



112#124/125

1 BEFORE THE OIL AND GAS CONSERVATION
2 OF THE STATE OF COLORADO

RECEIVED
JAN 13 1997
OIL & GAS CONS. COMM

3
4 IN THE MATTER OF THE PROMULGATION
AND ESTABLISHMENT OF FIELD RULES TO
5 GOVERN OPERATIONS IN THE IGNACIO
6 BLANCO FIELD, LA PLATA COUNTY,
COLORADO

) CAUSE NO. 112
) Docket 9-7-3
) Docket 9-7-4
)
)

7
8 PURSUANT TO NOTICE to all parties in
9 interest, the above-entitled matter came duly on
10 for hearing at the offices of the Colorado Oil and
11 Gas Conservation Commission, Room 801, 1120 Lincoln
12 Street, Denver, Colorado 80203, on Wednesday,
13 September 4, 1996.

14 BEFORE:
15 CHAIRMAN ALLAN HEINLE
16 COMMISSIONER LOGAN MacMILLAN
17 COMMISSIONER CAROLINE BLACKWELL
18 COMMISSIONER BRUCE JOHNSON
19 COMMISSIONER CLAUDIA REBNE
20 COMMISSIONER MARLA WILLIAMS
21 COMMISSIONER MIKE MATHESON
22
23 Richard Griebeling, Director
24 Brian Macke, Deputy Director
25 Patricia Beaver, Manager of Commissioner Affairs

1 CHAIRMAN HEINLE: Why don't we go ahead
2 and get started. There's one quick note. We will
3 break for lunch today at 12, and reconvene at 1:15.
4 And for the benefit of the commissioners, we'll be
5 going across the street, doing what we did yesterday,
6 hopefully, a little bit faster, so we should be able
7 to be back at 1. The other thing that we need to take
8 up before we get back into Pine River is in regard to
9 the Cedar Ridge matter that was scheduled for today.
10 I believe we have -- the attorneys for both applicants
11 are here today, and they wanted to talk about some
12 options that the commissioners want might want to
13 consider in terms of what to do with the docketed
14 items, so, gentlemen.

15 MR. WOZNIAK: Morning, everybody.

16 CHAIRMAN HEINLE: Please identify
17 yourself.

18 MR. WOZNIAK: Thanks for seeing us
19 again. I am Mike Wozniak on behalf of Cedar Ridge.
20 We had originally set two hearings today, the
21 contested matters that were set for pretty much all
22 day. Throughout the last week, we spoke to Trisha
23 about timing and we're pretty much assured we would
24 start about 9:30 and figured that we could get done.

25 We have Meridian as a protestant

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21 contested matters that were set for pretty much all
22 day. Throughout the last week, we spoke to Trisha
23 about timing and we're pretty much assured we would
24 start about 9:30 and figured that we could get done.

25 We have Meridian as a protestant

1 intervenor, and Amoco as intervenor, Questar as a
2 protestant, and a couple of other people who might
3 want to make a statement. So, we felt it would take
4 us a pretty significant amount of time.

5 Last evening, at about 7, quarter to 7,
6 Trisha called and indicated that, in all likelihood,
7 we wouldn't be able to begin until after lunch, and
8 probably 3 or 3:30. We were unwilling, on behalf of
9 the applicant, to go forward with potentially half of
10 one application, because that would -- we have five
11 people in from out of town today, and it would
12 necessitate us, basically, doing it twice, and also
13 require us to just put on our part of the case and
14 then, basically, have six weeks interim time for you
15 all to forget or remember it, as you choose, and also
16 for the other side to sort of work on the responses.

17 So, that didn't seem to work very well,
18 and so Trisha suggested that perhaps we try to pick
19 another dates, between now and October 16, to get
20 together. I spoke to Meridian's counsel and with
21 their three out-of-town witnesses and our five, and
22 the tribe also has involvement. It's going to be
23 pretty difficult, and, besides that, we haven't even
24 checked with your schedules, to see if that's
25 possible, so that doesn't seem like that worked. As I

1 understand it, Meridian's witnesses have probably been
2 sent to the airport, so they're probably not even
3 available for later today, although Carelton can speak
4 to that in a minute. So, our proposal was going to
5 go -- be back to the situation as it began in this
6 matter.

7 As I think all of you know, the two
8 applications are on 100 percent tribal minerals and
9 100 percent tribal surface. The tribe is -- we made a
10 presentation before the Southern Ute Indian Tribe. It
11 is in favor of the application. We have made
12 presentation to the Bureau of Land Management, and
13 they have reserved judgment, of course, as in accord
14 with the August 22, 1991 memorandum of understanding.
15 Our view of that memo is that is an, in essence, a
16 procedure through which the COGCC renders an advisory
17 ruling that is then reviewed by the BLM and either
18 adopted or rejected. Appeals are made through the BLM
19 system. The ultimate decision is in the BLM court.

20 The BLM has another issue that it has to
21 look at also, is what's in the best interests of the
22 Southern Ute Indian Tribe, which, in my view, is not
23 part of our statutes that the commission normally
24 applies. We have, on behalf of Cedar Ridge,
25 attempted, over the last year, to propose these

1 applications. We have been through a long process
2 with the Southern Ute Indian Tribe and with the Bureau
3 of Land Management, and were, in fact, directed by the
4 BLM, finally, to go ahead and file at the commission,
5 if the commission decided it wanted to hear this. The
6 BLM initially offered to hear the matter. Then we
7 were informed, over discussion with staff, that the
8 commission would like to hear it. So, the BLM said
9 that was fine. So, we filed the application. Our
10 view, now, is that another-6 week delay in what, in
11 essence, is an advisory opinion, is unacceptable for
12 Cedar Ridge, and frankly is unacceptable to the tribe.
13 Our suggestion to you would be for you all to consider
14 waiving the procedural aspects of the MOU with respect
15 to these two applications, and allow the decision to
16 be made by BLM in correspondence with whatever
17 procedures they enact or decide to utilize. It would
18 seem as though that would short-circuit the process,
19 would prevent us from having to wait at least the 6
20 weeks, bring everybody back here, including three
21 representatives from the tribe and the attorney, who
22 wanted to address you today.

23 So, our suggestion is -- and I have
24 looked at the MOUs in detail, and we're not asking the
25 commission to waive its jurisdiction. We're simply

1 asking it to waive the procedural aspects of the MOU,
2 which provide for this group to be a forum for
3 hearings prior to going to the BLM. So, the tribe is
4 here today. If you have any questions for Mr. Chips,
5 their attorney, he was involved with the drafting of
6 the MOU, and would be happy to address those for you,
7 but our feeling is that would be the quickest, most
8 expeditious way to resolve this, and would still give
9 the parties a forum for -- in front of the ultimate
10 decision-maker. So, that's our suggestion, and I will
11 let Mr. Ekberg decide or comment on behalf of
12 Meridian.

13 MR. EKBERG: My name is Carleton Ekberg,
14 representing Burlington Resource Oil and Gas Company.
15 That's been known as that for about 45 days. It used
16 to be Meridian Oil, Inc. As Mike mentioned, we were
17 informed late last night that the hearing probably
18 would not start until late this afternoon. He and I
19 talked about it and decided that it would probably be
20 best that we not start it at all rather than start and
21 go part way. As a result of that, this morning, my
22 clients were able to get a 11:30 flight, so, I sent
23 them to the airport. They are going to call in at 11.
24 We can call them if necessary. I think we still
25 agree, though, that if we don't get started until

1 mid-afternoon, it's better to wait. Both Mike and I
2 are cognizant of the value of this commission's time,
3 as a resource, and we don't want to use more than is
4 necessary. We think the two hearings, at once, can be
5 done more expeditiously than just hearing one and
6 coming back to the other one as to the jurisdictional
7 matter. There currently isn't spacing. There
8 currently is a spacing order in place that the tribe
9 and BLM consented to. We think that, under the
10 memorandum, it's necessary to go through this process
11 again. I think it states that the tribe and BLM, if
12 they want to change, could come back through this
13 process.

14 So, that's all I want to say at this
15 moment.

16 CHAIRMAN HEINLE: So, apparently, I
17 mean, you disagree with Mr. Wozniak's interpretation
18 of the MOU; that, because there is a spacing order in
19 place, that your interpretation of that MOU is that
20 really needs to go back through the commission.

21 MR. EKBERG: I think there's substantial
22 room for disagreement under that memorandum of
23 understanding.

24 CHAIRMAN HEINLE: All right. Well, it
25 seems to -- I will throw out one other option that we

1 haven't talk about yet. That option would be that we
2 add a third day of hearing, tomorrow. That the idea
3 would be that we would hear Cedar Ridge tomorrow. So,
4 I want to throw that out as an option for the
5 commissioners to consider at this point. As I see it,
6 we're really looking at two, well, two options. One
7 is sending it back to the BLM. And, No. 2, whether we
8 have another day of hearing scheduled to hear this
9 matter.

10 MS. COULTER: Is it possible to start
11 the hearing this afternoon?

12 CHAIRMAN HEINLE: I would hope so. I
13 would hope so.

14 MS. COULTER: Maybe even have only half
15 day tomorrow, if we keep moving.

16 COMMISSIONER BLACKWELL: Go late
17 tonight.

18 CHAIRMAN HEINLE: Anyway, I will throw
19 that out to the commissioners, as to what preference
20 they might have, or any other suggestions they might
21 have.

22 COMMISSIONER REBNE: Regardless, are we
23 going to hear the argument about the MOU?

24 MS. COULTER: I think, if we could hear
25 it today, that we might be willing to.

1 MR. WOZNIAK: You are welcome to hear
2 the argument on that and both Mr. Chips and I will
3 address the point about whether the BLM can take this
4 back. They are willing to do that, by the way.

5 COMMISSIONER REBNE: Would that be
6 something we could hear today and resolve today?

7 CHAIRMAN HEINLE: I don't think -- we
8 would have to hear the -- well.

9 MS. COULTER: It's chicken or egg.

10 COMMISSIONER REBNE: I am asking if
11 that's going to happen anyway.

12 MS. COULTER: We can proceed with the
13 hearing today. Mike, you essentially consent to our
14 jurisdiction, and if we can move it into tomorrow.

15 MR. WOZNIAK: To the extent that -- of
16 the MOU, what it says, yeah.

17 MS. COULTER: The issue is delay. And
18 if we can prevent delay, we probably won't have to
19 deal with the jurisdictional arguments, but the
20 chicken and egg. If you wanted to -- there are going
21 to be delays, then we need to deal with the MOU.

22 CHAIRMAN HEINLE: If we're going to do
23 this today and tomorrow, we need to decide quick,
24 because you are going to receive a phone call at 11
25 o'clock from your people.

1 MR. EKBERG: Right.

2 CHAIRMAN HEINLE: We don't have a whole
3 lot of time to deliberate that option. Mr. Johnson.

4 COMMISSIONER JOHNSON: I am available
5 tomorrow. I just as soon go on and get it done.

6 COMMISSIONER REBNE: Available if
7 needed.

8 CHAIRMAN HEINLE: Okay.

9 COMMISSIONER MacMILLAN: Same.

10 COMMISSIONER WILLIAMS: I am not, but I
11 would be recusing myself from this matter anyway.

12 CHAIRMAN HEINLE: Okay.

13 COMMISSIONER BLACKWELL: Available in
14 the morning, but I prefer to get back to the office in
15 the afternoon.

16 CHAIRMAN HEINLE: Okay. Commissioner
17 Matheson.

18 COMMISSIONER MATHESON: I am unwilling
19 to waive our hearing duties under the MOU, under any
20 circumstances, at this point. And I would prefer that
21 we continue this until our next hearing, and perhaps I
22 could hear a little bit more compelling reasons as to
23 why you folks can't wait, although I do apologize for
24 this screwup today. It's basically our screw up,
25 because we're in the midst of this Pine River Ranches

1 thing, and, you know, you guys, we have an important
2 matter, the Pine River has -- we got to finish that
3 up. So, if it's the pleasure of the commission we
4 continue to do this tomorrow, I will be here.

5 CHAIRMAN HEINLE: Well, I certainly can
6 be here, and so I would prefer to do that, rather than
7 spend a lot of time discussing the merits of the MOU.
8 So, it sounds to me that that's the, again, plan is
9 that we will attempt to get to this this afternoon,
10 and complete it by tomorrow morning.

11 MR. WOZNIAK: All right, then. Two
12 things we need to check, because we were told last
13 night that the commission was unavailable Thursday, is
14 that we need to both check with all five of my
15 witnesses and Mr. Ekberg needs to talk to his people
16 at 11:00, assuming he gets hold of them, so --

17 CHAIRMAN HEINLE: Could you do that? My
18 suggestion, we check on that and report back to the
19 staff sometime after 11. We really do apologize for
20 the mixed signals that we are sending, but, it's been
21 kind of a difficult hearing and I do appreciate the
22 urgency of the matter, and I think the other
23 commissioners do, if there's a way to fit this in and
24 get it resolved, today and tomorrow, I think it's in
25 the best interests of everybody, so --

1 MR. WOZNIAK: We appreciate it.

2 CHAIRMAN HEINLE: What we'll do is we'll
3 move onto Pine River, and if there are any problems
4 let Trisha know, and we'll get right back to this and
5 see if we can get it resolved.

6 MR. WOZNIAK: Okay. Thank you.

7 CHAIRMAN HEINLE: Let me ask the
8 commissioners as to schedule. Lunch, to come back
9 after lunch at 1:15. And what I am wondering,
10 providing the witnesses can be here, whether --
11 providing we're finished with Pine River.

12 MS. BEAVER: We won't be.

13 CHAIRMAN HEINLE: Whether the
14 commissioners would be interested in waiving the
15 budget discussions that we had anticipated doing, and
16 moving into this matter, trying to pick up budget
17 either tomorrow or at some other date.

18 COMMISSIONER REBNE: (Nodding in the
19 affirmative.)

20 COMMISSIONER WILLIAMS: (Nodding in the
21 affirmative.)

22 CHAIRMAN HEINLE: I heard at least one
23 yes and two head nods.

24 COMMISSIONER WILLIAMS: I would rather
25 not break up Pine River more than it's already been

1 broken up.

2 CHAIRMAN HEINLE: The point is do the
3 Pine River and then move directly into --

4 COMMISSIONER WILLIAMS: Cedar Ridge.

5 CHAIRMAN HEINLE: Cedar Ridge. Then
6 pick up budget matters as best we can. Okay. That
7 will be the game plan, providing that the witnesses
8 can be here and providing we're finished with Pine
9 River, but the plan is to move into it right after
10 Pine River.

11 MS. BEAVER: That, and lunch, are we --

12 CHAIRMAN HEINLE: At lunch, we're still
13 going to break at twelve, come back at 1:15.

14 MS. BEAVER: -- still doing.

15 (Whereupon these proceedings were
16 adjourned.)

17 CHAIRMAN HEINLE: Can we go ahead and
18 get started? Before we do, I need to ask the
19 commissioners about how late they want to go this
20 evening, because we're going to have to make
21 arrangements for another court reporter.

22 (Discussion had off the record.)

23 CHAIRMAN HEINLE: Right. Next item on
24 the agenda is Cause No. 112, Docket No. 9-7-3, Ignacio
25 Blanco Field, La Plata County. The applicant is Cedar

1 Ridge, through their attorney, Michael Wozniak, and I
2 might just ask -- I am not sure whether the agenda I
3 have is up-to-date and current as to who all the
4 parties are that are going to be actively involved in
5 this proceeding, but, perhaps I can just have you all
6 identify yourself for the record.

7 MR. EKBERG: My name is Carleton Ekberg,
8 appearing on behalf of Burlington Resource Oil and
9 Gas.

10 CHAIRMAN HEINLE: And could I --

11 MR. CHIPPS: And my name is Tom Chipps.
12 I am the general counsel for the Southern Ute Indian
13 Tribe, though we're not listed as an intervenor or a
14 party. Based upon prior practices of the commission,
15 pursuant to the memorandums of understanding, I would
16 like at least permission to have some limited role.

17 CHAIRMAN HEINLE: Okay. If I forget to
18 give you an opportunity to respond, Mr. Chipps, please
19 remind me.

20 MR. CHIPPS: I am pretty quiet about
21 such things.

22 MR. ONSAGER: Paul Onsager with the
23 Bureau of Land Management, O-n-s-a-g-e-r, and with me
24 is Sheri Thompson, and we're here to observe, possibly
25 ask some questions.

1 CHAIRMAN HEINLE: Okay. Anybody else?
2 I have got Amoco listed here as intervenor. Is that
3 not the situation, or they just chose not to be
4 present?

5 MS. BEAVER: I think that they might --
6 the letter that they sent, just to be -- hear
7 testimony about their opinion.

8 CHAIRMAN HEINLE: Okay. And Questar.

9 MS. BEAVER: I think that Questar is not
10 going to participate, beyond their letter, as well.

11 CHAIRMAN HEINLE: And I believe I saw a
12 letter somewhere from Mr. Keefe, where they have
13 withdrawn as a protestant. So, we're dealing with
14 Cedar Ridge, Burlington Resources and perhaps some
15 comments from the tribe. Very good. What I will ask
16 for is some brief opening comments from the applicant
17 and protestant, and upon completion of those opening
18 comments, we'll proceed with the applicant's case.

19 COMMISSIONER WILLIAMS: Can I say, for
20 the record, Mr. Chairman --

21 CHAIRMAN HEINLE: Excuse me.

22 COMMISSIONER WILLIAMS: Due to my prior
23 involvement with Burlington Resources, including some
24 at least tangentially related issues with respect to
25 infill, I do feel the need to recuse myself from the

1 hearing of this matter.

2 CHAIRMAN HEINLE: Okay. Are there any
3 other commissioners that have a conflict of interest?
4 Okay. Very good.

5 MR. WOZNIAK: Thank you, Mr. Chairman.
6 I am Mike Wozniak, on behalf of Cedar Ridge, L.L.C.
7 and we do appreciate your indulgence to meet late in
8 the day. And I know you have had two days of
9 hearings, and we really appreciate you sticking around
10 for our hearing.

11 The first application that we have in
12 front of you today is Cause No. 112, Docket No. 9-7-3,
13 and this involves the Southern Ute No. 2-5 well, which
14 is an existing Mesaverde well, which our application
15 requests the right to recomplete the well into the
16 Fruitland Coal Formation. The well is located on 100
17 percent tribal owned surface and minerals, and Cedar
18 Ridge, L.L.C., along with its affiliates, is the
19 working interest owner on the well. It is located in
20 the northwest quarter of Section 5, Township 32 North,
21 Range 11 West, that's in La Plata County, Colorado.
22 The order in the current spacing order, Cause No. 112,
23 provides for one well per 320 acres, located in the
24 northeast quarter in the southwest quarter. This is a
25 recompletion of an existing Mesaverde, as I said, and

1 it will be in the northwest quarter, thereby being an
2 exception location, and also the second well producing
3 from the Fruitland Formation in the 320.

4 So, that's basically a summary of what
5 our application is. I do have to make a comment,
6 touch on a jurisdictional issue. Cedar Ridge is
7 before this commission, in our view, in correspondence
8 with its two memorandums of understanding. One
9 between the BLM and the tribe, and the second one
10 between the BLM and COGCC. The tribe, as you know,
11 under those memorandums, doesn't, in essence, consent
12 to the jurisdiction of the commission, but in
13 correspondence with the terms of those memos,
14 basically, the BLM exercises its trust
15 responsibilities, delegates to the commission the
16 authority, on a limited basis, to hear applications
17 concerning tribal land. So, there is a second
18 procedure that we will be involved with after this,
19 that is basically the BLM's either approval or
20 rejection of the decision that is rendered or issued
21 by the commission.

22 With that preface, we believe that our
23 evidence will, basically, on the 2-5 well, show six
24 major points. The first is that Cedar Ridge began
25 working with BLM and the tribe over a year ago to try

1 to get these infill wells located. Initially, as the
2 evidence will show, the BLM had some caution and
3 concern about these wells, mainly because of the gas
4 seep issue, and based upon what you all have been
5 talking about for the last day and a half, you know a
6 lot more about that than I ever will. Basically, over
7 the last year the BLM has become satisfied with the
8 gas seep issues in this area of the reservoir. In
9 April of 1996, through a written decision, advised
10 Cedar Ridge to proceed to file for this exception
11 location. So, we're here, based upon the advice of
12 not only the tribe, their consent, but also with the
13 direction of the Bureau of Land Management.

14 We will have four witnesses today.
15 Mr. Terry Logan, who's the managing member of Cedar
16 Ridge, and will testify on background, the land
17 issues, and also the engineering. While he happens to
18 be an engineer, in order to save sometime as well, we
19 will have him also talk about land issues, and,
20 hopefully, we'll avoid a witness that way. We will
21 have a geologist, Mr. Matthews, who will talk about
22 geologic issues. We'll have two witnesses from the
23 tribe, one to address their gas seep program in this
24 area of La Plata County, and then another tribal
25 witness who will basically just discuss their support

1 of the application and why they do support it.

2 To get back to those main six points.
3 The most important thing in this application, which is
4 somewhat different from some of the others that you
5 have heard on infill in La Plata County, is that Cedar
6 Ridge needs to recomplete this well to protect its
7 correlative rights. You will hear testimony with
8 respect to the effect of adjacent wells, some of which
9 are also infill wells on the reservoir and on
10 production from the north half of Section 5, where 2-5
11 is located. First point of protection of correlative
12 rights. We believe our application and evidence will
13 show that it does prevent waste. It enables Cedar
14 Ridge to utilize an existing wellbore that otherwise
15 would be abandoned. As I think all of you know, under
16 our statutes, the protection of correlative rights is
17 the prevention of waste. That is part of the
18 definition of the protection of correlative rights.
19 It also will accelerate tax credit, and by
20 accelerating tax credits and production from the area,
21 will enable the tribe and surface owners to
22 economically develop the well.

23 We will have testimony with respect to
24 increased severance, ad valorem and tribal tax that
25 will be generated through this application. The

1 evidence will also show that the application is
2 consistent with the public health, safety and welfare,
3 which is one of the other standards that the
4 commission will apply. Very little effect on the
5 surface, because it is a existing well. No new
6 effects on road, pipelines, right-of-way, and also the
7 tribe will testify, with respect to the alleviation of
8 any gas seep concerns, so we feel that the public
9 safety issues will be addressed.

10 Another major point will be that the
11 tribe, as a mineral owner, surface owner and
12 predominant adjacent working interest owner, also
13 supports the application, and all of the hats that it
14 wears. And then, finally, I think the evidence will
15 show that this is not an attempt to do fieldwide
16 downspacing. The tribe will testify with respect to
17 the intent on that issue, and this is not some veiled
18 attempt to go ahead and downspace the entire field.
19 Mr. Soradnik will address that. Even with the three
20 Vastar applications that this commission approved on
21 downspacing this winter in the Fruitland coal,
22 basically, the evidence will show that the tribe has
23 only supported approximately six in-fills wells over
24 the last four years. So, we don't believe that
25 there's concern from the intervenors on that basis.

1 One final note on a procedural issue on
2 the 2-5 is we don't believe that there are any actual
3 protests, but we believe that there are three
4 interventions. And Amoco filed a letter, has
5 indicated that their nearest production was some 6 to
6 8 miles away, and so that they clearly weren't a
7 protestant. Questar has filed a letter that basically
8 says they were concerned about -- the well was moving
9 in the direction of a leasehold interest that they
10 own. In fact, the evidence will show that the well
11 moves away from that. And, finally, Meridian --
12 Burlington, excuse me, is not a cornering or
13 contiguous owner under the provisions of 112. That
14 would be the standards for them to be a protestant;
15 therefore, we believe that, under your rules, the
16 intervenor must show that they are advancing the
17 public interest by their comments, so we would like
18 you to keep that in mind, with respect to the comments
19 of the other parties, we feel the evidence will show
20 they are not protestants. That concludes my opening
21 remarks. We'll await your calling the first witness.

22 CHAIRMAN HEINLE: Mr. Ekberg.

23 MR. EKBERG: Thank you. Carleton Ekberg
24 on behalf of the Burlington Resource Oil and Gas
25 Company. Before I start, I would like to mention to

1 the commission that Burlington Resource Oil and Gas
2 Company is a new name for Meridian Oil, Inc, effective
3 as of July 18, I hope July 18. I hope that you
4 understand if every now and then we may use Meridian
5 and understand that we're talking about Burlington
6 Resource, although they may be pretty good about
7 having made the adjustment, not all of the rest of us
8 are.

9 We are here, we believe, to protest the
10 application 2-5, and let me get to whether we are a
11 protestant or intervenor later. I am not sure it
12 should make any difference what we are. The spacing
13 was established, as Mr. Wozniak said, back in 1988,
14 after substantial deliberation by this commission, and
15 the current spacing in place is 320 acres for one
16 well. And the applicant is really here to add an
17 additional well. We think the burden is on them to
18 show that correlative rights will not be affected;
19 that there will be no waste; that there will be no
20 unnecessary wells drilled, and we ask the commission
21 to hold them to that standard.

22 Our testimony, we believe, will show
23 that the coals in this area are continuous; that 320
24 acre spacing is the appropriate acreage for one well,
25 and that 160-acre wells are, in fact, smaller than the

1 area that will be efficiently and economically drained
2 by one well. We think our testimony will show that
3 the drilling of an additional well will not recover
4 ultimate additional reserves, in the long run,
5 although the applicant may put on testimony that it
6 will accelerate it. We don't believe that it will
7 affect the ultimate production. We also believe that
8 drilling a third well in the section, and perhaps a
9 fourth well in a section, will ultimately affect the
10 correlative rights. That parties in adjacent sections
11 will have to drill additional wells to protect their
12 own rights to their own land from drainage, and that
13 this, in fact, could start the drilling of wells where
14 a number of people would have to drill wells to
15 protect themselves from drainage.

16 It's easy for them to say that these are
17 limited applications, but we think that the testimony
18 will show that the additional well here may be broader
19 based than the statement of saying that it is limited
20 to this well alone. If parties are required to drill
21 additional wells, surface damages will have -- there
22 will be surface damage impact later down the road.
23 Not all of the wells that will be drilled to protect
24 correlative rights will be conversion of existing
25 Mesaverde wells to Fruitland coal wells. So, it is

1 very likely that, to protect correlative rights,
2 additional surface damage will be encountered.

3 Mr. Wozniak questioned whether we were a
4 protestant or intervenor. As we understand the rules
5 right now, notice is to be given to parties who own an
6 interest in the spacing under effect by the
7 application. Protestants are parties who are entitled
8 to notice. Since we do not own an interest in the
9 spacing unit, we did not get notice. We did get
10 notice on the well in Section 7, not the well in
11 Section 5, but we believe that our correlative rights
12 will be affected. And so, in our opinion, we are
13 protestants, not mere intervenors. That's all I have.

14 CHAIRMAN HEINLE: Thank you. I might
15 just raise an issue that raises a point -- issue that
16 I hear out there. I want to get some advice from our
17 assistant attorney general; that is, whether
18 Burlington Resources, under our rules and regulations
19 and definitions, can indeed be considered an
20 interested party. I think, under Rule 509, that that
21 is a word that certainly is used in 509.a and b.
22 Certainly, the commission, I think, under 509.b has
23 the -- perhaps has the authority to grant
24 intervention. Lori, could you perhaps comment on
25 that, or would you like a little bit more time?

1 MS. COULTER: No, not at all. 509.a
2 defines what -- a protest, and 509.b looks at
3 intervenor status, so, under a, to be a protestant,
4 you have to be an interested party. Essentially,
5 under b, you have to be an interested party, or have
6 essentially a, by participation of that party, they
7 would serve the public interest. That's where you are
8 at. It's your discretion whether or not to determine
9 that the public interest would be served. So, what we
10 do, then, is determine interested party status, and
11 that flips back to 508.a, for exception location, and
12 the last part of that indicates persons who would be
13 interested parties would receive notice in exception
14 locations instances where they are existing within
15 that drilling unit, within -- any owner within the
16 proposed drilling units. So, that's the argument that
17 they are not a interested party, if they don't have an
18 ownership interest within the drilling unit itself.

19 COMMISSIONER BLACKWELL: I am sorry,
20 Lori, what rule?

21 MS. COULTER: 508.a.

22 CHAIRMAN HEINLE: And perhaps this isn't
23 a issue for you, Mr. Wozniak. If it isn't an issue
24 for you, we can move on.

25 MR. WOZNIAK: Let me address it, and it

1 is a touch of an issue, but it not one that we're
2 going to get hung up about. The way I read 508.a is
3 you need to have an interest in this spacing unit to
4 be an interested party. Meridian clearly doesn't.
5 There's no dispute about that. Alternatively, you
6 could read our application as an exception location,
7 contrary to the -- changing the infill well, and, if
8 so, I believe that's under 508.d, which says any
9 owners of contiguous or cornering tracts towards which
10 the well is proposed to be moved. Now, our case, in
11 Exhibit B in your packet, shows that Meridian's
12 acreage is away from where it's moving, so we don't
13 believe they are an interested party, and we would
14 like you to take that into account.

15 I am not going to -- Cedar Ridge isn't
16 going to take the position that they cannot
17 participate in the hearing. It's just that we think
18 it's important, when we're talking about correlative
19 rights, on our behalf, that someone that's away from
20 where this well is moving is objecting. And while I
21 am, and I believe our attorney general at our
22 prehearing conference said, from her point of view, an
23 intervenor can participate the same with -- as the
24 protestant, that being the case, it doesn't matter,
25 except if someone really is an interested party, I

1 think that their testimony bears a little bit more
2 significant weight.

3 CHAIRMAN HEINLE: I think, as long as
4 that isn't an issue that's being debated, rather than
5 tie up the time, commission time, and your time, we
6 will just proceed with the presentation of your case.

7 MR. WOZNIAK: That's fine.

8 CHAIRMAN HEINLE: Mr. Chipps.

9 MR. CHIPPS: If I could make several
10 brief comments on behalf of the tribe. That may
11 conclude my presence here. First of all, with respect
12 to the memorandums of understanding, previously we had
13 suggested that we might be able to obtain conceptual
14 waiver from the commission and the Bureau of Land
15 Management to avoid this hearing at this level. Kick
16 it over to the Bureau of Land Management. That really
17 was just a one-time suggestion. The tribe is very
18 supportive of the MOU. And we think the relationship
19 between the tribe and commission has been a very
20 healthy one, both for the state and for the tribe. I
21 won't elaborate, but I think the exchange of
22 information between both governments has been very
23 beneficial for both of us.

24 With respect to this application, the
25 tribe is supportive of this application, as well as

1 the one that will follow. The tribe wants to
2 reiterate that it's not in support of downspacing. It
3 has not, certainly, on a fieldwide basis, has not
4 taken that position. And we view this as being a
5 correlative rights issue. And, really, with those
6 concluding remarks, in the interest of time, I am, at
7 this time, done.

8 CHAIRMAN HEINLE: Thank you.

9 Mr. Wozniak.

10 MR. WOZNIAK: I would like to call the
11 first witness, Mr. Terry Logan.

12 CHAIRMAN HEINLE: Would you prefer that
13 I just swear in all of your witnesses at once?

14 MR. WOZNIAK: Well, assuming if we get
15 through it today, that will be fine. We have
16 Mr. Logan, Mr. Zoradnik and Mr. Matthews and
17 Mr. Baughman.

18 CHAIRMAN HEINLE: Why don't we go ahead
19 and do it, and with the understanding that if they
20 testify tomorrow, they will still be under oath.

21 (Whereupon the witnesses were sworn.)

22 CHAIRMAN HEINLE: Thank you.

23 BY MR. WOZNIAK:

24 Q. Could you please state your name and
25 business address and occupation for the record.

1 A. Terry Logan. My business address is 484
2 Turner Drive, Building B, Durango, Colorado 81301.

3 Q. And what --

4 A. What else was it?

5 Q. And what was your occupation, Mr. Logan?

6 A. I am a registered professional petroleum
7 engineer.

8 Q. Okay. By whom are you employed?

9 A. Cedar Ridge, L.L.C.

10 Q. And in what capacity?

11 A. As a managing member.

12 Q. Okay. Can you briefly describe your
13 education and your work experience.

14 A. Yes. Education: I am a graduate, 1978,
15 from South Dakota School of Mines and Technology,
16 Bachelor of Science in Geological Engineering.
17 Background was with Amoco Production. Davis Oil
18 Company Resource Enterprises and now, most recently,
19 with Cedar Ridge.

20 Q. Okay. And you have testified before
21 this commission in the past?

22 A. Yes, I have.

23 Q. And in what capacity was that?

24 A. As a professional engineer.

25 Q. Okay. And are you a member of any

1 professional societies?

2 A. Yes. Society of Petroleum Engineers.

3 Q. Okay. And attached in the back of your
4 exhibit booklet, I believe, is a -- right towards the
5 end is a set of three resumes, and one of those has
6 your name on it. Is the information on that resume
7 and curriculum accurate?

8 A. Yes, it is.

9 Q. Okay. And did you really write all of
10 those articles that you put on that resume?

11 A. Yes, I did.

12 Q. Okay. Do I see most of those are in
13 coalbed methane issues; is that correct?

14 A. Yes, they are.

15 Q. All right. Are you familiar with the
16 land and the geologic issues involved with this
17 application?

18 A. Yes, I am.

19 MR. WOZNIAK: Okay. At this point, I
20 would request Mr. Logan's credentials as a petroleum
21 engineer be recognized, realizing he's going to
22 testify about some background land issues that were
23 done under his role.

24 CHAIRMAN HEINLE: Any questions of the
25 commissioners of the witness? So accepted.



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1 MR. WOZNIAK: Okay. Thank you. 117.124

2 BY MR. WOZNIAK:

3 Q. Mr. Logan, first, I would like to go
4 through a couple of land issues before we get into
5 anything with respect to engineering. Are you
6 familiar with the Fruitland coal spacing in this area?

7 A. Yes, I am.

8 Q. Okay. What is the spacing?

9 A. It's 320-acre spacing.

10 Q. Okay. And what -- is that Order
11 numbered 112, Cause No. 112?

12 A. 112, 60 and 61, I think.

13 Q. Okay. All right. And what does the
14 order provide with respect to well locations and
15 number of Fruitland wells within a 320-acre spacing
16 unit?

17 A. The rule provides for one well per
18 320-acre spacing. The location of the wells to be in
19 the northeast corner or the southwest corner of that
20 section, with a certain footage setback from interior
21 boundaries and exterior boundaries of that section.

22 Q. Okay. With respect to Section 5, where
23 the proposed 2-5 is to be relocated, does Cedar Ridge
24 and its affiliates own working interest ownership in
25 that section?

1 A. Yes, we do.

2 Q. Okay. Who currently owns and operates
3 the existing wellbore for the 2-5?

4 A. The existing 2-5 is a Mesaverde well
5 that is owned and operated by the Southern Ute Tribe.

6 Q. Okay. But your company has the
7 Fruitland rights; is that correct?

8 A. Correct.

9 Q. Okay. And, just in general, what are
10 you requesting with respect to the 2-5 well?

11 A. What we're requesting is an opportunity
12 to abandon the uneconomic Mesaverde production, move
13 uphole, and recomplete the Fruitland Coal.

14 Q. Okay. All right. And you mentioned
15 some footages in your application as to the location
16 of the well. Are those correct?

17 A. Yes. The footages on the application
18 are correct.

19 Q. What is the location of the well?

20 A. Location of the 2-5 proposed infill is
21 2,035 feet from the west line, by 2,150 feet from the
22 north line of Section 5, 32 North, 11 West, La Plata
23 County, Colorado.

24 Q. Okay. And while we're talking about
25 surface issues, who owns the surface and the minerals

1 underlying this section?

2 A. The Southern Ute Indian tribe.

3 Q. Do you have a surface owner agreement
4 with the tribe?

5 A. Yes. As part of the minerals agreement.

6 Q. Okay. All right. So they have no
7 objection to surface uses of those locations?

8 A. That's correct. They have no objection.

9 Q. Anything unusual about the surface area
10 or topography that we should know about in this area?

11 A. Nothing unusual, no.

12 Q. Okay. And any comments with respect to
13 the surface impacts on this?

14 A. There will be little to no surface
15 impacts. This is an existing wellbore, that is --
16 with an existing road and pipelines already connected
17 to the well, so there will be no additional surface
18 damages.

19 Q. Okay. And did you prepare some land
20 exhibits for purposes of today's hearings?

21 A. Yes, I did.

22 Q. And, all right. If I can direct your
23 attention to Exhibit A. If you can tell us what's
24 depicted on that exhibits?

25 A. Exhibit A, which is the first page in

1 your booklet that we have handed out, is a location
2 map, that -- identifying the location of the 2-5
3 Mesaverde proposed recompletion, along with a box
4 showing the acceptable location, based upon the rules.
5 Also shows the Cedar Ridge coal gas wells, the 5-5 in
6 the northeast corner and the Cedar Ridge well, the 6-5
7 in the southwest corner. This also shows the location
8 to the closest nonoperated coal gas well -- in this
9 case, Emerald Gas is operating that well, is located
10 approximately 3289 feet north of our proposed 2-5
11 well, depicted on this location map.

12 Q. Okay. Okay. I notice that there's two
13 Emerald coal gas wells listed in that section. If I
14 understood your testimony, the spacing order provides
15 for the wells to be located in the northeast and
16 southwest quarter, is that correct; that there's two
17 coalbed wells there?

18 A. Yes. There's two coal gas wells in
19 the -- depicted on this map. The 32-3 is the infill
20 well that was approved by this commission
21 approximately three to four years ago, I think in
22 1992, along with several other Emerald infill wells.

23 Q. Okay. All right. And the proposed
24 spacing unit for the production from the 2-5? What
25 will that be?

1 A. Excuse me, the question again.

2 Q. The proposed spacing.

3 A. Proposed would be a stand-up. It would
4 be the second well in the stand-up spacing unit of the
5 existing Cedar Ridge 6-5 well.

6 Q. It would be the west half?

7 A. Yes. It would be the west half.

8 Q. All right. Thank you.

9 A. West half stand-up.

10 Q. Okay. If I can direct your attention,
11 then, to your second exhibit, Exhibit B, which is
12 entitled "Lease Map," and ask if you could comment on
13 what's shown on this map.

14 MR. GRIEBLING: Mr. Wozniak?

15 MR. WOZNIAK: Just a second.

16 MR. GRIEBLING: Can I make a correcting
17 point? I think those infill wells that you reference
18 being approved by the commission were really approved
19 by the BLM.

20 THE WITNESS: Correct. And they were
21 Bowen, not Emerald, Bowen Edwards. That's the other
22 correction.

23 CHAIRMAN HEINLE: I am sorry. Continue.

24 MR. WOZNIAK: Vastar was the only ones
25 that were approved by the commission.

1 THE WITNESS: Okay.

2 MR. WOZNIAK: I am sorry. I should have
3 corrected that. Thanks for the correction, Director
4 Griebeling.

5 BY MR. WOZNIAK:

6 Q. Exhibit B, you started to testify about
7 what's shown on this map.

8 A. I have got a bigger scale. Can I show
9 you?

10 Q. Want to put that up?

11 A. That's the lease map. Can everyone see
12 that? Put it right here. What this exhibit -- this
13 Exhibit B, the second one in your handout. This color
14 acreage, sort of looks green to me, is the Cedar Ridge
15 acreage. Okay. All of this -- every one of these red
16 dots is an existing Fruitland coal gas well that's on
17 production. The black with the arrows are the
18 proposed Mesaverde recompletion ones. To the north of
19 this sort of blue color is the Emerald Gas Operating
20 coal gas wells -- each one of these is a coal gas
21 well -- and depicted in -- a little differently as an
22 offset coal gas well. In yellow is the Red
23 Willow/Southern Ute Indian Tribe operated acreage, in
24 yellow, this -- which is Pinon, which is a tribe,
25 Southern Ute Tribe. The other acreage that is shown

1 on here is this 80 acres here, which is that list of
2 the mineral owners. And Questar, who has an -- has
3 been able to lease, I think 20 or 30 acres. Haven't
4 been able to pin down exactly how much they leased
5 from these minerals owners that they have attempted to
6 lease from. Also, in this map we see the Meridian
7 acreage, which is located here, 80-acre tract in
8 Section 8. Okay.

9 Q. If I understood correctly, then, the Red
10 Willow/Pinon; that's tribal. The yellow is tribal
11 predominantly?

12 A. That's tribal.

13 Q. You also have Kukui here, who are
14 parties, who withdrew the protest?

15 A. That's correct.

16 Q. With respect to Meridian's interests, to
17 your knowledge, is that the only place in the
18 geographic area of your map here that it owns an
19 interest?

20 A. It's the only place close to, cornering,
21 contiguous, or in this area that would be in this
22 general area of our application.

23 Q. If I understand correctly, then, your
24 exception location is, in effect, farther north than
25 the 5-5 or 6-5 wells, farther away from Meridian than

1 existing production; is that correct?

2 A. That's correct. This is the existing
3 coal-gas well. This is the proposed recompletion
4 well. This is the existing Cedar Ridge well. This is
5 Meridian. We are moving away from it.

6 Q. So, technically, then -- in other words
7 the Red Willow 2-8 well?

8 A. It's the 8-2 well. Not the 2-8.

9 Q. All right. And then I notice that the,
10 at the bottom of your map, you mention that there's a
11 few people that you have letters of support from.
12 With respect to this, who are those?

13 A. Letters of support from White Aspen and
14 San Juan Basin Drilling Associates. Also a couple of
15 working interests owners in the Cedar Ridge acreage,
16 Pinon Operating, along with the tribe. And Hannah,
17 which is one of the mineral owners on this tract here.

18 Q. Okay. And with respect to -- except for
19 the letter from Amoco, which is an intervention, and
20 then the inquiry from Questar, did you receive any
21 other notice of protest or inquiries about your
22 application?

23 A. Just Burlington.

24 Q. Just Burlington. All right. I think
25 that's all the questions on that exhibit. Let's look

1 at your next exhibit, which is C, looks like the
2 topographic map. And please describe what's shown on
3 that exhibit.

4 A. That's exactly right. Exhibit C is a
5 topographic map. Depicts the mesa quadrangle. This
6 is in southwestern Colorado. The important features
7 shown on this is there's an existing road that goes to
8 both of the wells, with existing pipelines near it.
9 There's another about 6500 foot of elevation, some
10 relief, but generally semi-arid, with no one living
11 within the area.

12 Q. Okay. I note those dotted lines; that's
13 the road that goes along these wells?

14 A. Yes. The double-dotted line is one of
15 several roads, existing roads, that are in the area.

16 Q. Okay. So needless to say, there will be
17 little surface road impact?

18 A. That's correct. The existing wells,
19 existing pads, existing facilities.

20 Q. Okay. I think that's concludes the land
21 questions I have, and I see Director Griebeling's been
22 asked a question about why Meridian isn't -- the 8-2
23 well. Maybe you can address that for us.

24 A. Let me step back up here. The 8-2 well.
25 This is the orientation of the 320-acre spacing

1 drilling unit, which is north south lay-down 320-acre
2 spacing units. The 8-2 well is Pinon, operated by Red
3 Willow, but Meridian has not signed an operating
4 agreement for this well. They are not participating
5 in the revenues, nor the costs of this well, so they
6 are not participating in this well.

7 Q. Was there a communitization agreement?

8 A. There's not a communitization agreement
9 bringing Meridian into this well, yet.

10 MR. WOZNIAK: That's all of the land
11 questions I have. I would request, just to make this
12 a little simpler, even though I would like to have
13 Mr. Logan be able to testify on the engineering, that
14 we take any cross that he's got, then we can call him
15 back for engineering, because I might want to put our
16 geologist on in the middle, just for flow. It's
17 easier, if that's okay.

18 CHAIRMAN HEINLE: That's fine, at this
19 point.

20 MR. WOZNIAK: That would be fine.

21 CHAIRMAN HEINLE: Mr. Ekberg, do you
22 have any questions of the witnesses?

23 MR. EKBERG: Just one question on
24 Exhibit A.

25 BY MR. EKBERG:

1 Q. Mr. Logan.

2 A. Yes.

3 Q. You have drawn and outlined in there in
4 dotted lines in the northwest corner. You said that
5 was a permitted location. Is that presently a
6 permitted drilling widow?

7 A. That's a drilling widow, based upon the
8 116, I think, the orders of a conventionally located
9 Fruitland coal-gas well.

10 Q. Right now that is not a permitted
11 window?

12 A. Right.

13 MR. EKBERG: No further questions.

14 CHAIRMAN HEINLE: Any questions from the
15 commissioners?

16 COMMISSIONER MATHESON: I am just
17 curious whether the Emerald interests extend into
18 Section 4, or Burlington, Red Willow extend into
19 Section 9?

20 THE WITNESS: Excuse me? Where do
21 they --

22 COMMISSIONER MATHESON: Do the Emerald
23 interests extend into Section 4?

24 THE WITNESS: Yes, they do.

25 COMMISSIONER MATHESON: Also in Section

1 9, whether Red Willow and Meridian are in those
2 sections?

3 THE WITNESS: The Emerald acreage
4 extends a little sliver on this side, this 80 acres,
5 right here.

6 MR. WOZNIAK: For the record, Mr. Logan
7 could you identify where that is?

8 THE WITNESS: It would be the east half
9 of the east half of Section 4. Right? This strip
10 here. Excuse me. West. Yeah. Correct me when I do
11 those things. West half.

12 MR. WOZNIAK: West half, west half.

13 THE WITNESS: 80 acres right here and
14 section -- where else were you looking?

15 COMMISSIONER MATHESON: 9.

16 THE WITNESS: I do not know.

17 COMMISSIONER MATHESON: All right.

18 THE WITNESS: I don't know. I do not
19 know what the acreage position is, apparently, because
20 it was so far out of the area that we were looking at.
21 Well, not so far. It was outside of the area.

22 CHAIRMAN HEINLE: Any other questions
23 from the commissioners? Mr. Wozniak, do you have any
24 redirect?

25 EXAMINATION

1 BY MR. WOZNIAK:

2 Q. The only follow-up, since someone would
3 argue that the well's moving closer towards the
4 Emerald acreage. Has Emerald protested this
5 application?

6 A. Emerald has not.

7 Q. All interested parties were given notice
8 under your direction and control?

9 A. Yes. We notified all the cornering and
10 contiguous owners.

11 MR. WOZNIAK: That's all of the
12 questions we have on the land area.

13 CHAIRMAN HEINLE: Okay. Thank you.
14 Call your next witness.

15 MR. WOZNIAK: Mr. Matthews, please.

16 EXAMINATION

17 BY MR. WOZNIAK:

18 Q. Mr. Matthews, state your full name and
19 your business address for the record, please.

20 A. Curtis B. Matthews, business address,
21 350 Pearl Street, Bayfield, Colorado 81122.

22 Q. What is your occupation?

23 A. I'm a consulting geologist with M&M
24 Geological Consultants.

25 Q. Would you describe your education for

1 the commission, please.

2 A. Yes. I have a bachelor of science from
3 Georgia Southern College, now Georgia Southern
4 University, 1974, with a major in geology. I have a
5 master of science in geological engineering from South
6 Dakota School of Mines and Technology, geologic
7 engineering, 1979.

8 Q. Okay. Are you a member of any
9 professional societies?

10 A. Yes. I'm a member of the American
11 Association of Petroleum Geologists, and also, the
12 Four Corners Geologic Society.

13 Q. Okay. And briefly describe your
14 education, I am sorry, work experience, please.

15 A. Okay. I have almost 17 1/2 years of
16 experience as a petroleum geologist. I have almost
17 eight years experience with Penzoil Exploration
18 Production in Houston, Texas. Last 9 1/2 years, I
19 have been a consultant geologist in Durango and
20 Bayfield, Colorado.

21 Q. Okay. And you're familiar with the
22 coalbed methane formation, Fruitland coal formation,
23 San Juan Basin production?

24 A. That's correct.

25 Q. All right. And have you prepared a

1 resume and curriculum that's attached in the back of
2 the booklet?

3 A. Yes, I have.

4 Q. All right. And are the matters set
5 forth on there accurate, to your knowledge?

6 A. Yes.

7 Q. At this point in time, Mr. Chairman, I
8 would request Mr. Matthews credentials as a geologist
9 be recognized?

10 CHAIRMAN HEINLE: As expert?

11 MR. WOZNIAK: As an expert geologist.

12 CHAIRMAN HEINLE: Any questions of the
13 commissioners?

14 COMMISSIONER MacMILLAN: Mr. Matthews,
15 would you explain what certification by AAPG means?

16 THE WITNESS: Okay. No testing is
17 involved with AAPG. You have to go through all of
18 your peers. Your name is put out, and to go through,
19 get so many references, active or certified members.
20 And people have a chance to dispute anything on your
21 application. You have to also get some people that --
22 outside of the industry, to vouch for you, basically,
23 ethics.

24 COMMISSIONER MacMILLAN: Doesn't AAPG
25 also review and certify your educational experience?

1 THE WITNESS: Yes. They do.

2 COMMISSIONER MacMILLAN: The classes
3 that you have taken are along very rigorous lines of
4 geologic education?

5 THE WITNESS: That's true.

6 COMMISSIONER MacMILLAN: That are
7 internationally recognized?

8 THE WITNESS: That's true.

9 COMMISSIONER MacMILLAN: And, so, AAPG
10 certification may, in fact, then be the most
11 significant part of your CV here; that the largest
12 professional petroleum geologist organization in the
13 world has certified that you have, in fact,
14 experienced this educational practice, and in addition
15 to that, your ethical practice, as presented in front
16 of this large organization, has never discerned any
17 problems that anyone has experienced with your
18 practice as a geologist since the time that you have
19 been practicing?

20 THE WITNESS: That's true.

21 MR. WOZNIAK: And I want to tell you I
22 am dutifully impressed.

23 CHAIRMAN HEINLE: Almost sounds like an
24 advertisement for AAPG.

25 THE WITNESS: It's about a 30, 31,000

1 member organization.

2 CHAIRMAN HEINLE: Are there any other
3 questions? His credentials are accepted.

4 MR. WOZNIAK: Thank you.

5 BY MR. WOZNIAK:

6 Q. All right. Are you familiar with the
7 application that's before the commission today on the
8 2-5 well?

9 A. Yes, I am.

10 Q. All right. Would you please basically
11 describe the general geographic area, referring to
12 Exhibit D in the exhibit package, to identify where
13 the location is.

14 A. Yes, sir. Exhibit D is a map from the
15 Texas Bureau of Economic Geology. It shows -- it's a
16 coal rank map. Shows the bituminous coal. Shows the
17 leases in the well in question, in the area of the
18 well. It is situated in the northwest portion of the
19 San Juan Basin.

20 Q. Okay. And just looking at this,
21 basically, this is just north of the Colorado/New
22 Mexico line; is that correct?

23 A. That's correct.

24 Q. All right. And I know the commission
25 has been talking, the last day and a half, about the

1 gas seep area in the Bayfield and Pine River area. I
2 know that's not shown on here, but, roughly where
3 would that be located?

4 A. If you go east of Durango, the top of
5 the map, it has some values there. It's -- the Pine
6 River is just to the right of that .078, very north
7 portion of the map.

8 Q. So, approximately how far, in distance,
9 would that be from the Cedar Ridge application area?

10 A. That's approximately 15, 20, 30 miles.

11 Q. All right.

12 A. Air miles.

13 Q. I know you didn't prepare this map.
14 This is from the Texas Bureau of Economic Geology,
15 but, to your knowledge, is this correct and in what it
16 shows?

17 A. Yes, sir.

18 Q. All right. I would like to direct your
19 attention to the next exhibit, which is Exhibit E,
20 which is a structure map. Please, can you identify
21 this exhibit?

22 A. Yes. Exhibit E, did you say what it is?

23 Q. Yes.

24 A. Okay. Exhibit E is a structure map on
25 top of the Pictured Cliff sandstone, which is also

1 essentially the base of the Fruitland formation. The
2 outcrop is shown on the western side here. This map
3 shows the structure in this area is striking north to
4 northeast, and the dip is to the east-southeast. From
5 the outcrop down, for about a mile and a half into the
6 basin, the dip is approximately 14 degrees. At that
7 point, the dip flattens out a little bit to about 9
8 degrees for that half mile. And then, at that point,
9 the dip flattens to about a degree and a half. That's
10 what's referred to as the hinge line, okay.

11 Q. And I see that the 2-5 well is marked on
12 the exhibit in Section 5. Right next to it is the
13 4,276 feet. What does that represent?

14 A. All of the numbers next to the wells are
15 actual structural tops in these wells.

16 Q. Okay. And you have mentioned that the
17 outcrop was shown on the left side of map. What is
18 the outcrop?

19 A. Okay. That's where the geologic
20 formation appears at the surface of the earth, or it
21 crops out.

22 Q. And so that would be the -- where the
23 Pictured Cliff Fruitland reaches the surface; is that
24 correct?

25 A. That's correct.

1 Q. All right.

2 A. This also shows that these leases occur
3 in the -- within the Hogback monocline also.

4 Q. Okay. And I see this is again taken
5 from published data. Could you comment on that,
6 whether you have updated and reviewed this yourself
7 for accuracy?

8 A. I had -- did not do this map in the
9 book. I have updated this map, since this is a 1993
10 map. But, this map was used for -- because of space,
11 size and fit of the book. Mine is large scale.

12 Q. Is the map accurate?

13 A. Yes, it is. I did -- of course there's
14 a few additional wells here. Contour lines are
15 essentially the same. I moved them a little bit, but
16 this map is -- reflects the structure.

17 Q. Okay. This indicates on the map itself
18 it's interpreted by J. Close. Do you know who that
19 is?

20 A. Yes.

21 Q. Who is Mr. Close?

22 A. Mr. Close is a geologist with Burlington
23 Resources.

24 Q. Okay. You have no reason to doubt the
25 accuracy of this map?

1 A. No.

2 Q. Okay. If I can direct your attention to
3 your next depth map, which is Exhibit F. Can you tell
4 us what's depicted on that exhibit?

5 A. Yes. Exhibit F is a map showing the
6 depth from the surface to the top of the intermediate
7 Fruitland coal zone. In the 2-5 well in question
8 here, the depth from the surface down to the top of
9 the intermediate coal is 1797 feet.

10 Q. Okay. When you get down to the 1-7,
11 which is the second application, what's the depth on
12 that? I can't read it on here.

13 A. It's 1464 feet at the 1-7 well.

14 Q. Okay. So this is to the top of the
15 intermediate; is that correct?

16 A. That's correct.

17 Q. All right. And, again, this map appears
18 to be taken from published data that you -- from the
19 GRI Institute; is that correct?

20 A. That's correct. It's another J. Close
21 map.

22 Q. Okay. And you verified this for
23 accuracy, based on your data?

24 A. Yes.

25 Q. Okay. All right. And then I assume you

1 prepared some stratigraphic cross sections for the
2 purposes of today's hearing.

3 A. That's correct.

4 Q. All right. Can we have those, Terry.
5 It's sort of hard to see these in your packet. The
6 first exhibit is Exhibit G, which is an index of
7 the -- of these cross section. The first, if you
8 could take us through that, and then we'll move on to
9 the actual cross section.

10 A. Okay. These cross sections are
11 stratigraphic cross sections. The two involved with
12 this well are the D-D' and G-G' cross sections. First
13 one is D-D'. It is a northeast to southwest cross
14 section. The northeast well is the Emerald 32-1. The
15 next well is the 2-5 well, the well in question, and
16 the southwestern well is the Cedar Ridge 6-5. This
17 first cross section is a strike cross section. The
18 G-G' well cross section is essentially a dip cross
19 section. And it runs from the west, Cedar Ridge 3-6
20 through the 2-5 to the Cedar Ridge 5-5.

21 Q. Okay. So, that's the index itself of
22 the two stratigraphic cross section. Can you now take
23 us through the cross sections themselves and tell us
24 what is shown on the cross sections, starting with
25 Exhibit H first, which is the D-D'.

1 A. Okay. Exhibit H is the D-D' cross
2 section, northeast to southwest. That's the strike
3 cross section of the down structural strike. This
4 shows the Fruitland coal zone. This is a
5 stratigraphic section, hung -- the datum is hung on
6 the Torstein, right over the basal coal, so altered
7 volcanic ash. Very good marker beds. And that's the
8 datum on these cross sections.

9 This shows the upper Fruitland, the
10 intermediate Fruitland and basal Fruitland coals. The
11 upper Fruitland coals are very thin stringers. They
12 are possibly continuous, and some of them are
13 discontinuous. These little dark lines with question
14 marks show that they might or might not be laterally
15 continuous, these very small stringers.

16 The two coals of importance here are the
17 intermediate and basal coals. This cross section
18 shows these two very well. Shows that the thicknesses
19 are approximately the same. They are laterally
20 continuous. They have good lateral continuity between
21 these three wells, along the strike. At the very
22 bottom of the formation, there's some very small
23 stringers that might or might not be laterally
24 continuous, but the main coals in question are
25 laterally continuous.

1 Q. So, Cedar Ridge proposes to complete
2 this in both the intermediate and the basal coal; is
3 that correct?

4 A. Yes.

5 Q. If I understood your testimony, both
6 those coal seams are laterally continuous in this
7 area?

8 A. Correct.

9 Q. The little question marks are merely
10 just evidencing the stringers that may are may not be
11 continuous between the three wells?

12 A. That's correct.

13 Q. Okay. All right. If you can then
14 direct your attention to Exhibit I, and explain to the
15 commission what's shown on that exhibit?

16 A. Okay. This is essentially a dip cross
17 section, from the west to east. From the Cedar Ridge
18 3-6, Southern Ute 2-5 to the Cedar Ridge 5-5 wells.
19 This also shows very small stringers in the upper
20 Fruitland zone, which might or might not be laterally
21 continuous. The two coals of importance here are the
22 intermediate and basal. Also show the same
23 thicknesses, and it shows that they are laterally
24 continuous. There's good lateral continuity in these
25 wells in the dip direction also. And these -- the

1 black on here is the coal or the coals.

2 Q. All right. Those two wells appear -- or
3 the three wells appear to be approximately 2500 feet
4 and 2100 feet apart, and the northeast to southwest,
5 they are a little bit farther at least on the --
6 between the Valencia Canyon Well; is that correct?

7 A. That's correct. Basically what these
8 three show is that in a strike and dip direction, that
9 the basal and intermediate coals are continuous.

10 Q. Okay. Thank you. Okay. All right.
11 Then, going back to your exhibit book, the next map is
12 listed as Exhibit J, which appears to be an isopach
13 map. Can you please describe what's shown on this
14 exhibit?

15 A. Okay. Exhibit J in the book there is a
16 net isopach or thickness map on the intermediate
17 Fruitland coal. In the 2-5 well, the thickness of the
18 intermediate coal is 38 feet. It's also 38 feet in
19 the 32-1 and -- I lost my spot here. 35 feet in the
20 6-5 well.

21 Q. Okay.

22 A. On the D-D' cross section, even though
23 this map looks kind of extreme, these are 1-foot
24 contour intervals. And so, actually, if these were
25 5-foot contour intervals, there would only be about 2

1 lines on this map, so --

2 Q. All right. So a fairly uniform --

3 A. Yes.

4 Q. -- formation.

5 A. Yes.

6 Q. And, again, this is from published
7 information at the GRI; is that correct?

8 A. That's correct.

9 Q. You verified this on your own?

10 A. Yes.

11 Q. All right. Let's look at your Exhibit
12 K, which is the basal isopach map.

13 A. Okay. This is a thickness map on the
14 basal Fruitland coal. It shows the same thing. The
15 coal is essentially the same thickness. It varies a
16 little bit. Foot or two, but this is also a 1-foot
17 contour interval. And, in the 2-5 well, the basal
18 coal is 25 feet thick.

19 Q. Okay. Now, it looks like when you get
20 down to the 1-7, it's fairly uniform still?

21 A. Yes. It's 27 feet thick in the 1-7.

22 Q. All right. All right. Now, based upon
23 your cross section and the study you have done, and
24 review of the published data, I take it you have an
25 opinion, on a professional basis, as to whether the

1 coals in Section 5 are continuous?

2 A. That's correct.

3 Q. Okay. What is your opinion?

4 A. That the intermediate and the basal
5 coals in this area are laterally continuous.

6 Q. When you were doing your reviews, did
7 you notice any evidence of major faults in the area?

8 A. No I didn't. There is a little bit --
9 you can see, on these cross sections, a very small
10 amount of thickening and thinning between the wells
11 here and there. That could be interpreted as
12 faulting, but it is really -- it looks like it's
13 stratigraphic in nature. Most of the thickening zones
14 that thicken a little bit are due to sand build-ups
15 and not faulting. There are no major faults.

16 Q. Did you notice any geologic anomalies or
17 any other unusual things in this area?

18 A. No. There appear to be no geologic
19 anomalies in this area. There's a major structural
20 feature, which is the Hogback monocline. That's all.

21 Q. All right. Were these exhibits, along
22 with the published data that you have talked about,
23 with the remaining exhibits, were they all prepared
24 under your direction and control?

25 A. That's correct, except for the J. Close

1 maps.

2 MR. WOZNIAK: That's all the geologic
3 questions that we have for Mr. Matthews.

4 CHAIRMAN HEINLE: Mr. Ekberg. Do you
5 have any questions of the witness, Mr. Ekberg?

6 MR. EKBERG: No, sir, we do not.

7 CHAIRMAN HEINLE: Any questions from the
8 commissioners?

9 COMMISSIONER MacMILLAN: Can you tell me
10 what zones are perforated in the wells on the cross
11 sections and how these wells are completed?

12 THE WITNESS: That's one for Terry.

13 MR. LOGAN: Could I address that
14 question since I --

15 COMMISSIONER MacMILLAN: You are going
16 to do it later?

17 MR. LOGAN: I can address it right now.

18 COMMISSIONER MacMILLAN: As long as the
19 cross sections were here. Oftentimes it's common to
20 put those perforated intervals on the cross sections.

21 MR. LOGAN: Some of these are not
22 perforated. They are open hole cavity completed on
23 the D-D' cross section. The Valencia Canyon 32-1 has
24 two type of completions in it. There's an open hole
25 cavity completion in basal coal, and a perforated

1 hydraulic fracture stimulation in the intermediate
2 coal. Of course, the 2-5, there's nothing there.

3 COMMISSIONER MacMILLAN: Yeah.

4 MR. LOGAN: That's why it's -- the 6-5
5 is both hydraulically fracture stimulated and
6 perforated in the basal and the intermediate coal.
7 The Cedar Ridge 5-5 well, both of these are open hole
8 cavity completed, but casing set above it. Same
9 situation at 2-5. Nothing there yet. The 3-6,
10 perforated and fractured stimulated in both -- the
11 combination of both, perforation, it's primarily just
12 the intermediate, and the basal are perforated. Where
13 there's perforations, there's open hole cavity.
14 Typically everything is open.

15 COMMISSIONER MacMILLAN: The zones that
16 are hydraulically fractured, do you know what the size
17 of the fractures are?

18 MR. LOGAN: Yeah. What they did, these
19 were operated by Amax or Lab Petroleum, which
20 completed the 3-6, roughly 100,000 pounds of sand with
21 varying volumes of water. I think this one is about
22 120,000 gallons per zone, about 100,000 pounds of
23 sand. It's electrical fracture stimulation size.

24 COMMISSIONER MacMILLAN: The same would
25 be true, then, for the other zones that are

1 hydraulically fractured?

2 MR. LOGAN: That's a standard completion
3 technique. Could vary a few thousand gallons or
4 pounds either way. That's the standard technique.

5 COMMISSIONER MacMILLAN: Are there
6 quantification methods for the open hole cavitation?

7 MR. LOGAN: Which is better?

8 COMMISSIONER MacMILLAN: Say again?

9 MR. LOGAN: Do you mean which is better?

10 COMMISSIONER MacMILLAN: No. I meant as
11 far as how that method is done and how one might
12 determine how large the cavity may be, either by time
13 of circulation --

14 MR. LOGAN: Yes. There's several
15 things. One, this may sound like a little bit of an
16 advertisement, but GRI has reports on one of the
17 wells, 5-7, which is not on these cross sections, but
18 it's a nearby well, which goes through the specific
19 procedure. It's publicly available data from the Gas
20 Research Institute that goes through the procedure,
21 plus the measured cavity size. There's also another
22 publication from GRI that goes through the procedure
23 on doing open hole cavity completions, so, yes, there
24 are ways -- typically, the cavity size is about 10
25 feet in diameter. It's almost physically impossible



1 to make it larger than that. So, everything that we
 2 have, that has been published by the Gas Research
 3 Institute, ranges from about anywhere from 2 foot
 4 diameter up to 10 to 12 foot diameter. 12 foot is the
 5 largest they have ever seen.

6 COMMISSIONER MacMILLAN: In your
 7 estimation, the completion -- the open hole cavitation
 8 completion technique in the 5-7 is similar to the
 9 other wells that had open hole cavitation completion,
 10 for example, the 5-5 for both of those zones, and the
 11 other ones that you have mentioned?

12 MR. LOGAN: Yeah. The procedure was
 13 identical, yes. The completion procedure for open
 14 hole cavity completion was identical.

15 COMMISSIONER MacMILLAN: Good. Thank
 16 you.

17 MR. LOGAN: Okay.

18 CHAIRMAN HEINLE: Any other questions
 19 from the commissioners?

20 COMMISSIONER MATHESON: Note for the
 21 record. This is the third nomenclature for Fruitland
 22 coals that we have seen in one day. Sounds like the
 23 stratigraphers got a little work to do. That's all.

24 CHAIRMAN HEINLE: Any other questions?
 25 Any redirect, Mr. Wozniak?

1 MR. WOZNIAK: No, sir.

2 CHAIRMAN HEINLE: One of the
3 commissioners needs to make a phone call. Why don't
4 we take a five-minute break.

5 (Recess.)

6 CHAIRMAN HEINLE: Let's get back on the
7 record.

8 MR. WOZNIAK: You want to give Mr.
9 Matthews one more question from Commissioner
10 MacMillan.

11 COMMISSIONER MacMILLAN: In Exhibit J,
12 which is the thickness of the intermediate Fruitland
13 coal zone, can you tell me what the value is of the
14 well immediately to -- the well located in the
15 northeast quarter of Section 6?

16 MR. MATTHEWS: Okay. I think that is.

17 MR. WOZNIAK: That's the 3-

18 MR. MATTHEWS: I think that is 28 feet.
19 I believe it was. Yes, it doesn't -- I think that was
20 the one that doesn't have a value. I think it's 28
21 feet.

22 COMMISSIONER MacMILLAN: Are you sure?
23 In other words, are those contour lines going up or
24 down?

25 MR. MATTHEWS: I think they are going

1 down. I did not look to see that -- did not see that
2 well -- have that well to check on that map. There's
3 reentrant right there, you can see down in the
4 northeast quarter of Section 8. 32 feet.

5 COMMISSIONER MacMILLAN: Yes.

6 THE WITNESS: There's reentrant right
7 through there. It would be 28 feet.

8 COMMISSIONER MacMILLAN: Well, if it's
9 not -- if it is 28 feet, it's not contoured properly,
10 is it? And then I guess it brings up the question of
11 the value of the well in that southwest of Section 5,
12 which would be the 5 --

13 MR. LOGAN: 6-5. That's the 6-5.
14 Southwest corner. It's kind of hard to see those
15 numbers.

16 CHAIRMAN HEINLE: Can't have two
17 conversations going on at once here. Tough to get it
18 on the record. Commissioner MacMillan, did you get
19 your question answered?

20 COMMISSIONER MacMILLAN: No. I am
21 requesting -- asking for the value located in the
22 southwest, now, of Section 5.

23 MR. MATTHEWS: That is 35 feet in the
24 6-5.

25 COMMISSIONER MacMILLAN: It is. That

1 contour is correct?

2 MR. MATTHEWS: Yeah.

3 COMMISSIONER MacMILLAN: Thank you.

4 CHAIRMAN HEINLE: All right.

5 MR. WOZNIAK: We would like to go a
6 little bit out of order and call Mr. Baughman with the
7 tribe, because he has to leave tonight, and I would
8 state that he is probably going to have exactly the
9 same testimony in this case as he is in the 1-7. I
10 would sort of like -- and I have asked Mr. Ekberg, and
11 he doesn't seem to have an objection -- that he talks
12 about both of them together, because his issue is a
13 little bit different than specific to either well.

14 CHAIRMAN HEINLE: Okay.

15 EXAMINATION

16 BY MR. WOZNIAK:

17 Q. Mr. Baughman, would you state your full
18 name and business address for the record.

19 A. My name is Dick Baughman. It's spelled,
20 B-a-u-g-h-m-a-n, and my address is Post Office Box
21 737, Energy Resources Division, Ignacio Colorado,
22 81137.

23 Q. By whom are you employed?

24 A. The Energy Resources Division of the
25 Southern Ute Indian Tribe.

1 Q. In what capacity are you employed?

2 A. I am a petroleum geologist.

3 Q. Okay. How long have you been a
4 petroleum geologist?

5 A. 13 years. I have worked for Exxon
6 Company, U.S.A., as a private consultant and for the
7 tribe.

8 Q. All right. And are you familiar with
9 the coalbed methane development in La Plata County,
10 Colorado?

11 A. Yes, I am.

12 Q. And, okay. And did you prepare a
13 resume/curriculum vitae that's at the back of the
14 exhibit package?

15 A. Yes.

16 Q. Are the matters set forth in there
17 accurate?

18 A. Yes, they are.

19 Q. Briefly describe your education for us.

20 A. I have a bachelor of science in geology
21 from Arizona State University, and a master's of
22 science in geology from Northern Arizona University.

23 Q. Okay. I was checking your resume for a
24 couple of things I need to check. I would request
25 that Mr. Baughman's credentials as petroleum -- expert

1 petroleum geologist be recognized.

2 CHAIRMAN HEINLE: Any questions from the
3 commissioners? So accepted.

4 BY MR. WOZNIAK:

5 Q. All right. Have you studied the Western
6 Hogback region on the Southern Ute Tribe reservation?

7 A. Yes, I have.

8 Q. And for what purpose?

9 A. We first started looking at it in 1992
10 for purposes of the gas seep and possibility of it.

11 Q. Okay. And did you prepare an exhibit
12 that's in the packet that is in a map, that describes
13 some of your studies?

14 A. Yes, I did. I believe it's at the end
15 of the --

16 Q. It should be Exhibit 2, which is at the
17 end of the book. If I can direct your attention to
18 that and ask if you can maybe put it up on the board
19 and you can describe what's shown on this exhibit.

20 A. This is a map of Fruitland coalbed
21 methane development in the southwest part of the
22 Ignacio-Blanco Field. The red dots depict well
23 locations of Fruitland coalbed methane wells. The
24 colored stripes along the edge depict the outcrop --
25 the Fruitland coal outcrop. These are zones where any

1 particular coal seam would occur as mapped by the
2 U.S.G.S. in 1987. The magenta stripes you see along
3 the outcrop in three different places represent places
4 where we have gas seeps. The big blue triangles with
5 the red dots in them represent Fruitland coal bed
6 methane wells that were converted to observation
7 wells, and the small triangles along the outcrop, with
8 the circles inside of them, represent locations where
9 there are soil vapor tube locations, and there's
10 approximately 130 of those.

11 Q. That's the existing monitoring system
12 right now?

13 A. Yes, it is.

14 Q. Okay. And who operates the monitor
15 system?

16 A. The operators take readings from the
17 observation wells. The Bureau of Land Management
18 takes readings from soil vapor tube locations. And I
19 am out there about once a week and also look at
20 springs levels, both here at Soda Springs and at
21 Houston Well and at springs along the road here in
22 Valencia Canyon itself. The operators also watch
23 those same areas.

24 Q. Okay. And in addition to the pressure
25 observation wells and monitoring vapor tubes that you

1 mentioned, are there any other portions of your
2 monitoring system?

3 A. We have a gas collection system right
4 here, installed by Emerald Gas Company, which
5 basically is a blanket collector over places where we
6 have had lots of seepage. And gas that comes up, gets
7 trapped underneath that blanket collector, and is then
8 piped through a meter. We have three temperature
9 detectors in this area. One of them in the third coal
10 seam from the bottom. One as a sort of a blanket over
11 here, is in the same kind of area, buried about the
12 same depth, and one hanging in the tree right here.

13 Q. Did you take any daily surveys of any of
14 these areas?

15 A. Cedar Ridge personnel look at the
16 springs here at Soda Springs on a daily basis.
17 Emerald personnel look at the springs along Valencia
18 Canyon on a daily basis. And, periodically, I look at
19 this Houston well, which is a hand-dug water well.

20 Q. So, this is a cooperative effort between
21 the industry and tribe and the BLM with respect to
22 monitoring the gas seep?

23 A. And -- industry, Bureau of Land
24 Management and the tribe, yes.

25 Q. All right. And I also noticed, when you

1 look at your map in Section 6, there are -- there
2 appears to be a monitor well which is roughly between
3 the proposed 2-5 well and the outcrop; is that right?

4 A. Yes. This is the first recompleted
5 Fruitland well that's been converted to a observation
6 well and it's functioning that way now and taking
7 continuous readings, as I understand it.

8 Q. Okay. And then there appears to be
9 another one, down close to the 1-7 well, which is the
10 5-13; is that right?

11 A. Yes. There's also an observation well,
12 5-13.

13 Q. All right. Well, based upon all your
14 studies Mr. Baughman, do you have a professional
15 opinion as to the effect of these recompletions on gas
16 seeps?

17 A. I don't believe that the recompletion
18 will have any effect on it at all.

19 Q. Okay. And what's your thinking along --
20 to come to that conclusion?

21 A. Two reasons. That the pressure here in
22 the 4-6 is very steady, and there is production
23 between the proposed recompletion, which is the Cedar
24 Ridge Southern Ute 3-6, between the proposed
25 recompletion and the leak area.

1 Q. Okay. That's the case also in the 1-7
2 and 6-7 well?

3 A. Yes, it is.

4 Q. All right. Based upon your work for the
5 tribe, the tribe doesn't have a concern at this point
6 that this will cause any additional problems with gas
7 seeps?

8 A. I don't think it will cause any
9 problems, and if it does, we will detect it on the two
10 observation wells and in our monitoring in this area
11 right here. There's a spring right here that's still
12 flowing artesian right here. That's what Cedar Ridge
13 looks at and it's, to this date, flowing artesian.

14 Q. Okay. And did you prepare this exhibit?

15 A. Yes, I did.

16 Q. Okay. On behalf of the tribe, in
17 essence, right?

18 A. Yes, sir.

19 Q. All right. That's all of the questions
20 we have for Mr. Baughman. One last -- I am sorry.
21 Your testimony would be the same with the 1-7 well as
22 it is with the 2-5?

23 A. Yes, it would be.

24 CHAIRMAN HEINLE: Mr. Ekberg.

25 MR. EKBERG: Just two questions.

1 BY MR. EKBERG:

2 Q. What is the bottom hole pressure in the
3 4-6 well, the one that was recompleted for an --

4 A. I really don't know, but I think they
5 are -- Terry Logan can answer that.

6 MR. LOGAN: I don't have the exact
7 pressure with me, but it is normally pressured, with
8 gradient of .434 psi per foot -- it's 259 psi is what
9 it is. The 259 psi at whatever the gradient works out
10 to. It's about 509 feet deep, if I remember right,
11 where that pressure gauge is.

12 MR. EKBERG: We have no additional
13 questions that relate to the gas seep. May be other
14 questions that relate to pressure later on.

15 CHAIRMAN HEINLE: Any questions of the
16 commissioners?

17 COMMISSIONER MATHESON: Mr. Baughman, on
18 the Cedar Ridge 3-6, 4-6 and 6-7, I guess those are
19 the intervention wells between the subject wells here
20 and outcrop. Water production, historical, current,
21 how does it look?

22 THE WITNESS: I don't have the numbers
23 right at the top of my head. I can tell you that
24 water production in these four wells right here.

25 MR. WOZNIAK: Can you identify those for

1 the reporter?

2 THE WITNESS: The Emerald Valencia
3 Canyon Southern Ute 17-1. The Emerald Canyon Southern
4 Ute 20-4. Fuelco 44 Canyon 21-1, and the Fuelco
5 Southern Ute 16-2. The production in those wells is
6 much greater than I believe any of these wells.
7 There's also fairly high production down in here, and
8 in these three wells right in here.

9 COMMISSIONER MATHESON: And so north and
10 south, you have a feel for water production. Really
11 not very well in the application area.

12 THE WITNESS: I have made maps of water
13 production. I don't know the numbers off the top of
14 my head.

15 COMMISSIONER MATHESON: I guess what I
16 am trying to get at, I mean, we have seen large water
17 production in this area in the past. Are we still
18 seeing it, with these new wells, are we anticipating
19 lots of water production? Trying to get some feel
20 along those lines. Maybe Mr. Logan can help us with
21 that too.

22 MR. WOZNIAK: We're going to have a --
23 there's an exhibit in there, Commissioner Matheson,
24 that deals with actual water production from every
25 well pretty much on that map. That when Mr. Logan

1 goes through some more engineering, we'll give you
2 every -- more data than you are going to want.

3 COMMISSIONER MATHESON: I am sure it
4 will be too. Okay. That's good enough now.

5 CHAIRMAN HEINLE: Any other questions
6 from the commissioners of this witness? Any redirect?

7 MR. WOZNIAK: No.

8 CHAIRMAN HEINLE: I guess we have
9 another question. Commissioner Matheson.

10 COMMISSIONER MATHESON: The Valencia
11 Canyon seeps, it is a similar problem to Pine River
12 Ranches and elsewhere along the outcrop, and I know
13 that the tribe has been working actively with the
14 operators in the area to figure out what's going on.
15 Have you folks made any determination at this point as
16 to cause?

17 MR. WOZNIAK: As to this area or the --

18 COMMISSIONER MATHESON: This area.

19 MR. WOZNIAK: This area.

20 THE WITNESS: It's my opinion these
21 seeps were caused by downdip dewatering. There's very
22 clear correlation between the time that dewatering
23 started and the advent of leaks.

24 COMMISSIONER MATHESON: How is it, then,
25 infill drilling and continued -- increased water

1 production is not going to be a concern for future
2 seepage here?

3 THE WITNESS: Well, I think there's a
4 barrier out there, except in a few locations. I
5 believe there's at least one barrier that exists,
6 paralleling to the outcrop here, and I believe that
7 barrier is pierced right here at Valencia Canyon.

8 MR. WOZNIAK: That's in section --

9 THE WITNESS: In Section 17 of Township
10 33 North, 11 West. I could go over the reasons why I
11 think that barrier is there. I can't absolutely prove
12 it.

13 COMMISSIONER BLACKWELL: Could you
14 outline that barrier again, please.

15 THE WITNESS: It parallels the Hogback,
16 approximately half a mile from the Hogback.

17 COMMISSIONER BLACKWELL: All of the way.

18 THE WITNESS: I don't know about down
19 here, to tell you the truth. But I believe it's in
20 this area right in here, between Section 31 and
21 Section 16 of 3 North, 11 West.

22 COMMISSIONER MATHESON: What would be
23 the nature of that barrier? Do you have a feeling
24 yet?

25 THE WITNESS: I believe it's a fault.

1 There's a couple of reasons that -- this area used to
2 be overpressured, before it -- dewatering and
3 development occurred. And it was overpressured, and
4 yet it didn't leak out the Hogback, so something was
5 holding it in there. That's the first good reason.

6 Secondly, I have looked at water
7 chemistry and changes in water chemistry at the wells,
8 measured the water, and I can see a difference between
9 here and here. The well on this side of the so-called
10 barrier cleaned up. The total dissolved solids, with
11 time, decreased. On this side of the barrier, they
12 actually increased. And when you look at a total
13 dissolved solid map of the basin in this area, these
14 wells are quite high, up to 11, 12, 13,000 PPM. These
15 wells over here are relatively low. They started low
16 and then they went lower, indicating that the source
17 of water for these wells out here was this area, and
18 the source of water over here was the Hogback itself.
19 In 1992, we started looking at the Hogback for gas
20 seepage because we thought this problem might occur.
21 We didn't know whether it would or not. We found a
22 few places with methane, and a few places with a small
23 amount of hydrogen sulfides, but nothing of any
24 significance. Approximately two years after
25 production started, in this area here --

1 MR. WOZNIAK: In which area is that?

2 THE WITNESS: In the Valencia Canyon Gap
3 area, 33 North, 11 West, actually in April of 1995, we
4 found gas venting out of Valencia Canyon Gap so
5 forcefully that it would flow -- if you punched a hole
6 in the soil, it would flow a geyser up that high of
7 gas, and that definitely was not there before. So, we
8 see a direct correlation between the timing of downdip
9 dewatering and the advent of these leaks.

10 At the time, in April of 1995, we did
11 not have leaks here, and we didn't have any leaks
12 here, and we only had two seeps that were leaking
13 here. By September of that same year, all of these
14 leaks had occurred. And above those leaks, above the
15 coal, we have a Pinon Juniper forest that mostly died
16 where we had the leaks. And some of those Juniper
17 trees are 3 to 500 years old. So, they died,
18 virtually, overnight, and in a few months. And then
19 the leaks seems to have reached a equilibrium. And I
20 am not sure how to explain that yet. But it did --
21 the strips here don't seem to have stopped, or they
22 seem to have stopped growing.

23 With the BLM, we put these soil vapor
24 tubes on the ends of these strips, and then in some
25 cases, we went a little past it to see if it was

1 growing and it didn't appear to be growing. We also
2 had reservoir modeling out here that indicates that
3 the downdip dewatering here should cause a serious
4 amount of leakage out here that we're not seeing.

5 COMMISSIONER MATHESON: So, this barrier
6 would be between basically the existing monitor wells,
7 let's call them, and then the active production wells?

8 THE WITNESS: Yes.

9 COMMISSIONER MATHESON: And, though, up
10 by Valencia Canyon, you are thinking there's a
11 penetration of that barrier that's accounting for
12 those seeps, you said here, the southern two seeps.
13 Is there a similar penetration of the barrier there?
14 Do you think the seepage is related to the wells that
15 you have shut in for monitoring?

16 THE WITNESS: Well, this monitoring well
17 is rock solid. It doesn't move.

18 MR. WOZNIAK: That's this monitoring
19 well.

20 THE WITNESS: The Cedar Ridge Southern
21 Ute 4-6. I believe that the outcrop has been filled
22 with water, primarily, not from out here, but -- from
23 the overpressurized region, but from recharge coming
24 down along the Hogback. And that these wells right in
25 here intercepted that water, and there's a fault going

1 right through, the leak right here, and that this --

2 MR. WOZNIAK: Where is that fault? I am
3 sorry.

4 THE WITNESS: That fault is in the far
5 northwestern part of Section 6 of 32, 11, and by
6 intercepting the water that was filling up the Hogback
7 here, it caused that leak right here. And these wells
8 here are very shallow. They were actually drilled
9 originally as observation wells, and then they were
10 put on production, and they are 3 to 400 feet deep,
11 and I believe that these two wells directly caused
12 these leaks. And that this group of wells right here
13 caused this leak, and that these four wells right in
14 here, right in Section 17 and Section 21 in 33 North,
15 11 West, caused this leak right here. And that's the
16 other reason I didn't answer your question about the
17 fault. If there were a permeable barrier caused by
18 diagenic alteration of the rock, or something like
19 that, it would be unlikely like we would see it in all
20 four coal seams there, and that's why I think the
21 barrier is a fault, and I am, at present, working on
22 that. And, actually, I think maybe there's two
23 barriers in here, but I am still looking at that. I
24 am looking at Landsat and radar images and the aerial
25 photos, trying to identify that, because I see

1 possibly a reason for two barriers in there.

2 COMMISSIONER MATHESON: Do you know --
3 when were these wells shut in for monitoring purposes?

4 THE WITNESS: At various times, and I
5 don't know. I don't know the dates. All of them, as
6 far as I know, except for the Cedar Ridge Southern Ute
7 4-6 has been shut in and converted in the last few
8 months. We don't have a whole lot of data on this,
9 except for the Southern Ute 4-6.

10 COMMISSIONER MATHESON: How long has the
11 4-6 -- how long has that been --

12 MR. LOGAN: It's been shut-in, oh, for a
13 year, because we also have a flowing spring right
14 here. We used to have a flowing spring here, and it
15 doesn't flow anymore.

16 COMMISSIONER MATHESON: In light of
17 everything else we dealt with, you're feeling
18 comfortable with these? You have had a sufficient
19 period of record to make these statements, I guess.

20 THE WITNESS: Yes.

21 COMMISSIONER MATHESON: Okay.

22 CHAIRMAN HEINLE: Commissioner
23 Blackwell.

24 COMMISSIONER BLACKWELL: I just want to
25 clarify. Is it your testimony, then, that allowing

1 the recompletion into the Fruitland in these two
2 locations would not cause an increase in gas seepage
3 along the Hogback, because of the existence of
4 barriers between those locations?

5 THE WITNESS: I do not believe that the
6 recompletions will have any effect on the seepage of
7 the Hogback. And at this point, I believe there's a
8 barrier there, but, at this point, I can't prove it.

9 MR. WOZNIAK: Is part of your answer
10 also based upon the fact there are the two monitor
11 wells that are in between there, and the fact there is
12 production between the Hogback and the proposed
13 recompletion?

14 THE WITNESS: Yes.

15 CHAIRMAN HEINLE: Commissioner Matheson.

16 COMMISSIONER MATHESON: One more for
17 Mr. Baughman, as long as we're on environmental
18 matters, I guess. Do you feel comfortable with the
19 cementing within the existing well; that it is
20 sufficient, after the recompletion, to prevent any
21 near-region-to-the-well problems, because I haven't
22 looked at the cement jobs.

23 CHAIRMAN HEINLE: That might be a
24 question of, perhaps --

25 MR. WOZNIAK: Do that tomorrow.

1 CHAIRMAN HEINLE: I have that on my list
2 too. Mr. Ekberg.

3 MR. EKBERG: There's been some
4 additional testimony since I last had a chance to
5 cross examine. I would like to ask a few questions.

6 EXAMINATION

7 BY MR. EKBERG:

8 Q. You have stated that you believe there
9 is a barrier between the wells that are going to be
10 recompleted and the outcrop.

11 A. Yes, I have.

12 Q. That you haven't completed your studies.

13 A. No.

14 Q. So, that is a postulate right now?

15 A. Yes, it is.

16 Q. It's not scientific conclusion?

17 A. It's not the interpretation at this
18 point.

19 Q. Is it possible that a downdip infill
20 could impact --

21 A. Sure.

22 Q. Okay. One other thing. One of the
23 things that you said about the barrier, it might be a
24 fault.

25 A. Uh-hum. (Witness nodding in the

1 affirmative.)

2 Q. Your geologist did not testify to the
3 existence of any faults.

4 MR. WOZNIAK: Well, point of
5 clarification. It's not his geologist. He represents
6 the Southern Ute Tribe. That's who he's for. It's
7 not his geologist.

8 MR. EKBERG: I would withdraw the
9 question.

10 MR. CHIPPS: That was the nature of my
11 objection as well.

12 MR. EKBERG: No more questions.

13 CHAIRMAN HEINLE: Any redirect?

14 BY MR. WOZNIAK:

15 Q. The only redirect I have, Mr. Baughman,
16 has anything you have talked about today changed your
17 conclusion that you don't have a concern, on the part
18 of the tribe, as to the contribution of the gas seep
19 based upon these infill wells?

20 A. No. I haven't heard anything today to
21 support my changing my opinion.

22 MR. WOZNIAK: That's all of the
23 questions that we have.

24 CHAIRMAN HEINLE: Another question.

25 COMMISSIONER JOHNSON: I am not sure how

1 to ask it, but some of the things I have been
2 hearing -- you believe there's any communication,
3 either by water or otherwise, from the formations
4 below the basal Fruitland into the Fruitland
5 formations?

6 THE WITNESS: I have no such evidence --
7 I have never seen of an instance where I believe that
8 was occurring.

9 COMMISSIONER JOHNSON: Thank you.

10 MR. WOZNIAK: Again, how many miles is
11 this from the Pine River area?

12 THE WITNESS: It's at least 30 miles
13 from the Pine River Gap area.

14 MR. GRIEBLING: Can I ask a question
15 along this line? We were concerned about proximity of
16 water production to these wells. And we have a map
17 we're trying to find that you all generated showing
18 water production in the area, which indicates that the
19 nearby producers did not make a lot of water and that
20 the two recompletion sites were not at locations that
21 we could project would make a relatively high amount
22 of water, whereas there were high water producers near
23 some of the high seepage areas along the outcrop.
24 That's just sort of my recollection of the map. I am
25 trying to find it, but that ties with your

1 recollection?

2 THE WITNESS: That's the way I see it
3 too. In general, where you are see seeps along the
4 outcrop, you see nearby downdip water production
5 higher than in other places.

6 MR. GRIEBLING: The wells adjacent to
7 the recompletion site didn't make high water?

8 THE WITNESS: No. They didn't, not in
9 that area.

10 CHAIRMAN HEINLE: I think we're done.

11 COMMISSIONER MacMILLAN: Point of
12 clarification. This witness is now leaving and won't
13 be available tomorrow.

14 MR. WOZNIAK: That's correct.

15 COMMISSIONER MacMILLAN: If we can't be
16 finished here in 9 minutes --

17 MR. WOZNIAK: That's true. Yeah. He
18 would like to be excused.

19 COMMISSIONER MacMILLAN: I believe that
20 Commissioner Matheson has raised some questions that
21 may come up, from my perspective, not from his, after
22 we review some of the water production data. And
23 we'll do the best job we can, I guess, of answering
24 it, but I guess it is of concern, because of the
25 position that this witness has for the tribe and that

1 perspective, and also his expertise and knowledge of
2 gas production in the area, but also the water.

3 MR. WOZNIAK: It's very difficult for
4 the applicant who -- we have no control over
5 Mr. Baughman. He is here, graciously, and has given
6 two days, and, unfortunately, it's one day short, and
7 everybody hoped, including the commission, that we
8 would be able to go first thing this morning, so we
9 apologize for that. But it's hard when you are
10 begging to ask people to stay an extra day, when they
11 have commitments, so I apologize.

12 COMMISSIONER MacMILLAN: One question I
13 guess, if I may, Mr. Chairman. One thing that I don't
14 believe has been explained on this map is the color
15 patterns of the outcrop.

16 THE WITNESS: Those are zones where any
17 particular coal seam will occur, as mapped by the
18 U.S.G.S, and they didn't give us the exact locations.
19 We're in the process of doing that right now. We have
20 mapped the area around Valencia Canyon Gap there, mile
21 on each side of it, in detail, and we're in the
22 process of mapping the rest of it.

23 COMMISSIONER MacMILLAN: Can you give a
24 perspective on what the overall pattern appears to be,
25 based on the map here.

1 THE WITNESS: Well, there's two
2 simple -- there's two coal seams in the southwest.
3 There's actually one thin stringer above those two,
4 and, as you go north, you get up to five coals.
5 With -- typically, in the field, there's about four
6 coal beds. You can separate it that way.

7 COMMISSIONER MacMILLAN: In the cross
8 section in the subsurface that we saw over the
9 proposed site, we did, in fact, see two coals, did we
10 not, two major coals and the thin stringer above them?

11 THE WITNESS: Yes.

12 COMMISSIONER MacMILLAN: In both the
13 west-east direction and the north-south direction?

14 THE WITNESS: Right. In that area,
15 there's basically two coalbeds.

16 COMMISSIONER MacMILLAN: And if one were
17 to project geology from the surface into the
18 subsurface, is that what you would expect?

19 THE WITNESS: In the far southwest area,
20 yeah.

21 COMMISSIONER MacMILLAN: Thanks.

22 EXAMINATION

23 BY MR. WOZNIAK:

24 Q. How many years do you expect to keep
25 studying this? The tribe is going to be involved.

1 This isn't going to end next week?

2 A. No, it's not. I have been studying,
3 basically, I have been paying attention to it since
4 1992. I have been on the Pine River investigative
5 team for -- been almost three years looking at it.
6 And it's quite possible that the leakage, especially
7 of Valencia Canyon Gap, could last much longer than
8 Fruitland coalbed development, possibly several
9 hundred years. We're in the process right now of
10 maneuvering to drill a couple of slant holes into the
11 coal at Valencia Canyon Gap to produce the gas and get
12 it under control, trying to stop it in that area. We
13 probably can't do that, but we can at least remove the
14 safety hazard right there.

15 Q. Again, is anyone living in this area,
16 Mr. Baughman?

17 A. No one has lived there for about 50
18 years. No one lives there. Just oil field personnel
19 out there. And -- I take it back. Rancher once in a
20 while. We're keeping him out of the Hogback itself.

21 Q. You didn't mean to point at Commissioner
22 MacMillan? I want to make sure.

23 A. No. I am sorry.

24 MR. WOZNIAK: We have no further
25 questions of this witness.

1 CHAIRMAN HEINLE: All right. Okay.
2 Thank you. I think I at least need to ask Mr. Ekberg
3 if he has got any other questions. We have gone back
4 and forth beyond you.

5 MR. EKBERG: No, sir. No more
6 questions.

7 CHAIRMAN HEINLE: I think we're at the
8 point today where the commissioners decided to
9 adjourn, and we will resume tomorrow morning at 8:30
10 p.m.

11 (Whereupon these proceedings were
12 adjourned at 5:00 p.m.)

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STATE OF COLORADO) ss
CITY AND COUNTY OF DENVER)

I, Harriet S. Weisenthal, Certified Shorthand Reporter and Notary Public for the City and County of Denver, State of Colorado, do hereby certify that the foregoing proceedings were taken in shorthand by me at 1120 Lincoln Street, Denver, Colorado on the 4th day of September, 1996, and was reduced to computer-aided typewritten form under my supervision;

That the foregoing is a true transcript of the proceedings had; that I am neither attorney nor counsel, nor in any way connected with any attorney or counsel for any of the parties to said action or otherwise interested in the event;

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this 13th day of September, 1996.
My Commission expires October 15, 1997.



Harriet S. Weisenthal

