. I certainly don't want to see another situation like this where we don't have it.

I think the data, though, that has been presented, in looking at the bubble maps and the level of production of these wells as a pressure data, all convince me that an additional well here is going to drain additional reserves.

But I concur with what you said in regard to the data, the presentation of the data. The data is available; it just hasn't been presented. Commissioner Johnson.

COMMISSIONER JOHNSON: I would like to follow up on the pressure data in Section 13, the observed well, 5-13. Has the pressure changed much, or is it similar to the Section 6 observation 4-6?

MR. LOGAN: The pressure in the 5-13, we have only monitored that for the last several months

and, in fact, pressure has increased slightly in the last little bit. It is overpressured and it really hasn't changed much, and any change that I have seen has actually increased a little bit.

COMMISSIONER JOHNSON: How much is "a little bit"?

MR. LOGAN: It has increased from some of the first measurements from approximately 0.044 psi per foot to about 0.45, a little bit, third or fourth decimal point out -- a few psi is what it would be.

CHAIRMAN HEINLE: Any other questions?

I guess what I would like to do is sort of go around to each one of the commissioners and see where they are at. Commissioner Rebne.

COMMISSIONER REBNE: I guess first of all, like Allan and Mike have said, it would be helpful to have some additional data to make our conclusions. But I think, in general, this area looks a little bit different from the last application.

The reservoir rock does seem to be different, perhaps lower permeability. And when you compare the cumulative production in other areas, such as the example Meridian provided in the last

application, it does appears to me that this is different, and we probably have a situation where the drainage area is a lot smaller.

So the applicant has testified that additional reserves will be recovered. They can be economically recovered. The protection of the correlative rights is not a big concern of mine in this area, so I support approving the application.

CHAIRMAN HEINLE: Commissioner Johnson.

COMMISSIONER JOHNSON: I guess I see that the cumulative or the correlative rights issue is not an issue in this case. I guess it is the number one criteria where I'm looking at, as far as making my way to a decision; number 2, it would appear -- and this is purely intuitive, I guess -- that an additional well is going to pick up production that they wouldn't otherwise have. A statement was made there, but no hard facts stated that, that I recall.

Due to little or no change in the pressure situation, I think, in my mind, it diffuses the opponent's or the intervenor's concern about pressure moving out, and so I guess that is where I'm at.

CHAIRMAN HEINLE: Commissioner Matheson.

COMMISSIONER MATHESON: I concur with Commissioner Rebne's comments.

CHAIRMAN HEINLE: I also concur with Commissioner Rebne's comments. I don't have anything to add to it.

I think at this point the chair will entertain a motion that the application be approved.

COMMISSIONER REBNE: So moved.

COMMISSIONER JOHNSON: I second it.

CHAIRMAN HEINLE: All in favor respond by saying aye.

COMMISSIONER REBNE: Aye.

CHAIRMAN HEINLE: Opposed? The commission passes.

MR. ONSAGER: Paul Onsager with BLM. For the record, we would like to state that the BLM concurs with the commission's decisions on these matters. Under the MOU, BLM does not have to issue a separate decision, and we would not anticipate doing so at this time.

CHAIRMAN HEINLE: Could you restate your name. I don't think the reporter got that.

MR. ONSAGER: I'm sorry. Paul Onsager, O-n-s-a-g-e-r.

MR. ZAHRADNIK: On the behalf of the

tribe, I would really like to thank you guys for hearing this and going the extra mile and staying the extra day and getting this done. Thanks for your cooperation.

MS. COULTER: Thank you for putting up with our schedule.

MR. WOZNIAK: Thanks for staying late. We really appreciate that -- especially the extra day.

MR. EKBERG: Burlington Resources seconds that. Thanks to the commission.

CHAIRMAN HEINLE: You had a question as to who seconded it?

MS. BEAVER: I got the answer.

CHAIRMAN HEINLE: We have some clean-up work at this point.

MS. BEAVER: We have the rest of the agenda.

CHAIRMAN HEINLE: I have to read some things into the record. We still have some business to conduct here.

Can you hear me? It would be helpful if you would keep the conversation to a mild roar.

MS. BEAVER: Maybe the consent agenda down at the very bottom.

CHAIRMAN HEINLE: Do you want to do that first?

MS. BEAVER: Why don't we.

CHAIRMAN HEINLE: If that is okay with everybody.

MS. BEAVER: If you would rather not --

CHAIRMAN HEINLE: I guess the chair would entertain a motion that the consent agenda be approved.

COMMISSIONER JOHNSON: I so move.

MS. BEAVER: Before we do that, I do want to make one amendment to the recommendation or maybe just a note on the Hayes Oil & Gas application. This goes back to a concern that we have raised previously about our interested party rule. There is a concern that Rule 508A, which is the interested party rule that affects applications with respect to previously spaced lands, that the parties outside of the drilling unit are not given notice by an amendment to the drilling application. And this particular application is for a well that has actually been drilled already, but for a well that is encroaching on a section to the north, by reading this rule you don't notify that party.

And just so you will know, we have asked

the applicant if the party to the north, which is Sampson Oil, is aware that the well has been drilled and is in concurrence with it, even though they didn't receive notice of the application, and the answer that we have gotten is yes.

We asked if we could get a letter from Sampson just to quell that concern even though as the rule has been interpreted it is not required. We haven't gotten that letter.

The engineer that testified in the adversary didn't think there would be a problem -- and we haven't been able to get in touch with him. I know he is going out of town, and I'm afraid that with the holiday we didn't get the letter. So we still recommend approval of the application.

But in the event that Sampson is adamantly opposed at all to the well, we would want to come back to the commission. And I put it that way because the well has been drilled. The well was drilled. It was approved. As the notice states and as the hearing officer report states, the location of the well was incorrect. It was approved as a permittable location, but it was unfortunately in error and drilled -- where it was drilled was not in compliance with the order, and that is why we have

to have this application in the first place.

So hopefully I haven't thoroughly confused you. But what I would like you to do is approve it unless Sampson has a problem, and at that point we will have to come back and address it.

CHAIRMAN HEINLE: Sure. That is fine. We can amend the motion to approve the consent agenda session such that if opposition is raised by Sampson on that particular cause number, that it would be, in effect, removed from the consent agenda and it would come before the commission.

MS. BEAVER: Right. And since it will take me a couple of weeks to get the order prepared anyway, I expect to have something -- either a piece of paper from Sampson or have had a conversation with Sampson beforehand.

COMMISSIONER MATHESON: Given that this is an approval basically and we will be waiting upon all parties' concurrence, should we seek -- instead of their nonobjection, perhaps we should require their approval. I think you stated it differently.

COMMISSIONER REBNE: What was their response if they have no objection?

COMMISSIONER MATHESON: Basically.

COMMISSIONER REBNE: A response, whether

it be written or telephone.

MS. BEAVER: I might point out that the well was drilled eleven months ago this coming Monday. Sampson, I'm sure, is aware of the well's existence, and to the best of my knowledge we have not heard anything from them in opposition of the well. The well is shut-in. It hasn't produced, but it was drilled October 9 of '95.

CHAIRMAN HEINLE: But obviously you had enough concern that you wanted some written response from Sampson. I agree with Commissioner Matheson. All we need to do is make the amendment to the motion such that it is approved after the written response is received from Sampson; is that right?

COMMISSIONER MATHESON: Yes. In previous matters we heard that people right next door to each other weren't paying attention. I think we need something explicit.

MS. BEAVER: I think I misunderstood you. I guess I thought you were wanting to wait perhaps until October to approve it.

COMMISSIONER MATHESON: I'm just saying just as you say, but we want something explicit.

MS. BEAVER: That's great.

CHAIRMAN HEINLE: So how do we --

DIRECTOR GRIEBLING: Why don't we recommend that the commission approve the order contingent upon receipt of --

MS. BEAVER: -- a waiver from Sampson?

DIRECTOR GRIEBLING: -- documentation indicating that Sampson is not going to oppose the application?

COMMISSIONER MATHESON: That would be fine.

CHAIRMAN HEINLE: Is that agreeable to all the commissioners?

COMMISSIONER MATHESON: Yes, it is, to all of them.

CHAIRMAN HEINLE: Is there anything else on the consent agenda that we need to address at this time?

MS. BEAVER: Not specifically. The other two matters are as stands.

CHAIRMAN HEINLE: So we have a motion on the table with an amendment to approve the consent agenda and we need a second to the --

COMMISSIONER REBNE: Second.

CHAIRMAN HEINLE: We have a second. Any further discussion? All in favor respond by saying aye. Opposed? Consent agenda is approved. Rich.

DIRECTOR GRIEBLING: While we are on the topic of 508A and -D, we would appreciate direction from the commission in future evidence hearings to interpret -- there is an apparent conflict and we would like to interpret 508D as applying -- I think we will have to bring corrections or adjustments to 508A before you finish your rule-making efforts.

It would be helpful for us to be able to require that notice be provided to owners which well is being approved before anything -- and it would seem to indicate that only those within a drilling unit would need to be noticed. We can't believe that is your intent.

CHAIRMAN HEINLE: It appears to be in conflict. 508A and 508D are in conflict. It does appear to be a problem. Patricia.

MS. BEAVER: I might point out that there are some orders, especially the newer orders, that when they give -- as you heard Mr. Wozniak mention, 11260, Rule 3 -- there are some orders that specifically tell operators who they have to notify when they are seeking an exception. So I think in that case we need to follow whatever rule would be in that order and maybe --

DIRECTOR GRIEBLING: In the absence of

specific guidance within the order we apply D?

MS. BEAVER: Can we do that?

CHAIRMAN HEINLE: Again, I think it is going to require some cleanup of the rule --

MS. BEAVER: We are already working on that.

CHAIRMAN HEINLE: In the interim, I guess, is what you are --

DIRECTOR GRIEBLING: Yes. That way, if we get an applicant, we would like to be able to apply that. And if they don't agree with it, then we will say you are welcome to appeal to the commission.

CHAIRMAN HEINLE: Fine. I think that is fine. An error on that side provides more protection. Anything else before I read these final matters into the record?

The following items have been withdrawn and the hearing is canceled: Cause Number 112, Docket Number 9-7-1, Ignacio-Blanco Field, La Plata County. The applicant was Markwest Coalseam Development Company. This was a request to pool all interests in the south half of Section 36, township 33 north, range 7 west, of the Fruitland Coal.

The second item is Cause Number 112,

Docket Number 9-7-2, Ignacio-Blanco Field, La Plata County. The applicant was again Markwest Coalseam Development Company, and this was a request to pool all of the interests in the east half of Section 35, township 33 north, range 7 west, of the Fruitland Coal.

Cause Number 504, Docket Number 9-8, Moffat County. The applicant, Apache Corporation. This was a request to establish 320-acre drilling and spacing units for certain sections in township 9 north, range 90 and 91 west, for the Almond Formation. This is continued to the October hearing.

And finally Cause Numbers 407 and 232, Docket Number 9-5-10, Codell-Niobrara Spaced Area and the Wattenberg Gas Spaced Area, Weld County. Applicant, Vessels Oil & Gas Company. This was a request to pool the interest in a 320-acre drilling and spacing unit in the south half of Section 18 -- no township and range was given -- from the "J" Sand Formation and in the 80-acre drilling and spacing unit in the same section for the Codell and Niobrara Formations.

Patricia, what is the status of this matter? It was continued from the June hearing.

There was a prehearing conference held -- has this been continued to October?

MS. BEAVER: I basically told them we did not have time this month to hear them. I don't know if I have the ability to continue it on my own, but I just did it.

It is going to be heard -- although I do understand that the protestant may be filling against the applicant in court -- but the prehearing conference was --

CHAIRMAN HEINLE: It will either be resolved by October or we will be seeing it in October?

MS. BEAVER: I don't think it will be resolved by October.

CHAIRMAN HEINLE: So maybe another continuation?

COMMISSIONER MATHESON: However, we are continuing it now until October.

COMMISSIONER BEAVER: Right.

CHAIRMAN HEINLE: I guess there is one more item, Cause Number 427, Docket 9-6, West Side Canal Field, Moffat County. Applicant is Ballard Energy 1992 Limited Partnership. This is a pooling request for Sections 29, 31, 32, township 12 north,

range 91 west, for the Lewis "A" Formation. I assume this has also been continued to the October hearing?

MS. BEAVER: Actually, you may be working off an old agenda. The parties settled, and that application has been withdrawn.

CHAIRMAN HEINLE: So that cause, Docket Number 9-6, has been withdrawn, the hearing canceled?

MS. BEAVER: Right.

CHAIRMAN HEINLE: Is there anything else?

MS. BEAVER: I would like to talk about the October agenda. I don't think we need to do that on the record.

CHAIRMAN HEINLE: Off the record. Actually we need a motion to so move.

COMMISSIONER MATHESON: So moved.

CHAIRMAN HEINLE: All in favor respond by saying aye. Opposed? That was a motion to adjourn.

(The hearing ended at 5:08 P.M.)

CERTIFICATE

I, TERRY H. EDWARDS, RPR, do hereby certify that I reported the foregoing proceedings in the first instance, and that later the same was reduced to typewritten form under my direct supervision and control; I further certify that the foregoing is a true and complete transcription of my stenographic notes then and there taken.

Dated September 16, 1996

Terry H. Edwards

TERRY H. EDWARDS, RPR

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