No. 137, Original

IN THE SUPREME COURT OF THE UNITED STATES

VOLUME 18 OF 25 VOLUMES

TRANSCRIPT OF TRIAL PROCEEDINGS

STATE OF MONTANA

Plaintiff,

v.

STATE OF WYOMING

and

STATE OF NORTH DAKOTA

Defendants.

BEFORE THE HONORABLE BARTON H. THOMPSON, JR. Special Master Stanford, California

James F. Battin United States Courthouse 2601 2nd Avenue North Billings, Montana 59101 8:33, Tuesday, November 19, 2013

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Proceedings recorded by machine shorthand Transcript produced by computer-assisted transcription

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```
1
             TUESDAY, NOVEMBER 19, 2013, 8:33 A.M.
              SPECIAL MASTER: Okay. Everyone can be
2
3
   seated.
              Okay. Why don't we start out this morning by
4
   resolving Wyoming's motion at the end of Montana's case
5
   yesterday. So I did go home. I carefully -- yes.
6
              MS. VERLEGER: This is off the record.
7
                        (Discussion held off the
8
9
                        record.)
10
              SPECIAL MASTER: Would anyone object if we
   took lunch today at 11:30, if I remember correctly?
11
   That gives us an opportunity to all get out and get
12
13
   lunches before the lunch crowd hits. And Ms. Verleger
14
   has an 11:30 phone conference she wants to participate
15
   in.
16
              Any objection to that?
              MR. KASTE: No objection.
17
18
              MR. DRAPER:
                           No.
19
              SPECIAL MASTER: Okay. Then we will plan to
   take the break at 11:30 this morning. And,
20
21
   Ms. Verleger, if I forget about that and we're in the
2.2
   middle of a witness, feel free just to stand up, and
23
   I'll remember at that particular point.
              Okay. So I did take all of my notes home
24
   last night, reviewed them carefully. And, Mr. Draper,
25
```

```
I mentioned that I might want a little bit of help from
   you on a couple of years.
2.
              My notes were, I think, really quite good on
 3
   the question of notice for actually 2001, 2002, 2003,
4
    2004, and 2006 as well as the 1981 year that was added
5
   back in.
6
7
              But could you just briefly summarize what the
   evidence was on '87, '88, '89, and 2000? Because those
8
9
   were the years where my notes weren't as copious as on
10
   some of the other ones.
11
              MR. DRAPER: Yes, Your Honor.
12
              SPECIAL MASTER:
                              Okay.
                                      Thank you.
13
              MR. DRAPER: You had mentioned the years
14
   before 2000 yesterday. And that's what I focused on.
15
   So my remarks are mainly directed to the 1980s.
16
              SPECIAL MASTER:
                               Okay. Thank you.
              MR. DRAPER: I think you mentioned first that
17
   your notes were quite good on the 1981 exchanges that
18
   were memorialized in Exhibit M136.
19
20
              SPECIAL MASTER: That's true.
21
              MR. DRAPER: Between Mr. Fritz and
2.2
   Mr. Christopulos.
23
              SPECIAL MASTER:
                               That's correct.
24
              MR. DRAPER: And we would formally ask that
   you reserve any ruling. I know you've made rulings
25
```

prior to trial that did not have the benefit of this evidence that came in late during the discovery 2. process. And we would formally request that, to the 3 extent that your rulings were made in the absence of 4 that and that these are relevant, that you would 5 reconsider your rulings excluding matters that relate 7 to the years 1981 and following. Because those do show the consistent position of the state of Wyoming that they did not need to do anything to protect the 9 pre-1950 rights of Montana. 10 11 You see that in those notes very clearly. It's the message that we've been getting down through 12 13 the decades. It was essentially the response right up 14 until your ruling in this case. And so we've been 15 battering against that concrete wall for all that There's no evidence that that attitude changed 16 period. after the 1981 exchanges that do document that. 17 18 I would point Your Honor to particularly the 19 evidence that Mr. Moy gave with respect to those years: 1987, 1988, and 1989. I did print out a rough 20 21 transcript that we do have relating to a couple of 2.2 passages in that regard. He testified on November 1st. And it was an a.m. and a p.m., in other words, a 23 morning and an afternoon transcript. And I printed out 24 25 just a couple pages for Mr. Kaste and you, if I may.

```
1
              SPECIAL MASTER:
                               You certainly may.
2.
              MR. DRAPER:
                           The morning session -- it
   doesn't say morning, but it starts on page 42. And the
3
   afternoon session starts on page 22 of these two
4
5
   copies.
              SPECIAL MASTER:
                               Okay.
                                      Thanks.
6
7
              MR. DRAPER: Looking at the transcript that
   starts on page 42, that's the morning transcript.
8
9
   you turn over to the second page. This is printed
10
   double-sided. The beginning of the front side of the
11
   second page, page 44, has some language I think is
   worth quoting. I did print out a little bit more so
12
13
   that you can see the context and the other statements
14
   that are consistent with the ones that appear on this
15
   page.
              You can see that on page 44, line 16, the
16
   question is: "Well, and so my question is: You have
17
18
   testified that you were frustrated about Montana not
19
   receiving enough water; did you have communications
   with Wyoming about that?
20
21
              "Answer: I had communications with Wyoming
2.2
   about that. I had communications with the Montana
   commissioner about that.
23
2.4
              "Question: Was this that 1987, '88, and '89?
              "Answer:
                        Yes."
25
```

```
1
              This is the next question: "Did you demand
2.
   Wyoming stop using post-'50 water?
              "No, you can't demand.
 3
              "Question: Did you ask them?
 4
              "Answer: I asked.
5
              "Question: Did you tell --
6
7
              "Answer: Asked, talked.
              "Question: Did you ask them to stop using
8
9
   post-'50 water?
10
              "Answer: I asked them to stop using post-'50
   so we could get some water across the border to help
11
12
   Montana water users, yes."
13
              So this is very direct evidence of the
14
   official Rich Moy who was testifying and who
   represented the interests of Montana at that time for
15
   Mr. Fritz who was the chief water official.
16
              On the second printout, this is from the
17
   afternoon on November 1st, I would point you to the
18
19
   bottom of the first page, page 22. It starts on line
    20, where I would direct your attention.
20
21
              "So you stated earlier you did not demand any
2.2
   water of Wyoming. But is it your testimony that you
23
   asked?
                        I never demand -- the issue was
24
              "Answer:
   asking for the protection of pre-'50 rights in Montana
25
```

and Wyoming to shut off its post-'50 uses."

2.

2.2

2.4

And this is other -- I have printed out an extra page or two there so you could see the rest of the discussion.

But these are very direct claims by the water official who really was the one that was engaged, interfacing with Wyoming at that time. It is quite consistent with the conversations we've seen between the state engineers in the early 1980s as documented in those notes. And it's consistent with the other witnesses that have been presented in this proceeding, that there were direct conversations. This is some of the most pointed that we have.

But the others support that. And there was ongoing discussion -- there's evidence of ongoing discussions with the water users, their water officials in Montana who were complaining to them and being told that they were, in fact, having their complaints communicated to Wyoming.

So the whole -- the specifics of the person directly in the center of these discussions and all of the evidence around them, go to the point that Montana was doing whatever it reasonably could do as a sovereign to make its concerns known and its demands for compliance with the compact in the form of letting

water down to satisfy pre-1950 rights in Montana. 2 This appears also in the records of the compact administration meetings. We see it in Joint 3 4 Exhibit 32, which Your Honor I think referred to yesterday. We've also had evidence from several 5 witnesses that the strong tendency of the USGS, who is 7 responsible for preparing the minutes of meetings, tried at all costs to avoid controversy in the official record. And we know that nothing gets in the official 9 10 record unless it's agreed to by both states so that 11 there's veto power even on the minutes. And so you're 12 really looking at a forum where to create a record is 13 sometimes very difficult. But I think despite that, 14 we've got all the indices of strong communications 15 between Montana and Wyoming folks speaking directly on their demands for water in the 1980s. 16 17 SPECIAL MASTER: Okay. Thank you, 18 Mr. Draper. 19 So I'm sure Mr. Kaste would love to respond. But let me just comment. I've gone back over all of my 20 21 notes. The actual transcript was valuable this 2.2 morning. And based on my notes, I conclude that 23 actually Montana has presented substantial evidence for all the various elements of their claims for the years 2.4 that were in issue. So I'm going to deny Wyoming's 25

l | motion at this point.

2.2

So, Mr. Kaste, you still have a record, not having prevailed on one of these motions.

Let me just say several things. First of all, my decision to carefully consider Wyoming's motion and actually go back and review all the records should not in any way indicate anything about my overall views of Montana's case. But even though this is a proceeding where I'm actually preparing a record and then recommending findings for the United States Supreme Court, I do think that Wyoming's motion deserves to be carefully considered. And if we could have avoided the need for additional witnesses on particular issues, that's always useful to avoid.

Obviously, my decision to deny Wyoming's motion also shouldn't be considered as any indication as to ultimately how the United States Supreme Court will come out on this or what recommendations I will make one way or the other. Because all I have, number one, were my notes in front of me. And I obviously have not gone back and reviewed all the various transcripts and exhibits. And furthermore, Wyoming hasn't presented its case in chief at this point.

So, Mr. Draper, you also brought up the question of other years in the 1980s. I do think,

```
given the one document that was produced, late 1981 is
   a year that's still in contention.
                                        The -- if I
2.
   understood your request to also apply to years in the
 3
   1980s, other than 1981, 1987, 1988, and 1989, that,
4
   I'll deny. I think that we should continue to limit
5
   ourselves in the 1980s, other than that 1981 year, the
6
7
   years at the end because there was testimony and it's
   reflected in the minutes of the Yellowstone River
9
   Compact Commission that whatever Wyoming's position
   was, Montana was going to furnish notice to Wyoming of
10
   any years in which they believe that they were short of
11
12
   water.
              So I think that notice is still an issue.
13
14
   And at the moment, all we have as evidence is on those
   years, 1987, 1988, and 1989. So we're basically in the
15
   years that I denied Wyoming summary judgment on
16
   earlier, but also including a 1981 year because of the
17
   additional document that came in late on that
18
19
   particular year.
20
              MR. DRAPER: Thank you very much, Your Honor.
21
              SPECIAL MASTER: Okay. You're welcome,
2.2
   Mr. Draper.
23
              So, yeah, I was just trying to think on
   whether I should call on you first if you wanted to say
24
   anything about the case today.
25
```

```
1
              MR. KASTE:
                          Are you giving me an open forum
   to say what I'd like?
2
 3
              SPECIAL MASTER: Not quite.
              MR. KASTE: That would be a mistake on your
 4
          No, I think it would be best to proceed to the
5
   evidence in light of the fact that you've already ruled
6
7
   on the motion.
              SPECIAL MASTER:
8
                               Okay.
              MR. KASTE: Nothing further needs to be said.
9
10
              SPECIAL MASTER:
                               Okay. Then Mr. Levens can
   come back up to the stand, and Mr. Michael -- I'm
11
   sorry, Mr. Brown. I'm not promoting you to attorney
12
13
   general yet.
14
                          I don't think I want that job.
              MR. BROWN:
15
              SPECIAL MASTER: Mr. Brown can continue his
   direct examination.
16
              And, Mr. Levens, we will not swear you in
17
18
   again this morning because you're still under oath.
19
                    RUSSELL LEVENS (CONT.),
   having been first duly sworn, testified as follows:
20
21
                       DIRECT EXAMINATION
2.2
   BY MR. BROWN:
              First thing I'll do is bring back Exhibits
23
   W203 and W204, which I believe is where we were at.
24
25
   And the court reporter has yet to convince me to get
```

```
the realtime or the daily transcripts, so I'll try to
   remember where I was at as best I can.
2.
              And I think we just introduced the Powder
 3
   River Basin control groundwater area order; right?
4
              I don't remember myself.
5
              I'm going to start there as if we just
         Ο.
6
7
   introduced that, and I don't think we'd started talking
   about that yet.
              So you have that in front of you, it's W204;
9
10
   right?
11
         Α.
              Yes.
12
              And what -- just what's your general
         Ο.
13
   understanding of the purpose of that order?
14
              It's to provide protections for existing
   water users and as a result of, at that time,
15
   pending -- impending coalbed methane development.
16
              Okay. And just generally, was it to provide
17
         Ο.
18
   protection to existing groundwater users and spring
19
            Is that right?
   users?
20
              Wells and springs, yes.
         Α.
21
         Ο.
              Okay. And just generally, how was the order
2.2
    implemented? I'm wondering about the administrative
23
   structure. Who was in charge? How did the state of
   Montana go about implementing the order?
24
              Well, I guess my perspective on it comes from
25
         Α.
```

```
the Technical Advisory Committee. And basically the
    Board of Oil and Gas, Montana Board of Oil and Gas has
 2.
    the authority for impacting coalbed methane
 3
    developments. And this provided for technical input
 4
    from the Technical Advisory Committee on
 5
    characterization and monitoring requirements so that,
 6
 7
    you know, the primary responsibility was on the Board
    of Oil and Gas.
              And this -- the Technical Advisory Committee
 9
10
   provided advice to them.
              Okay. And I just want to look at a couple of
11
         Q.
    the provisions in the order itself. And if you'll look
12
13
    on page 3 of the order. And it's the first paragraph
14
    under the section of the order entitled "Order."
15
              And it says, "The controlled groundwater area
    designation shall apply only to wells designated and
16
    installed for the extraction of coalbed methane (CBM)."
17
18
    So this order didn't apply to any other kind of
    groundwater withdrawals; right?
19
20
         Α.
              That's correct.
21
         Ο.
              Just those that were meant to withdraw CBM?
2.2
         Α.
              That's correct.
23
              And I wanted to look at, on that same page,
         Ο.
    under paragraph 4, it talks about the Technical
24
    Advisory Committee; right?
25
```

A. Yes.

2.2

- Q. And the third paragraph under that Technical Advisory section starts out, it says, "The TAC will periodically review groundwater data gathered for CBM development." And that's what you were talking about as far as the Technical Advisory Committee monitoring what was going on with CBM development; is that right?
 - A. Yes.
- Q. And it says, "This TAC will perform an annual report or -- or prepare -- excuse me -- an annual report each year of their findings regarding the impact of the groundwater resources from CBM activities and any mitigation recommendations that may develop."

And so did the Advisory Committee prepare annual reports?

- A. We prepared reports that we reported our activities. And for the purpose of findings, we adopted the reports that the Montana Bureau of Mines & Geology does. That's more of a detailed assessment of the data.
- Q. And I think you told me that yesterday, that Advisory Committee looked to those Montana Bureau of Mines documents for the primary sorts of data that went along with your work as the Advisory Committee; right?
 - A. Yes.

```
1
         Q.
              Okay.
                     Now, I want you to look back at page 2
   of Exhibit 204, under the "Conclusions of law" heading.
2.
   And the third paragraph under the "Conclusions of law"
3
   heading, I'm looking at the last sentence. And it
4
   says, "The Montana Department of Natural Resources may
5
   petition the Board for hearings in regard to the
6
   production, use, and disposal of water from coalbed
7
   methane development wells that exist -- or could affect
   existing water rights in the area based upon
9
    information gathered concerning the water withdrawals."
10
              And my question is whether or not the Montana
11
   DNRC ever petitioned the Board -- I think this is
12
13
   talking about the Board of Oil and Gas with regard to
14
   what's discussed in that sentence. Do you know?
              I do not know. I don't think so.
15
         Α.
              So you're not aware of --
16
         Ο.
              I'm not aware of it.
17
         Α.
              Okay. I'm going to show you what's marked as
18
         Ο.
   Wyoming Exhibit 224; do you recognize that document?
19
20
         Α.
              Yes.
21
         Ο.
              What is it?
2.2
              It's a annual report that I prepared of the
   activities of the Technical Advisory Committee for 2000
23
   and 2001.
2.4
              And so is this the annual report that we just
25
         Q.
```

```
read about in the order?
         Α.
              Yes.
2
              Okay. And I think you said you prepared it;
 3
         Ο.
   right?
4
5
              Yes.
                    And I guess one point is a couple of
   meetings occurred before I started.
6
7
         Q.
              Sure. You started in 2001; right?
8
         Α.
              Correct.
              And you just put together what had happened
9
10
    in the meetings prior to you getting --
              Right. There were some detailed notes, and I
11
         Α.
   put them in the report.
12
13
         O.
              Does that appear to be complete?
14
         Α.
              Yes.
              MR. BROWN: I'd like to offer Exhibit W224.
15
16
              MR. BRAMBLETT: No objection.
              SPECIAL MASTER: Then Exhibit W224 is
17
   admitted.
18
19
                        (Exhibit W224 admitted.)
20
   BY MR. BROWN:
21
         Ο.
              I'd like to direct your attention under the
2.2
    introduction paragraph of -- or the introduction
23
   section of the last paragraph. It's just one sentence.
   It says, "The purpose of this report is to describe the
24
   activities of the TAC and the impacts of CBM
25
```

```
development on groundwater resources during 2000,
    2001."
2.
              Did I read that right?
 3
         Α.
              Yes.
 4
5
              And looking at the other annual reports that
         Ο.
   all -- I think they all contain that kind of a
6
7
   provision. Is that generally what these reports are
   designed to do?
              That's what they are designed to do.
9
10
         Ο.
              I want to look at the second page of
   Exhibit 224. And, of course, they are not page
11
   numbered. But on the second page of W224, last
12
13
   paragraph, last sentence, it says, "An outline of
14
   coalbed methane technical guidance document was
15
   proposed, and then in parentheses, (see [the]
   following text box) and a draft document was prepared
16
   pursuant to the April 12th, 2001, conference call."
17
              Did I read that right?
18
19
         Α.
              Yes.
20
              And then the outline appears on the following
         O.
21
   page; right?
2.2
         Α.
              Yes.
23
              And then I want to direct your attention to
24
   the Regional Monitoring section. And it says spring
   and surface water flows.
25
```

1 Now, did the Technical Advisory Committee do anything independent to monitor streamflows? 2 3 Α. No. Ο. My understanding is you essentially took what 4 available USGS data was available; is that right? 5 Yes. Α. 6 7 Q. Let's turn to the last page of Exhibit 224. And at the top of that page is Table 1 entitled Summary 8 of Water Produced from CBM Production Wells in 2000 and 9 2001. And can you just describe for us, please, the 10 information contained within Table 1? 11 Α. These are water production numbers that would 12 13 have been obtained from the Board of Oil and Gas 14 database. I'm trying to remember back to that time. 15 Currently, there's an online database that you can query. And that's how I'd get them. I don't recall 16 how I obtained these numbers. But it would have come 17 from the Montana Board of Oil and Gas. And it looks at 18 production from their producing at three different coal 19 zones on the Dietz, Monarch, and Kearney in the CX 20 Field of -- and this would not be a field that was 21 2.2 operated by -- at that time, it would have been 23 Redstone, but they were purchased by Fidelity. 24 Okay. And this is reporting water production Ο. not gas production; right? 25

```
1
         Α.
              Correct.
              'Cause that's what you guys were interested
2
         0.
   in; right?
 3
         Α.
              Right.
4
              The first sentence under Table 1 says, "Water
5
         Ο.
   production from the Dietz, Monarch and Kearney coals
6
7
   averaged 17 gallons per minute, 10.9 gallons per
   minute, and 11.2 gallons per minute per well
   respectively during 2001."
9
10
              Are those gallons per minute production
   levels consistent with what you observed as far as CBM
11
   wells in Montana?
12
13
              I guess I'd have to look at other -- I think,
14
   you know, when you look at longer terms, it's lower
15
    than that. But I guess I can't give you a detailed
   answer to that.
16
              Fair enough. And all I want to do now,
17
         Ο.
   Mr. Levens, is I'm going to go through some of the
18
   annual reports that follow this initial one and just
19
   get you to identify them for me. I've got a question
20
21
   about a few, but more than anything, I'd just like to
2.2
   have you identify the reports for me. So we'll just
```

look at the rest of them that I have anyway.

23

24

25

```
1
         Α.
              Yes.
              And what is it?
2.
         0.
              It's 2002 Annual Report of the Technical
 3
         Α.
   Advisory Committee.
4
5
              And you prepared that one as well?
         Q.
         Α.
              Yes.
6
7
         Q.
              Does it appear complete?
              It does.
8
         Α.
                          I'd like to offer Exhibit W225.
9
              MR. BROWN:
              MR. BRAMBLETT: No objection, Your Honor.
10
              SPECIAL MASTER: Exhibit W225 is admitted.
11
12
                        (Exhibit W225 admitted.)
13
   BY MR. BROWN:
14
              I only have one question about this
15
   particular report. If you'll look at the very first
   page with me, under the Summary of TAC Meetings
16
   section. And then under the March 1st, 2002, meeting,
17
   the second sentence reads: "The subject wells are
18
   intended to be first -- to be the first installation of
19
   the regional-scale monitoring program developed by TAC
20
   and included in the Statewide Draft Oil and Gas
21
2.2
   Environmental Impact Statement."
              Can you describe for me what subject wells
23
   are being discussed in that -- at that meeting?
24
              Well, if you look at the first sentence, it
25
         Α.
```

```
says, "TAC met to discuss the locations of wells to be
    drilled by the Montana Bureau of Mines & Geology for
 2.
   monitoring impacts of coalbed methane development."
 3
                                                          So
    that would be referring to wells as part of the
 4
    regional-scale monitoring program.
 5
              And that was, you know, we recognized early
 6
    on that the most -- the information we were getting was
 7
    from the internal -- from the actual CBM fields, and
    that's not the most useful information. And we needed
 9
    to have dedicated monitoring wells outside of the
10
    coalbed methane fields where coalbed methane companies
11
    couldn't drill off their property.
12
13
              So we developed the regional monitoring
14
    program that the Bureau of Mines has implemented. And
    that was kind of the start.
15
16
         Ο.
              Okay. And I guess the main point I was
    trying to get across is as time went on, the Technical
17
    Advisory Committee recommended additional monitoring
18
19
    wells be installed; right?
20
         Α.
              Yes.
21
         Ο.
              And then as time went on, more and more
2.2
    monitoring wells were installed; right?
23
              Correct.
         Α.
              And those were monitored by the Montana
24
         Ο.
    Bureau of Mines & Geology?
25
```

```
1
         Α.
              Yes.
              I'm going to show you what's been marked as
2
         0.
    Exhibit W227; and do you recognize that document?
3
         Α.
              Yes.
4
              And what is it?
5
         Ο.
              2004 Annual Report Powder River Basin
6
         Α.
    Controlled Groundwater Area Technical Advisory
7
    Committee.
9
         O.
              And you prepared that one as well?
10
         Α.
              Yes.
11
         Q.
              And does it appear to be complete?
              It does.
12
         Α.
                          I would offer Exhibit W227.
13
              MR. BROWN:
14
              MR. BRAMBLETT: No objection.
              SPECIAL MASTER: Exhibit W227 is admitted.
15
                        (Exhibit W227 admitted.)
16
   BY MR. BROWN:
17
              And I had a question with regard to this
18
   particular one. I downloaded these from -- are these
19
20
    posted on the DNRC website, these reports?
21
         Α.
              Yes.
                    I haven't, obviously, been -- I haven't
2.2
   been back there for a while, but they should be.
23
              Well, I'll represent to you that I actually
    downloaded this from the DNRC website. And as a title
2.4
    for this particular report, it says 2003 and 2004.
25
                                                          Do
```

```
1
   you know if this is meant to be a report for both these
            It's not hugely important. I was just curious.
2.
   years?
 3
         Α.
              I'm reading it.
         Q.
              Sure.
 4
              We changed over how we did these. We were
5
         Α.
   doing calendar year, and we changed over to the water
6
7
   year. So I think that was about the time frame. So it
   was probably 2003 water year data.
9
              Okay. Sure. So it might be a report for
10
   both those years?
              Yeah. But as far as the meeting
11
         Α.
   descriptions, it appears the first one was May 2004.
12
13
   So all the activities, although, it -- so as you go
14
   later on in the document, it talks about 2003
15
   development. So that's -- that would have been that --
   kind of the way it was done after that. So it would
16
   have been -- the 2005 report would have presented data
17
   from the 2004 water year. So this is activities of
18
    2004, although the data is from the year 2003.
19
20
              And then you switched from reporting on a
         Ο.
21
   calendar year to a water year?
2.2
              Right. But when you look at 2004, the
   activities were in 2004. The data was from 2003.
23
              On the first page of Exhibit W227, under the
24
         O.
```

Summary of the TAC Meetings, the second paragraph under

25

```
1 there, can you read that paragraph to yourself for me.
```

- 2 | And it's a discussion with regard to Mr. Ray Muggli.
- 3 And I have a couple questions about that. So if you
- 4 | could take a look at that and refresh yourself, please.
- 5 | A. Okay.
- 6 Q. Do you have a recollection of what
- 7 | Mr. Muggli's concerns were at that time?
- 8 A. I believe his -- and as it states in there, I
- 9 believe his main concern was the water quality impacts
- 10 of discharge being coalbed methane water to the Tongue
- 11 | River Reservoir.
- 12 Q. And that was my concern, whether his concerns
- 13 | were water quantity or if they were water quality. And
- 14 | you said they are water quality concerns; right?
- 15 A. Yeah. And I refer in that paragraph and
- 16 | that's what my recollection was. They were primarily
- 17 | water quality concerns.
- 18 | O. And he describes -- or it's described in
- 19 | Exhibit 227 that part of his concern was he had
- 20 | observed or taken photographs of sprinkler systems used
- 21 to distribute CBM produced water and CBM impoundments
- 22 | with signs of seepage.
- 23 Do you know if those CBM impoundments that he
- 24 | had concerns about, were they in Wyoming or Montana?
- 25 A. I believe they were in Wyoming.

- Q. Okay. And what's your understanding of his concerns with regard to those impoundments?
 - A. I'm just going to read to refresh my memory.
 - Q. Sure.

3

4

5

6

7

16

17

18

19

20

21

2.2

23

24

25

- A. Just that CBM produced water is leaking to shallow sediments and surface water drainage. I think that that water would then get into the surface water drainage system.
- 9 Q. So, again, it was a water quality concern 10 that he had?
- 11 A. Yes.
- Q. The water that was -- the CBM water that was impounded in Wyoming would seep out of those impoundments and get into the surface streams?
 - A. That's my understanding, yes.
 - Q. If you'll turn to the second page of Exhibit 227, and the third paragraph from the top.

 That paragraph starts out with the sentence, "John Wheaton presented maps"; do you see that paragraph?
 - A. Yes.
 - Q. And I'm looking at the last two sentences of that paragraph. And it says, "In addition, MBMG plans to install monitoring wells along the Wyoming border during 2004." MBMG is the Montana Bureau of Mines &

```
Geology; right?
         Α.
              Yes.
2
              What's your understanding of the reasons for
 3
         Ο.
   placing those monitoring wells along the Wyoming
4
   border?
5
         Α.
              To be able to distinguish impacts from CBM
6
   development in Wyoming from impacts from CBM
7
   development in Montana.
              And were those monitoring wells ever
9
    installed?
10
11
         Α.
              Yes.
12
              I believe they were installed in seven
         0.
13
   different locations; is that right?
14
         Α.
              I don't recall the details.
15
         0.
              Okay.
16
         Α.
              That sounds right.
              The next sentence says, "The TAC also
17
         0.
18
    discussed ongoing efforts by the Interagency Hydrology
19
    Task Group to develop an integrated regional monitoring
    plan for Montana and Wyoming portions of the Tongue
20
   River Basin."
21
2.2
              What is the Interagency Hydrology Task Group?
              It was a combination of federal BLM
23
         Α.
    primarily, I believe, on the federal side, and state
24
    agencies that had some sort of primacy on issues
25
```

- related to coalbed methane. I believe it came out of a recommendation of the EIS. But that's about the limit 2. of what I know about it. I think it was set up as part 3 of the 2003 EIS in Montana. 4
- And that's what I was going to ask. 5 that you referred to was the EIS that was done for the 6 State of Montana; right? 7
- Yeah, the programmatic EIS. 8
- And just to clarify for you, there's another EIS that we've talked about in this case. So I wanted to clarify which one that was. 11
- 12 Α. Okay.

9

10

- 13 Can you tell me whether or not an integrated 14 regional monitoring plan for Montana and Wyoming portions of the Powder River Basin was ever developed? 15
- 16 Α. I don't know. I'm pretty sure it was not implemented. 17
- Okay. The last thing I want to look at on 18 Ο. Exhibit W227, there are a couple of figures at the end 19 20 of this particular annual report. And I apologize for 21 the poor quality of the copy. But can you please just 2.2 tell us what is depicted in Figures 1 and Figures 2 at 23 the end of this report?
- 24 Α. Figure 1, the title is Map of 10-foot water level drawdown contours for Dietz and Monarch coal 25

```
beds.
           So that would be the approximate limit of the
    extent of the 10 feet of drawdown in groundwater levels
 2.
    around the CX Field.
 3
              Okay. And how about the next one?
 4
              Figure 2 is titled Locations of wells
 5
    monitored by MBMG in the Powder River Basin controlled
 6
 7
    groundwater area.
              So in that one, the particular Figure 2
 8
    indicates the locations of Montana Bureau of Mines &
 9
    Geology's monitoring wells?
10
              Yeah, those are the wells they monitored.
11
         Α.
              Okay. I'll now show you what's been marked
12
         Ο.
13
    W229; and do you recognize that document?
1.4
         Α.
              Yes.
15
         O.
              What is it?
              It is the 2007 Annual Report Powder River
16
         Α.
    Basin Controlled Groundwater Area Technical Advisory
17
    Committee.
18
19
              And I just want to alert you, I've been going
    in chronological order, but I don't have 2005 and 2006.
20
21
    So I skipped a couple years here, just so you know
2.2
    where we're at in the chronology of things.
23
              Did you prepare this report as well?
```

And does it appear to be complete?

2.4

25

Α.

Q.

Yes.

```
1
        Α.
              Yes.
              MR. BROWN: I would like to offer Exhibit
2
   W229.
3
4
              SPECIAL MASTER: Any objection?
5
              MR. BRAMBLETT: No objection.
              SPECIAL MASTER: Then Exhibit W229 is
6
   admitted.
7
                        (Exhibit W229 admitted.)
8
   BY MR. BROWN:
9
10
         Q.
              The only question I have with regard to
   Exhibit W229, turn to the very last page. And can you
11
   describe for me -- well, for the Special Master, what
12
13
   that reference is?
14
         Α.
              The reference is 2006 Annual coalbed methane
15
   regional groundwater monitoring report: Northern
   portion of the Powder River Basin. That would be the
16
   report prepared by Montana Bureau of Mines & Geology on
17
   data collected during the 2006 water year.
18
19
              Right. And I just wanted to point out that
         Ο.
   at least by this time, the Technical Advisory Committee
20
21
   is now referencing the work of the Montana Bureau of
   Mines & Geology, and that's what that is; right?
2.2
23
         Α.
              Yes.
              Okay. That's the only question that I have.
24
         Ο.
              I'm now going to show you what's been marked
25
```

```
as Exhibit W230. Do you recognize that document?
         Α.
              Yes.
2
              What is it?
 3
         Ο.
              It is the 2008 Annual Report Powder River
4
   Basin Groundwater Controlled Water Area Technical
5
   Advisory Committee.
6
7
         Q.
              Okay. And you prepared that one as well?
8
         Α.
              Yes.
9
         Ο.
              Does it appear to be complete?
10
         Α.
              It does.
              MR. BROWN: I would like to offer Exhibit
11
   W230.
12
              MR. BRAMBLETT: No objection.
13
14
              SPECIAL MASTER: Then Exhibit W230 is
   admitted into evidence.
15
                        (Exhibit W230 admitted.)
16
   BY MR. BROWN:
17
              On the second page of Exhibit W230, in the
18
   second paragraph, and this relates back to a question
19
   I'd asked you yesterday with regard to order 99-99,
20
21
   when I wasn't quite certain what it was. But you'll
2.2
   see in the middle of that paragraph is a discussion --
   and I'll read a portion of it. It says, "...Russell
23
24
   Levens finalized the proposed changes to MBOGC Board
   Order 99-99 and the Groundwater Monitoring and
25
```

```
Reporting Guidelines and, with TAC approval,
    transmitted the final documents to Tom Richmond."
 2.
              Can you describe for me -- or describe for
 3
   us, please, what's that discussing?
 4
 5
              We proposed to update the Montana Board of
   Oil and Gas' Board Order 99-99 was -- that was passed
 6
   by the Board at the same time that the DNRC did our
 7
    controlled groundwater area order. And it has specific
   provisions. There were a number of parts of that order
 9
10
    that had been superseded by law, by future -- by
    statutes that were passed. It was unclear in that
11
    order how the TAC worked with the Board.
12
13
              So we proposed -- you know, we had done -- we
14
   had discussed with Tom Richmond about this prior to
15
    embarking on this. And so we updated it with the
    current law and then made it clear how the TAC worked
16
    with the Board. And along with that, we also developed
17
    a monitoring and reporting guidelines. And I think
18
   part of that order described how we would submit those
19
20
    to the Board. And they were approved by the Board.
21
         Ο.
              And so the monitoring and reporting
2.2
    quidelines, were those quidelines for the Advisory
23
    Committee or were they for industry?
              It was a combination. It explained what was
24
         Α.
    expected from industry but described -- and I haven't
25
```

```
looked at it in detail for a while. But it also
described essentially how the information would be
compiled, you know, the idea that companies could
prepare their own reports or the Bureau of Mines would
do a combined report.
```

Q. So what was settled on was -- the Bureau of Mines report, was that one settled on as far as the official reporting?

6

7

11

12

13

14

15

16

17

18

19

- 9 A. The companies were still given an option of 10 doing their own.
 - Q. Was there any change at that time made with regard to the controlled groundwater area's focus on groundwater impacts? And my question is: Was there any focus then made to surface water impacts?
 - A. I don't recall. I don't recall that there was any additional -- anything in addition added on the surface water.
 - Q. Okay. Do you recall at any time during your involvement with the TAC whether there was a focus on surface water impacts?
- A. There were -- I think, you know, there were discussions at times. But the primary emphasis has been wells and springs.
- Q. Okay. Would it be fair to say that Fidelity
 was the primary CBM producer in Montana? Fidelity

```
production company I think is the name?
         Α.
              They're the largest by far.
2
              Okay. And I think as these reports go on in
 3
         Ο.
    years, the number of the companies increased; is that
4
    right?
5
         Α.
              Correct.
6
              And then, of course, production, at least to
7
         Q.
    some point in time, increased; right?
8
              To some point in time.
9
         Α.
10
         Q.
              All right. And then later on decreased?
11
         Α.
              Yes.
12
              I'm handing you what's marked Exhibit W231;
         Ο.
13
    and do you recognize that document?
14
         Α.
              Yes.
15
         O.
              What is it?
              It's the 2009 Annual Report Powder River
16
         Α.
    Basin Controlled Groundwater Area Technical Advisory
17
    Committee.
18
19
         Ο.
              And did you prepare that report as well?
20
         Α.
              Yes.
21
         Ο.
              Does it appear to be complete?
2.2
         Α.
              Yes.
23
              I have no questions about that one.
         Q.
              SPECIAL MASTER: But you want to admit it?
2.4
                           I'd like to offer Exhibit W231.
              MR. BROWN:
25
```

```
SPECIAL MASTER: Any objection?
 1
 2
              MR. BRAMBLETT: I think we've got a relevance
    objection if he doesn't have any questions about that
 3
 4
    exhibit.
              SPECIAL MASTER: I'm really quite open on
 5
    admitting documents that could be relevant. And I
 6
 7
    actually prefer people didn't spend a lot of time on
    the documents if we can avoid it. So I will admit
    Exhibit W231.
 9
                        (Exhibit W231 admitted.)
10
11
              MR. BROWN:
                          Thank you.
   BY MR. BROWN:
12
13
              I'm going to hand you now what's marked as
14
    Exhibit W232; and do you recognize that document?
15
         Α.
              Yes.
              What is it?
16
         Ο.
              2010 Annual Report Powder River Basin
17
         Α.
    Controlled Groundwater Area Technical Advisory
18
    Committee.
19
20
              And did you prepare that report as well?
         O.
21
         Α.
              Yes.
2.2
         Q.
              Does it appear to be complete?
23
              I was just checking. Yes.
         Α.
              MR. BROWN: I would like to offer Exhibit
24
    W232.
25
```

```
1
              SPECIAL MASTER: Any objection other than --
   well, feel free to repeat your relevance objection.
2
              MR. BRAMBLETT: State the same objection.
 3
              SPECIAL MASTER: Okay. I'll overrule the
 4
   objection, and I'll admit Exhibit W232.
5
                        (Exhibit W232 admitted.)
6
7
              MR. BROWN: I have no questions about that
         I may have, though.
8
   one.
   BY MR. BROWN:
9
10
         Q.
              I'm going to show you what's been marked as
   W233; and do you recognize that document?
11
12
         Α.
              Yes.
              And what is it?
13
         O.
              It is the 2011 Annual Report Powder River
14
         Α.
   Basin Controlled Groundwater Area Technical Advisory
15
   Committee.
16
              And did you prepare that report as well?
17
         Ο.
18
         Α.
              Yes.
19
         Q.
              Does it appear to be complete?
20
         Α.
              Yes.
              MR. BROWN: I would like to offer Exhibit
21
2.2
   W233.
              SPECIAL MASTER: Same objection?
23
24
              MR. BRAMBLETT: Yeah, if there are no
   questions on it.
25
```

```
1
              SPECIAL MASTER:
                               Okay. I'm going to admit
    Exhibit W233.
 2
                        (Exhibit W233 admitted.)
 3
   BY MR. BROWN:
 4
              I do have a couple questions. Mr. Levens, if
 5
         0.
    you would look at that exhibit, W233, on the first page
 6
 7
    under the groundwater Monitoring section, about halfway
    through that first paragraph. And I'll read a portion
    of it. It says, "MBMG reports that the 20-foot
 9
    drawdown contour extends a maximum distance of 1 to
10
    1.5 miles from the edge of the CX Field. A shorter
11
    distance than predicted in the final statewide EIS."
12
13
              Can you describe for us, please, what that is
14
    talking about?
15
              It's just -- the MBMG reported that drawdown
    of up to 20 feet occurred, extended a distance of 1 to
16
    1 and a half miles. So there was modeling done, but
17
    the EIS predicted that it would extend farther at --
18
    for the same kind of development.
19
              So just generally, the earlier predictions
20
         Ο.
21
    done by the EIS, the drawdowns extended further than
2.2
    what was observed; is that right?
23
         Α.
              Yes.
              If you'll look at the next paragraph, which
24
         Ο.
    begins at the bottom of page 1, says "Kevin Chandler
25
```

```
presented a summary of the results of a groundwater
   flow model constructed for the Ashenberg Creek-West
2.
   Decker Mine area that were included in the 2010 annual
 3
4
   report."
              Can you describe that flow model that's
5
   discussed there?
6
7
         Α.
              Not in detail. It's -- it was really, I
   think, an attempt to match -- to model the groundwater
8
   system matching data from observation wells. And that
9
   particular location, that was historic. There was an
10
   Ashenberg Creek Mine, I believe it's in Wyoming,
11
   operated for a short time. There was some good data of
12
13
   drawdown resulting from mining and recovery and
14
   drawdown from CBM at a later time. And that model was
15
   an attempt to try and calibrate to those data.
              Okay. And who is Kevin Chandler?
16
         Ο.
              He works for the Montana Bureau of Mines &
17
         Α.
18
   Geology.
19
              Do you know what the purpose of that model
         Ο.
   was? What were they trying to achieve with it?
20
21
         Α.
              I think it was just to see if they could
2.2
   calibrate the model, maybe looking towards, you know, a
   larger modeling effort. But I don't know the specifics
23
             That's my recollection. It was taking a
24
   of that.
   pretty comprehensive set of data and try to fit a model
25
```

```
to it, see if they could.
              Okay. Can you just tell us generally what
2
 3
   the current status of CBM development in Montana is as
   of today?
4
         Α.
              No.
5
         Ο.
              Is it going as strong as it was in the
6
   mid-2000s?
7
                   The last I've looked, it has been
8
9
   declining. The amount of production of gas and water
10
   has declined in recent years.
11
         Q.
              Do you know if Montana is still getting more
   applicants for new CBM wells?
12
13
              The only way I would know that is if we have
14
   a monitoring plan to review. And we haven't had one
15
   for a number of years.
16
         Ο.
              Okay. And so just generally to summarize,
   then, the CBM production in Montana has been steadily
17
18
   declining; is that fair?
19
         Α.
              I think, yeah, it has been declining for the
    last few years.
20
21
         Ο.
              Okay. That's all I have. Thank you.
2.2
              MR. BRAMBLETT: Can I have a minute?
23
              SPECIAL MASTER: Why don't we take the
24
   morning break, then, right now for ten minutes. And we
```

can come back at that point and have the

```
cross-examination.
                        (Recess taken 9:29 to 9:39
2
 3
                        a.m., November 19, 2013)
              SPECIAL MASTER: Okay. Any
 4
   cross-examination?
5
              MR. BRAMBLETT: No, Your Honor. We have no
6
7
   questions for Mr. Levens.
              SPECIAL MASTER: Okay. Neither do I. So you
8
9
   can step down from the witness chair. Thank you for
10
   coming in.
              MR. BROWN: Well, that was easy. I know my
11
   direct wasn't comprehensive.
12
13
              Wyoming would call John Wheaton.
14
              (John Wheaton sworn.)
15
              THE CLERK: Have a seat and state your name
16
   and spell it for the court reporter.
17
              THE WITNESS: My name is John Wheaton,
18
   W-h-e-a-t-o-n.
19
              SPECIAL MASTER: Good morning, Mr. Wheaton.
20
              THE WITNESS: Good morning.
21
                         JOHN WHEATON,
2.2
   having been first duly sworn, testified as follows:
23
                       DIRECT EXAMINATION
   BY MR. BROWN:
2.4
              Good morning, Mr. Wheaton.
25
         Q.
```

1 Α. Good morning, Mr. Brown.

5

6

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9

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19

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21

2.2

23

24

25

Good to see you again. And just fair 2 Ο. warning, the guy who produces the thicker report gets 3 more questions. Just so you know. 4

Could you please tell us what your current professional position is?

I'm a senior research hydrogeologist with the 7 Α. Montana Bureau of Mines & Geology. The Bureau of Mines and Geology, just let me give you that background, it's part of the university system. We're the State 11 Geological Survey for Montana. Most states have a geological survey. 12

And I manage the Groundwater Investigation Program, which is a four and a half year old program and -- on the campus at Butte.

- Okay. Just taking questions right out of my Ο. mouth. So that the Special Master has a better idea of what your background is, can you please just generally describe your education after high school?
- I have a bachelor's in geology from the Α. University of Montana, master's degree also from the University of Montana. And that was in environmental studies and hydrogeology. That was just education you asked about?
 - Yes, sir. And I think you told me at your Q.

deposition that after you obtained your bachelor's degree, you went to work for a while?

A. I did.

3

4

10

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14

15

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19

20

- Q. And what did you do?
- A. I worked in the oil field as a mud logger for one year. Then after that, I went back to a different kind of logger, timber logging for a few years. It didn't take long to decide to go back to school for the master's degree then.

After the master's degree, I went to work for Peabody Coal as a hydrogeologist and then from there came to the Bureau of Mines and Geology. I think I started at the Bureau of Mines in 1988.

- Q. And just generally describe what your job responsibilities were for Peabody Coal?
- A. I was a mine site hydrologist. And so we did the annual reports, satisfied the regulatory monitoring requirements, and helped compile the reports and helped write a mine expansion permit application.
 - Q. And where was that mine located?
- A. It was in Colstrip, which is part of the Powder River Basin.
- Q. Okay. Did you do a thesis for your master's degree?
- 25 A. I did.

1 Q. What was the topic of that? Coal mining in the Colstrip area. 2. Α. And I think you said you went to work for the 3 Ο. Montana Bureau of Mines in 1988; is that right? 4 That's correct. 5 Α. Is that the same year you got your master's 6 Ο. 7 degree? No, I got the master's in '86 or '87. 8 Α. What did do you in between? 9 Ο. That was working at Peabody when I was 10 Α. finishing. 11 12 Describe your job responsibilities when you Ο. first went to work for the Bureau of Mines. 13 14 The Bureau of Mines had a coal program, coal 15 hydrogeology and a coal geology program since -- or the coal hydrogeology program started in about 1968. 16 with my experience, I came in to assist Wayne Van Voast 17 who was kind of the father of coal hydrogeology. 18 worked for him as his research assistant. 19 20 And how long were you the research assistant? Ο. 21 Α. About three years. And then he took a 2.2 promotion, and I became the lead on that program. 23 And that was 1991? Ο. 24 That's pretty close.

Α.

Q.

What --

- 1 A. I didn't check the dates.
- Q. What was the purpose of that monitoring program?
- A. We did work around the coal mines to provide third-party objective interpretations and understandings of the impacts of large scale development, like coal mines, to the groundwater systems.
- 9 Q. And what geographic area are we talking 10 about?
- A. We worked in Colstrip, which is the northeast part of -- I'm sorry -- northwest, and Decker, which is near the Wyoming and Montana state line.
 - Q. Right around Tongue River Reservoir; right?
- 15 A. Right.

14

24

- Q. What kind of data did the program gather?
- A. We collected water level data, long-term
 monitoring wells on water levels, and physical
 characteristics of the aquifers. And we also did a lot
 on chemistry. Resaturation of the mine spoils and the
 reestablishment of that material as an aquifer is a
 major concern, major issue to understand. So we did a
 lot of chemistry work.
 - Q. Would it be fair to say that at any time you mention water levels today, it's about groundwater?

- 1 A. It would be, yes. That would be fair.
- Q. And I think you told me that you never did anything with regard to monitoring surface water, at least with regard to this monitor program; is that right?
- 6 A. Which monitoring program?
- 7 Q. The coal.
- A. Well, at Peabody, it's a one-person show.

 You do surface and groundwater with the coal. With the

 Bureau of Mines, we did very little. We did

 cocasional, but it was very little.
- Q. And I guess, describe for us generally what the concerns are or what happens with regard to groundwater drawdown in coal mining.
- A. In coal mining, the overburden material is physically removed -- I'm sorry. I'm used to talking with my hands.
 - Q. The Special Master can see your hands.

SPECIAL MASTER: You can go ahead and use
your hands, but you have to recognize that anything you
do with your hands is not going to end up on the

22 transcript. So you have to be able to describe it too.

THE WITNESS: As well as the testimony.

24 Okay. Thank you.

18

25

The target is the coal seam at depth. And so

```
the overburden material is blasted, removed, and the
   coal underneath that is then physically removed.
2.
                                                       The
   spoils material, that clay and silt and sand
 3
   overburden, gets pushed back into the pit. And it's a
4
                        The overburden from one pit goes
   revolving process.
5
    into the previous pit. And they keep working uphill.
6
7
              The coal in that part of Montana is an
             And so it's feeding the recharge to the
8
   aquifer.
9
   spoils.
10
              And now I've lost track of the question and
   where we were going with that. But that's the process
11
   of mining. And our interest is where there had been a
12
13
   coal aquifer, there's now a silt, clay, sand aquifer.
14
   There's a chemical change, and there's a salt flushing
   that has to occur.
15
   BY MR. BROWN:
16
              I guess another element to my question was,
17
18
   what impact does that coal mining have on groundwater
   levels?
19
20
         Α.
              The water levels around the coal mine is
21
   drawdown to the bottom of the coal. And then a cone of
2.2
   depression is shaped somewhat like a funnel, if we take
   one well. And we have this funnel shape. But it gets
23
   flatter as you get farther away from the wells, very
24
   steep near the well and becomes flatter with distance
25
```

```
1
   away. If, instead of a single well and radio flow to
   the well, we have a linear disturbance, like a mine
2
   pit, then that with drawdown becomes more of a wall
 3
   shape away from there. Steep at the pit; less at a
4
   distance.
5
              And those can extend for several miles too.
6
   In the Decker area, the drawdown extended between the
7
   Ashenberg Creek Mine, which was actually in Wyoming, to
   the Decker mines. There's a continuous extension of
9
10
   those.
            The cones of depression extend for 10 or
   15 miles.
11
              And you said that the water drawdown would go
12
13
   to the bottom of coal. Would that be to the bottom of
14
   wherever the mine had mined to?
              The mine would take it to the bottom of the
15
        Α.
16
   coal.
              Okay. And my understanding is that that
17
         Ο.
   existing coal mine monitoring program evolved into a
18
19
   coalbed methane monitoring program when it started up;
    is that right?
20
21
         Α.
              That's right.
2.2
         Ο.
              Explain to us how that evolved.
              We had a network of wells that we were
23
         Α.
   monitoring. We were doing regular runs. We also had a
24
   database, that's publicly available, in order to store
25
```

```
the data.
               So everyone has access to the data.
                                                     And we
   had built the third-party reputation and the
2
   respectability that goes with the university research.
 3
   So it was fairly easy for us to step into that new
4
5
   role.
              And were you interested in -- with regard to
         Ο.
6
   the coalbed methane product, were you also interested
7
   in the groundwater level drawdown?
9
         Α.
              That's right.
10
         Ο.
              So you had the same types of interest with
   regard to the coal mine monitoring program?
11
12
         Α.
              Correct.
13
              And so you collected the same kind of data?
         Ο.
14
              Well, much less emphasis on chemistry, but it
         Α.
15
   was drawdown data.
16
         Ο.
              Did you collect more data as a result of the
   CBM production?
17
              We did expand our monitoring program with
18
   time. Instead of just focusing around the mines, over
19
   a period of years, then, we grew over a larger area.
20
21
         Ο.
              With regard to the CBM monitoring, let's
2.2
   start at the beginning. When, to your recollection,
   did you begin monitoring for CBM production drawdown?
23
              There's not a distinct line. Because we
24
         Α.
```

still monitor for the mine drawdown now. And we

```
monitor for CBM drawdown now. So it's an overlap.
              When we first started seeing drawdown around
2
    1990 or 1991 would have been when we started talking
3
    about it and looking at it more specifically.
4
              So the existing monitoring wells you had for
5
         Ο.
    the coal mine monitoring program would pick up the
6
    effects of the CBM production that was going on?
7
              That's correct.
8
         Α.
              And I think you told me that you were in
9
    charge of that monitoring program from 1991 to 2009; is
10
    that right?
11
              That's right.
12
         Α.
              And then you took over, I think you called
13
14
    it, the Groundwater Investigation Program?
15
         Α.
              That's right.
              Okay. And I think you said that your
16
         Ο.
    modeling efforts -- not modeling efforts -- monitoring
17
    efforts with regard to the CBM production, you didn't
18
    have anything to do with water rights; is that right?
19
20
         Α.
              That's right.
21
         Ο.
              You were just collecting data?
2.2
         Α.
              We were a nonregulatory agency.
23
              I think you said that to me like ten times in
         Ο.
24
    your deposition.
```

25

Α.

It's a well-practiced phrase. We use it

 $1 \mid frequently.$

13

14

15

16

17

18

19

20

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2.2

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24

25

- Q. With regard to your new job, Groundwater

 Investigation Program, describe that generally. What's

 involved with that?
- 5 Α. Specific questions come up. For example, I'll just use aquifer storage and recovery as one 6 Someone wants to know, can we enhance aquifer 7 example. storage and develop, manage our water resources better? So they can come to us, put that on a list, and when it 9 10 gets to the top of the list, a team of people would go look at their site and look at the possibilities of an 11 aguifer storage project there. 12

It's applied research. So that question would be answered in such a way that could be applied to other areas.

- Q. And does your program cover the entire state of Montana?
- A. Potentially. We have about 50 projects on our list at the moment that go from the Bakken oil field to the Bitterroot Valley.
- Q. And I think you described to me a current project that you had under your program wherein there's some attempt to identify the base flows in the Powder River Basin; is that right?
- A. There is.

```
1
         Q.
              And is that the flows coming from the coal
    seams into the perennial streams?
2
              That's right.
 3
         Α.
         Q.
              And that includes the Tongue River?
 4
5
         Α.
              Yes.
              And I think it includes Hanging Woman Creek
6
         Ο.
    and Otter Creek; right?
7
8
         Α.
              Right.
              And I think you told me that Elizabeth
9
   Meredith is overseeing that project?
10
              She is.
11
         Α.
              And she took over the monitoring program
12
         Ο.
13
    after you left?
14
         Α.
              That's right.
15
         O.
              With regard to that project she's doing, it's
    an isotope study; right?
16
              It is.
17
         Α.
              Describe how that works.
18
         Q.
19
              She's an isotope chemist. And to actually
         Α.
20
    understand how those processes work, it would take
21
    Liddy to explain it, the chemistry. But she develops a
2.2
    signature for different waters and then uses samples
    and mixes and models to look for different percentages.
23
24
         O.
              Okay.
                     Is there a need to try to identify the
    base flows in that area?
25
```

```
A. To better understand how the system flows, we know all of the Tongue River member aquifers discharge at some point somewhere between the state line, roughly Moorhead and Miles City, because of the Lebo Shale.
```

- Q. And can you describe that? If you'll look up at the big screen, we have exhibit, I believe it's W203 up there. Can you describe what you just said in the context of that diagram?
- 9 A. I can. You gave me a pointer. So with the 10 Court's permission, I'll point.
- 11 | SPECIAL MASTER: That will be fine.
- 12 THE WITNESS: Let me make sure I find it 13 without pointing it towards anyone.

The Lebo Shale outcrops, let's see, about
along Rosebud Creek down to -- that would be Ashland.

Actually, I'm not sure of the geology there. This may
be the Tongue River member. No, I think that's too far
up.

So it would be just down a little bit below the Yellow to Gray contact. And the Tongue River, it comes down fairly low, south of Broadus towards

Moorhead. So it's midway on the basin here, and it follows the contours.

24 BY MR. BROWN:

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20

21

2.2

23

25

Q. And describe to me again what you're

```
discussing with regard to the discharge of the Tongue
River members.
```

- A. The groundwater flow system really can't go down because of the continuous shale. So any sand or coal water that hasn't already discharged to date would discharge above the Lebo contact.
- Q. And I think you had told me that sometime in the 1970s, the USGS had tried to measure the base flow in the Tongue River; is that right?
 - A. The Paul Woods project.
- Q. Describe how that went or what they tried to do.
 - A. Yeah, I did not review that paper. And the Tongue River Dam was receiving maintenance, the flow was very low, and so he measured gains along the river.
- Q. And did he run into any problems?
- 17 | A. Did he?
- 18 | O. Yes.

3

4

5

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13

14

- 19 A. I don't know if he did or not.
- Q. Okay. I think you told me that he had made some -- or there were some discussions with regard to the base flow coming into the alluvium; do you recall that?
- A. In order to measure changes in the river, he would have to allow for the alluvial flow.

1 Q. Okay. And you're familiar with the Powder River Basin controlled groundwater area; right? 2. Somewhat. 3 Α. You were asked to be on the Technical Ο. 4 Advisory Committee sometime after it was formed; right? 5 Right. 6 Α. I think we figured out in your deposition 7 Q. that you weren't there right at the beginning of it but 8 sometime thereafter? 9 And then left in 2009. 10 Α. 11 Q. Right. 12 I think 2004 to 2009, I think, is when I Α. 13 officially began. But I attended other meetings. Right. Prior to being officially an Advisory 14 Ο. 15 Committee member you had gone and participated, at least; right? 16 Right. 17 Α. What was your role with the Advisory 18 Ο. Committee? 19 20 The technical -- provide information on the Α. 21 monitoring program drawdown and recovery and review the 2.2 hydrologic reports. Okay. And I think Mr. Levens told us that at 23

took over the yearly reporting with regard to the raw

some point in time, it was the Bureau of Mines that

24

```
data; is that right?
              The hydrologic reports. So there's actually
 2
         Α.
    two reports: The short report and -- I shouldn't call
 3
    it short. But the description of the Committee's
 4
    activities that Russell prepared. There's the
 5
    hydrologic description that we prepared.
 6
 7
         Q.
              Okay. You were here for Mr. Levens'
    testimony; right?
 8
              Yes, I was.
 9
         Α.
10
         Ο.
              And the first reports you just described are
    the ones I discussed with him?
11
12
         Α.
              Yes.
13
         Q.
              And then the second ones were the ones
14
    prepared by the Bureau of Mines?
15
         Α.
              That's correct.
              I'm going to show you what's been marked
16
         0.
    W298; and do you recognize that document?
17
              I do.
18
         Α.
19
              And what is it?
         Ο.
20
              It's the Bureau of Mines & Geology open filed
         Α.
    report 458 entitled Potential Groundwater Drawdown and
21
2.2
    Recovery from Coalbed Methane Development in the Powder
    River Basin, Montana.
23
2.4
              And that was written by you and Mr. John
         O.
    Metish?
25
```

```
1
         Α.
              That's right.
              Is that something you produced in your
2.
         Ο.
    ordinary course of work with the Bureau of Mines.
3
         Α.
              That would be a regular report for us, yes.
4
              Does it appear to be complete?
5
         Q.
              As far as I can tell.
         Α.
6
              Okay. And was this report, and reports like
7
         Q.
    it, is it reviewed by others prior to being published?
8
              It is. In order for it to be an open file or
9
    a -- open files are our informal reports. So they
10
    receive three internal reviews other than the authors,
11
    I should say.
12
13
         Ο.
              Okay.
14
              MR. BROWN: I'd like to offer Exhibit W298.
15
              MR. DRAPER: No objection, Your Honor.
16
              SPECIAL MASTER: Okay. Thank you. Exhibit
    W298 is admitted into evidence.
17
                        (Exhibit W298 admitted.)
18
   BY MR. BROWN:
19
20
              Tell us, generally, what's the purpose of
         Ο.
21
    this report?
              This describes the results of an assessment
2.2
23
    that Dr. Metish and I did on the potential, what we
    felt was the potential impact from coalbed methane
24
    development within the Montana portion of the basin.
25
```

- Q. And is it fair to say that it was based on the best information that you had available at the time at least?
 - A. Yes.

4

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- Q. And what information did you either use or collect to prepare this report?
- A. We took water level data, aquifer physical parameter data from as many sources as we could, and evaluated mining impacts. And then Dr. Metish did a model with those.
- Q. Was that data information you used a lot of the information you had developed from your coal mine monitoring program?
- A. Yes. But there was additional information besides that. A lot of mining areas has been proposed throughout the Powder River Basin. And so we used data from mine permits and previous studies.
- Turn to the bottom of page 41. 18 Ο. I quess to page 41, and we'll look at the bottom. And I asked 19 about this particular paragraph in your deposition. 20 21 And I'll just read it at the bottom of page 41 there. 2.2 It says, "However, based on conditions near Decker, vertical leakage from units near ground surface is 23 thought not to be a major factor. There drawdowns in 24 coalbeds pass uninterrupted beneath perennial streams 25

```
(Squirrel Creek and Tongue River) and the associated
    alluvial valley floors. Water table levels in the
2.
    alluvium and a shallow sandstone unit have not
 3
    responded to coal mine induced drawdown."
4
              Did I read that right?
5
         Α.
              Right.
6
7
         Q.
              Can you just describe for us, what do you
   mean by that?
              We have a set of monitoring wells -- actually
9
         Α.
    a series, to the west of the West Decker mines.
                                                      And we
10
    see drawdown in the coal seams extend quite some
11
    distance out from the mine. But the overburden wells
12
13
    did not respond and Squirrel Creek alluvium did not
14
    show response during that time frame. So our
15
    interpretation is a lack of vertical hydrologic
    communication.
16
              So at least for that location, that was the
17
    observation that you had made with regard to the coal
18
19
    mine drawdowns; right?
20
              That's right.
         Α.
21
         Ο.
              Now, to be fair, in other locations, you've
    seen more vertical connection?
2.2
23
              We have. Some areas have seen some.
         Α.
2.4
              So it just depends on where you're at?
         Ο.
              Very site specific.
25
         Α.
```

- Q. And I think you'd mentioned that Dr. Metish had constructed a groundwater model with regard to this report; right?
 - A. He did.

4

5

6

7

9

- Q. And I don't really want to talk about that much. But just as a point of reference, is the kind of that groundwater model depicted to page 23, at least its geographic scope?
 - A. Yes, Figure 10.
- Q. Now, I wasn't sure by looking at that, can
 you see that the -- what appears to be the cells in the
 model, were they limited to Montana, or did they extend
 south into Wyoming?
- 14 A. The cells continue into Wyoming.
- Q. I'm going to show you what's been marked as 16 W228; and do you recognize that document?
- 17 A. I do.
 - O. And what is that?
- A. This is Bureau of Mines & Geology open file report 508 entitled Groundwater Monitoring Program and Perspective Coalbed Methane Areas of Southeastern
- 22 | Montana, Year 1.
- Q. And that was drafted by you and Ms. Donato?
- 24 A. That's correct.
- Q. And this is also a report that you prepared

```
during your ordinary work with the Bureau of Mines?
         Α.
              Yes, I did.
2
              This one's also reviewed prior to
 3
         0.
   publication?
4
5
         Α.
              Yes, it was.
              MR. BROWN: I would like to offer Exhibit
6
   W228.
7
              MR. DRAPER:
                          No objection.
8
              SPECIAL MASTER: Okay. Exhibit W228 is
9
   admitted into evidence.
10
                        (Exhibit W228 admitted.)
11
   BY MR. BROWN:
12
13
              And what was the purpose of this report?
14
              This was to review the monitoring program and
   what we'd learned so far about drawdown around the
15
16
   coalbed methane. And one of the questions also was
   whether we could distinguish coal mining and coalbed
17
18
   methane projects. I believe that was pointed out in
19
   here.
20
              And you just mentioned the monitoring
         Ο.
21
   program.
             Do you make any distinction between the coal
2.2
   mine monitoring program and CBM monitoring program?
              In part of it there's a funding source
23
2.4
   distinction. So we do do some separation. But the
   data are shared where they're applicable.
25
```

- Q. Okay. And so this report incorporates data that had been collected during the history of the coal mine monitoring program?
 - A. That's right.

4

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2.2

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25

- Q. And this is the first annual report that specifically deals with the coalbed methane monitoring?
 - A. That's correct.
- Q. And so this would be the first in the progeny, I guess, or the reports that came after, yearly reports with regard to CBM impacts in Montana?
 - A. Correct.
- Q. And looking all the way into the report at page 1, and that's just an abstract. And down at the bottom, it says, "Two types of groundwater flow systems are present in the Powder River Basin in Montana: The regional systems flowing from Wyoming north into Montana. And the local systems that are recharged along areas of outcropped in clinker-capped ridges, and flow toward topographically lower areas."

And I just wanted to use that provision to just have you generally explain to me the regional flow system and the local system.

A. The shallow or local flow systems, sometimes refer to those as topographically controlled. Clinker we may need to explain, when you drive through eastern

```
Montana, it's the red shale hills. The coal burns
   underneath the hill. The overburden material gets
2
   baked and collapses into the void formed by the burning
3
          That forms a very good recharge area. And so
4
   these local systems, and probably the regional systems
5
   to an extent, also recharged farther away.
6
              So recharge in Wyoming, that eventually
7
   becomes the deeper system wherever that seam outcrops
8
   could be recharged. Locally, we have seams that are --
9
   the clinker is recharged. It can form springs right
10
```

Q. Okay. So I think for the most part what you were describing there was the local systems; right?

system that feeds the adjacent springs and creeks.

there at the edge of the clinker or form a shallow flow

A. Right.

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. So generally describe the regional systems.
- A. Now, the regional system flows, and it recharges from our mapping primarily on the Wyoming side, flows north across the border in the state line into Montana. And it's identified partly by the chemistry. It's typically sodium bicarb. And it's fairly deep under artesian pressure.
- Q. And your work with regard to both the coal monitoring program and the coalbed methane monitoring program, dealt with the geologic layers between the

1 Lebo shale and the Wasatch Formation; is that right?

- A. That included the Wasatch if it was present.
- Q. Okay. And as you move north, the Wasatch becomes less and less present; right?
 - A. That's right.
- Q. If you'll turn to page 31 for me, please.

 And that's under a section entitled Hydrologic

 Conditions After Three Years of Coalbed Methane

 Production. Are you there?
 - A. Yes.

2

3

4

5

6

7

9

10

20

21

2.2

23

24

25

I'm looking at the second paragraph, about 11 Ο. halfway through. And I'll read a sentence. "Mining at 12 13 the West Decker Mine has not lowered the water levels in the Squirrel Creek alluvium which indicates a lack 14 of vertical communication between the coal and shallow 15 aguifers." And then there's a citation to Van Voast 16 and Reiten, 1988. And then it continues, "For the same 17 reason, CBM production has not lowered water levels in 18 the alluvium." 19

Can you describe what that means for us?

A. It's what we talked about just a minute ago, that that drawdown from the Decker Coal Mine, we can measure that drawdown and actually watch it project underneath Squirrel Creek. But we don't see a pressure change or a drawdown vertically migrating into the

| Squirrel Creek area.

2

3

4

5

6

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11

14

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16

20

Q. And then it continues, "With the CBM production area (11C) since 1999, the water level in some reaches of the alluvium has increased probably in response to CBM production water infiltrating from nearby holding ponds."

Describe what that means.

- A. So the shallow recharge from infiltration pond or holding pond or any application, recharges shallowly and, in this case, is discharging to the alluvium and feeding the creek probably.
- Q. Was that describing a CBM holding pond in Montana?
 - A. That was an implication or assumption, yes, that I had made was, there's a pond there close. And when we get to the graph, it will -- that will show.
- Q. You made the assumption that it was in infiltrating, or you made the assumption it was in Montana?
 - A. No. That it was infiltrating.
- Q. Okay. Do you want to look at the graph
 that's referenced there? I hadn't planned to, but we
 certainly can. Figure 11C. Where do we find that?
- A. I think that's the one on the next page, isn't it?

```
1
         Q.
              I think so. Describe to us what's depicted
2.
   by Figure 11C.
              On the left axis, the Y axis, we have
 3
    elevations. So that's water level elevation. On the X
4
    axis, on the bottom, we have time from 1974, although
5
    the dates start in 1978, through 2004. And for
6
7
    reference, we have at the top graph precipitation
    trends, annual totals. And so the graphs themselves
    are showing water level trends or water level
9
   measurements in the alluvium.
10
              Okay. Anything else you wanted to talk about
11
         Q.
    about those figures?
12
13
              Do you have another question on it?
         Α.
14
         Ο.
              I do not.
15
              Were there other CBM infiltration ponds in
16
   Montana?
              There were some in the Squirrel Creek area.
17
         Α.
18
         O.
              Do you know how many, about?
19
         Α.
              No.
20
              Were there any in any other areas?
         O.
21
         Α.
              There were in Wyoming.
2.2
         Q.
              Okay. But not in Montana?
23
              But not in Montana that I know of.
         Α.
24
              Let's turn to page 46. Are you there?
         O.
25
         Α.
              Yes.
```

- 1 Q. And this is under your summary section; 2. right? Right. 3 Α. Ο. And in the second paragraph, about halfway or 4 a little more than halfway down, there's a sentence 5 that says, "Groundwater discharge where aguifers 6 7 sub-crop in alluvium provides base flow to support perennial streams." 8 What does that mean? 9 10 Α. That's a standard textbook concept. 11 perennial stream has to be supported by base flow from an aguifer. And reiteration of that concept. 12 13 And then it follows: "During CBM production 14 and aquifer recovery, the streams that receive significant portions of their flow from groundwater 15 discharge from coal beds may decline due to the loss of 16 groundwater base flow." 17 Describe what that means. 18 19 If an aquifer is discharging to that stream Α. 20 through the alluvium to the stream and that flow is 21 interrupted or decreased, there would be a 2.2 representative decrease in the streamflow.
 - larger surface water bodies, such as the Tongue River, this impact will likely -- not likely be measurable."

Okay. And it concludes that paragraph, "In

23

24

```
1
              What do you mean by that?
         Α.
              In measuring, surface flow measurements are
2
   typically in the 5- to 10-percent accuracy. And so if
3
   a stream is flowing, let's say 1000 CFS -- let's do 100
4
          That's easier math. If it's flowing 100 CFS,
5
   your accuracy of measurement would be 5 to 10 CFS.
6
              Okay. And to be fair, you're not saying
7
         Q.
   there that there wouldn't be some kind of impact? It's
8
   simply it's likely not measurable; right?
9
10
         Α.
              Right.
              And during the course of your work with this
11
         Ο.
   area and the CBM monitoring, you didn't ever attempt to
12
13
   quantify impacts to surface flows; right?
14
         Α.
              That's correct.
              Look at what's been marked Exhibit W234.
15
         Ο.
   I apologize for the rubber band binding. Do you
16
   recognize that document?
17
              I do.
18
         Α.
19
              And what is it?
         Ο.
20
              This is Montana Bureau of Mines & Geology
         Α.
21
   open file report 600, titled 2010 Annual Coalbed
2.2
   Methane Regional Groundwater Monitoring Report, Powder
   River Basin, Montana.
23
24
              And you were an author on this report as
         Ο.
   well?
25
```

```
I am.
1
         Α.
2
              And was this report prepared in the ordinary
         Ο.
    course of Bureau of Mine business?
 3
         Α.
              Yes, it was.
4
              And this one was reviewed prior to
5
         Q.
    publication as well; right?
6
7
         Α.
              That's correct.
              Does it appear to be complete?
8
         O.
9
         Α.
              Yes.
              MR. BROWN: I would like to offer Exhibit
10
   W234.
11
              MR. DRAPER: No objection.
12
13
              SPECIAL MASTER: Okay. Exhibit W234 is
14
   admitted.
                         (Exhibit W234 admitted.)
15
   BY MR. BROWN:
16
              So now we've gone to year 2010 for reporting
17
         Ο.
    of CBM monitoring; right?
18
19
         Α.
              That's right.
20
         Ο.
              So between -- I think we looked at 2004 and
21
    2010, there would be a report like this for every
2.2
    single year; right?
              Each year, that's correct.
23
         Α.
              And I think within the reports, much of that
24
         O.
    information is historical data, so a lot of the report
25
```

```
is carried over from year to year; right?
         Α.
              That's correct.
2
              And predominantly, what new is contained in
 3
         Ο.
    each year's report is the monitoring information that
4
   had been compiled during that year; right?
5
         Α.
              Correct.
6
7
         Q.
              There's sometimes other changes, but usually
    just the new monitoring data?
8
              That's correct.
9
         Α.
10
         Ο.
              By the time this 2010 report came out, you'd
    moved on to your new job?
11
12
         Α.
              I had.
              But you're still listed as an author on here
13
14
   because much of the information they used, you put
    together?
15
              Because of that historical perspective.
16
         Α.
                                                        And
    this one, I would have still been involved in the early
17
18
   part of it.
              So by this time, Elizabeth Meredith had taken
19
         Ο.
    over the monitoring program?
20
21
         Α.
              That's correct.
              And she's a University of Wyoming graduate;
2.2
         Ο.
23
    right?
              She is.
2.4
         Α.
```

25

Q.

I had to figure out a way to get that in.

```
1
         Α.
              She's an excellent University of Wyoming
    grad.
2.
              They all are. Just thought I'd throw that
 3
         O.
4
    in.
              And in 2002, the 2002 report that we had
5
    taken a look at, you had attempted to predict what the
6
    CBM drawdowns would be as a result of CBM production;
7
    right?
9
         Α.
              Correct.
10
         Q.
              So by this time, how did your predictions
11
   hold up?
12
         Α.
              Well, some of them were sort of where you
13
    want a prediction to be, a little overstated but not
14
    dramatically overstated. So we felt okay about the
   predictive capabilities. And we continued to refine
15
    them.
16
              So the -- your 2002 predictions were a little
17
         0.
18
   bit more than what you came to observe; right?
19
         Α.
              That's correct.
20
              If you'd take a look at page 43 with me,
         Ο.
21
   please.
              No page numbers.
2.2
         Α.
23
              There aren't on some of them. Some of them
         Ο.
    there are.
2.4
              Is it a figure or a section?
25
         Α.
```

```
1
         Q.
              It is a section. It's not a figure.
         Α.
              I found 33.
2.
              Page 43 actually has a page number on it.
 3
         O.
         Α.
              Good. Okay. I'm there.
 4
              Did you find it?
5
         Q.
6
         Α.
              Yes.
              What's -- and it's entitled, the section I'm
7
         Q.
    looking at anyway, Tongue River Alluvial Aquifer Water
8
    Levels and Water Quality; do you see that?
9
10
         Α.
              Yes.
              And this is talking about the water levels in
11
         Q.
    the Squirrel Creek alluvium; right?
12
13
         Α.
              Right.
14
              And about halfway through that paragraph, it
         O.
    says, "Farther downstream in the CBM production area
15
    (WR-52D), the water levels in the alluvium were stable
16
    until 2000, when levels increased by approximately 4
17
    feet. Since that time water levels have gradually
18
19
    returned to baseline and are currently at their
20
    original levels."
21
              Is this the same concept that you described
2.2
    in earlier reports with regard to infiltration from the
23
    CBM impoundments?
```

A. It is.

2.4

25

Q. And I think this indicates here that after

```
1 those CBM impoundments stopped being used, the water
2 levels in the alluvium went back to normal?
```

- A. The timing is unknown between those two because these were Fidelity -- originally Redstone and Fidelity ponds. And they did not permit us to do monitoring on the ponds. So we don't have state or discharge records to the pond. We don't know when it was filled.
- 9 Q. Okay. But after they stopped, then, using
 10 the alluvium measurements anyway, you went back to
 11 normal; isn't that what that indicates here?
- 12 A. What it indicates to me from a hydrogeologic 13 perspective is after it stopped infiltrating, they went 14 back to normal.
 - Q. Okay. I'm going to try to take a look at Plate 1 for this report. And you can see it in the report itself, but it's so small. It's really hard to read. So we're going to see if we can't -- first, go to the legend in the top right. You're familiar with Plate 1 of this report?
- 21 A. Yes.

3

4

5

6

7

15

16

17

18

19

- Q. And isn't Plate 1 of this report one that was used in the previous reports as well?
- A. Right. Once we developed a standard format, we stayed with it.

```
1
         Q.
              Okay. And so this is just this year's
    iteration of that report?
2.
              That's correct.
 3
         Α.
         Ο.
              And so it incorporates all of the -- well,
 4
    what's plate 1 depict?
5
              This is the monitoring sites, the wells and
6
         Α.
    springs that we monitored and the weather stations that
7
   we had out. And Plate 1, that just shows the
   monitoring wells and the production wells, I believe.
9
10
    Yes.
              And doesn't it also show the springs that the
11
         Q.
    Bureau of Mines was monitoring?
12
13
         Α.
              I think I said that. I intended to.
                                                     Springs
14
    and wells.
15
         O.
              I apologize.
16
              MR. BROWN: Let's go back up and try to
    enlarge around the Tongue River Reservoir area.
17
   BY MR. BROWN:
18
19
         Ο.
              And can you use your pointer and just
    generally describe what we're looking at here?
20
                                                     It's
    still kind of difficult to see. Do you --
21
2.2
         Α.
              Okay. Let's run back.
23
              You want back out some?
         Ο.
              If we could back out -- actually, run back to
24
         Α.
```

the legend real fast. And let's make sure that I get

 $1 \mid \mathsf{the}\ \mathsf{color}\ \mathsf{coding}\ \mathsf{right}.$

- Q. So what are we looking at here?
- A. So we'll look for that symbol for monitored
 wells and monitored springs. Production wells, coalbed
 methane production wells, they're active during the
 year, the gray dots, green dots and a tan. And maybe
 that's an orange. I'm not sure. But these three are
 Wyoming production, CBM production wells.
- 9 | Q. Okay.

2

- 10 A. And then underneath is the geologic 11 cross-section.
- Q. Okay. So, again, we'll go back to the Tongue River area, maybe a little bigger than you had before. Let's try that.
- 15 A. That works.
- 16 Q. Okay.

2.2

23

24

25

A. So we have the Tongue River, the Tongue River
Reservoir, the Tongue River continuing below the
reservoir, the Montana/Wyoming state line. This red
line is the location of the geologic cross-section.
It's not for reference.

The tan areas are areas that are potentially coalbed methane producing or being considered for coalbed methane production and includes areas where there is production on the Montana side. This is the

```
Redstone-Fidelity field. And I think that was at that
    time Pinnacle.
2.
              This darker tan on this area is the Crow
 3
    Indian Reservation.
4
5
         Ο.
              Okay.
              Within there we see coalbed methane
6
7
   production wells in Wyoming. And we see our -- these
    symbols are our monitor wells.
              Looking at the Hanging Woman Creek CBM field,
9
   did the coal seam stop at the border?
10
                    Seriously.
11
         Α.
              Yes.
12
              It does?
         0.
13
              I think there was eventually one CBM well
14
   drilled in Montana.
15
         O.
              My question was: Does the coal seam stop?
16
         Α.
              No.
              As the CBM monitoring program evolved, I
17
         Ο.
    think there were a series of state line monitoring
18
    wells put in, was there not?
19
20
         Α.
              Correct.
21
              What was the purpose of those?
         0.
2.2
         Α.
              That was to distinguish impacts, drawdown
    in -- let me start that over.
23
              That was to distinguish impacts to water
24
    levels between Wyoming production and the Montana
25
```

```
production.
         Ο.
              Okay. And I believe that those state line
2
   monitoring wells were placed in about seven different
 3
4
   locations?
              At that time, there were, I believe, six new
5
         Α.
   sites actually put in. That red line actually shows
6
   those. But we picked up part of that state line
7
   program. We picked up others since then. There's also
9
   been some more put in.
10
              That site there was put in after I -- no,
   that's picking up the Powder River. Yes.
11
12
              So the state line monitoring program
         Ο.
13
   stretches all the way from over by the Tongue River all
14
   the way over to Powder River?
              To the Powder River.
15
              And at each of those locations -- I quess
16
         Ο.
   first of all, those particular monitoring wells are
17
18
   designated with an SL; right?
19
              They -- the ones we drilled are designated
         Α.
   with an SL, right.
20
21
         Ο.
              The state line monitoring well?
2.2
         Α.
              Correct.
23
              And at each of those locations, there's more
```

Not in every location. That was our intent.

than one well?

Α.

2.4

```
1
         Q.
              Okay. At some of the locations, I guess,
    there's more than one well?
 2.
 3
         Α.
              Correct.
         O.
              What's the purpose of having more than one
 4
   well?
 5
              To look at vertical gradients and that
 6
         Α.
 7
    separation and impacts between the regional and the
    local system.
 8
              And so on those sites where there's multiple
 9
         Ο.
10
    wells, they're completed different formations?
              That's correct.
11
         Α.
12
         Ο.
              Okay.
13
              MR. BROWN: Probably a great place to take
14
    our second break if you'd like.
15
              SPECIAL MASTER: Okay. Why don't we take a
    ten-minute break. We'll come back when that clock over
16
    there says 20 minutes to the hour.
17
                        (Recess taken 10:29 to 10:41
18
19
                        a.m., November 19, 2013)
20
              SPECIAL MASTER: Okay. Everyone can be
21
    seated.
2.2
              Mr. Brown, you can continue your direct.
   BY MR. BROWN:
23
              I'm going to hand you what's been marked
24
         Q.
    Exhibit W235; and do you recognize that documents?
25
```

```
1
         Α.
              I do.
2.
         Ο.
              And what is it?
              This is Montana Bureau of Mines & Geology
 3
         Α.
    open file report 614 titled 2011 Annual Coalbed Methane
4
    Regional Groundwater Monitoring Report Powder River
5
    Basin, Montana.
6
7
         Q.
              And you're still listed as an author; is that
    right?
8
9
         Α.
              I am.
              And this is just the next year -- or 2011, at
10
         Q.
    least, with regard to the coalbed methane monitoring
11
    information?
12
13
         Α.
              That's correct.
14
              And this one, as well, was prepared in the
         Ο.
    ordinary course of the Bureau's business?
15
              Yes, it was.
16
         Α.
17
              And it was reviewed prior to publication?
         Q.
              Yes, it was.
18
         Α.
              MR. BROWN: I would like to offer Exhibit
19
20
   W235.
21
              MR. DRAPER: No objection.
2.2
              SPECIAL MASTER: Okay. Thank you.
    Exhibit W235 is admitted into evidence.
23
2.4
                        (Exhibit W235 admitted.)
25
```

BY MR. BROWN: And there's also a 2012 report, is there not? 2 Ο. There is. I'm trying to remember if it's 3 Α. published yet or not. 4 I don't have it with me, so I just wanted to 5 Ο. establish that there is one. 6 There is. And I think it's published, and 7 Α. they're actually drafting the next one. They got confused after a while. 9 10 Q. Okay. And I was going to ask a couple questions about that one. But I think we'll just move 11 on. And I just wanted to offer it for a book end with 12 13 regard to, at least, the last copy of the report that I 14 have. 15 I'm going to show you what's been marked as Exhibit W236; and do you recognize that document? 16 I do. 17 Α. And what is it? 18 Q. 19 This is Montana Bureau of Mines & Geology Α. 20 Information Pamphlet 6 titled Coalbed Methane Basics: 21 Ten years of lessons from the Powder River Basin, 2.2 Montana. 23 And you're an author of this publication as Ο. well; right? 24

25

Α.

I am.

```
1
         Q.
              Does it appear to be complete?
         Α.
              It does.
2.
              MR. BROWN: I'd like to offer Exhibit W236.
 3
              MR. DRAPER: No admission, Your Honor.
 4
              MR. BROWN: No admission?
5
              MR. DRAPER: No objection.
6
7
              SPECIAL MASTER: I knew what you meant.
              I don't know what it is in the air this
8
9
   morning.
              Exhibit W236 is admitted.
10
                        (Exhibit W236 admitted.)
11
   BY MR. BROWN:
12
13
              I think you'd mentioned at your deposition
14
   that this particular document was given some kind of a
   national award?
15
16
              It was. It was recognized by the American
   Association of State Geologists as the best
17
   environmental geology publication in the last three
18
   years. And Liddy received her award at the Geologic
19
20
   Society of America meeting in Denver in October.
21
   Actually, unfortunately, though, she couldn't go.
2.2
   Somebody had to stand in for her.
23
              You were quick to give all the credit to
24
   Liddy.
              Absolutely.
25
         Α.
```

```
1
         Q.
              And that's Elizabeth Meredith; right?
         Α.
              It is.
2.
              And you had drafted previous versions of this
 3
         Ο.
    informational pamphlet, and this was, at least as of
4
    this time, the latest version; right?
5
         Α.
              That's correct.
6
              So it identifies itself as Information
7
         Q.
    Pamphlet 6; correct?
8
9
         Α.
              That's correct.
10
         Q.
              And you had put together the previous five?
                   The Informational Pamphlet series is a
11
         Α.
              No.
    Bureau of Mines series. So I had put out Informational
12
13
    Pamphlet 5, which is a predecessor to this. But 1, 2,
14
    3, 4, they were unrelated.
15
         Ο.
              So, at least with regard to the coalbed
    methane focus, No. 5 was the predecessor to this?
16
              Right.
17
         Α.
              And you drafted that?
18
         O.
19
              I drafted it.
         Α.
              But Elizabeth got the award with No. 6?
20
         Ο.
              She did much better.
21
         Α.
2.2
         Q.
              What's the purpose of this informational
23
   pamphlet?
24
         Α.
              This is intended as sort of a layperson's
    review of the hydrogeology. Because it is a
25
```

```
1 controversial subject, we like to make our information
2 as available and useful as we possibly can.
```

- Q. Is it fair to say that this informational pamphlet kind of boils down the more technical information in the annual report and puts it in a more user friendly format?
- A. It does. But it's a generalization, an overview, whereas, the annual reports present that year's finding, and maybe the question of the year, so to speak.
- Q. Let's take a look at page 18, which is -- it's not the last page. And are you there? Page 18?
 - A. I am.

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

- Q. And I'm looking at the left-hand column at the very bottom, the last paragraph appearing in the left-hand column. And there's a discussion there with regard to baseline information and an identification of something called the state-funded Montana CBM Protection Act. Are you familiar with that?
 - A. Yes.
 - O. And what is the Montana CBM Protection Act?
- A. It was formed -- and I'm not familiar enough
 to give you times and dates. It was formed as a method
 for landowners to be compensated for unidentified -I'm sorry. That's not accurate. It's an impact whose

```
cause is not -- the company indicates the coalbed
methane is not identifiable. If there's no liable
party, but yet an impact's identified as coalbed
methane related, that would give them some resource.

Q. Okay. And I think you had told me that you
were on the Advisory Committee for this particular act?
```

- A. I was, in this committee.
- Q. And during your experience with your involvement with that, were you aware of any groundwater well owners that had taken advantage of the act?
- 12 A. No.

7

8

9

10

11

13

14

15

16

17

- Q. And I think you told me that you were aware of one surface water right owner that attempted to take advantage of the act; is that right?
- A. From what I understood, yes. And I actually was not -- I never saw the application. But I heard the members mention that.
- Q. Okay. But it was your understanding that
 that application, at least at the time you were
 involved, was not accepted because it was an incomplete
 application?
- 23 A. Right.
- Q. So at least with regard to the extent of your involvement, you're not aware of anybody who actually

got any benefit from that act? Α. That's correct. 2 During your time that you were involved with 3 Ο. the CBM monitoring program in Montana, I think you told 4 me that you never observed a time where -- you never 5 observed any impacts to a groundwater well in Montana 6 7 that was caused by CBM pumping; is that right? Did I say that poorly? Our monitoring program showed drawdown in our 9 10 monitoring wells from CBM pumping in Wyoming that caused drawdown in Montana. 11 Right. And I think my question was, I think 12 Ο. 13 you told me that you didn't observe any impacts to 14 existing groundwater wells for groundwater right owners in Montana; is that right? 15 And that's -- I have not observed it. And I 16 Α. would not necessarily have recourse or an option to 17 observe it. So it's not -- I can't say that it didn't 18 19 happen. 20 Sure. You just never observed it? O. 21 Α. Right. 2.2

- Q. And during the course of your monitoring program in Montana, you have not observed any impacts to springs in Montana?
 - A. That's correct.

23

24

```
1
         Q.
              And some of those springs that you monitor
    are connected to the regional groundwater flow system;
 2
    right?
 3
              Some of those have a mixed source; regional
 4
    and local.
 5
              Okay. Showing you what's been marked as
         Ο.
 6
    Exhibit W237. And I apologize for the binding. Do you
 7
    recognize that document? Do you recognize it?
              I do recognize it as a talk that I'd given.
 9
    I don't know when or where because it doesn't have the
10
    source underneath.
11
              It appears to be a presentation; right?
12
         Ο.
13
              It appears to be a PowerPoint slide
14
   presentation. And I have given a lot of presentations.
15
         Ο.
              You were an author of this particular
   presentation?
16
              As the first listed person, I should have
17
         Α.
18
    been the presenter of this one.
              Do the slides or the information contained
19
         Ο.
20
    within Exhibit 237 look familiar to you?
21
         Α.
              It does.
2.2
              And does this look to be a presentation that
    you provided at some point in time during your
23
```

involvement with the CBM monitoring program?

2.4

25

Α.

Yes.

```
I would like to offer Exhibit
1
              MR. BROWN:
   W237.
2.
              MR. DRAPER: I'm not going to object to the
 3
   admission of this exhibit, Your Honor.
4
              SPECIAL MASTER: Okay. Thank you. He's
5
   being very careful now how he says this.
6
              So Exhibit W237 is admitted.
7
                        (Exhibit W237 admitted.)
8
   BY MR. BROWN:
9
10
         Q.
              What was the purpose of this presentation?
              Since it's not identified as to where I gave
11
         Α.
   it, I'm not sure I can tell the exact purpose.
12
13
   we're having a discussion -- this is not a national
   conference. Slide 3 is -- look to the 2009 regional
14
15
   monitoring report. That's not something you talk about
   at a national conference. But yet it's a little more
16
   technical than some of the landowner talks we would
17
18
   give. So it may be a BLM update or someone was working
19
   on a group update.
20
              And just give us a general summary of the
         Ο.
21
    information contained within this presentation.
2.2
              So this was specific to infiltration ponds,
   our work, just our infiltration sites, lessons that we
23
   had learned in presenting some of our data.
24
              Okay. And my understanding is generally you
25
         Q.
```

```
had done some studies to analyze the infiltration rates
of the CBM impoundments; is that accurate?
```

- A. That's right.
- Q. And this kind of provides the results of a couple of those studies; right?
- A. We had one pond in particular that we had very well instrumented.
 - Q. And which pond was that?
 - A. Coal Creek.

3

4

5

8

9

15

16

17

18

19

- Q. And does your discussion of Coal Creek begin on the fourth page of Exhibit W237?
- 12 A. That's correct.
- Q. Describe the Coal Creek infiltration pond for us.
 - A. So this first picture, slide 4, we're looking down Coal Creek proper. There's a farm pond in foreground. Coal Creek is running from that, away from us towards the trees. It's just left -- you can see a house way down the road. Up on the right, you can see
- 20 three red frac tanks where they're drilling CBM wells.
- 21 There's actually a drill rig. That's our monitor well
- 22 drilling rig. And the disturbed dirt you see just to
- 23 the right of that drill rig is actually the berm around
- 24 the pond. So that's the pond itself.
 - Q. Okay. And if I'd have been better organized,

```
1
    I would have just ran the whole presentation on the
             But I apologize. I'm not that organized.
 2
    screen.
              Where is the Coal Creek infiltration pond?
 3
         Α.
              This is in the Powder River watershed in the
 4
    Powder River Basin. So remembering the Powder River
 5
    Basin contains several watersheds. This is in the
 6
    Powder River watershed east of Sheridan, Wyoming,
 7
    30 miles. And Coal Creek is tributary to Clear Creek,
 8
    which is, I think, direct tributary to the Powder
 9
    River. It's a bit of a convoluted path.
10
              So this particular study is in Wyoming?
11
         Q.
              It is.
         Α.
12
              And what were you doing studying infiltration
13
         O.
14
   ponds in Wyoming?
15
              Actually, this started as Apache Oil Company
    asked a group from the University of Wyoming and the
16
    Western Research Institute and myself to come down and
17
    do a study. And so this is near Ucross. And they had
18
    found the site, and we worked out a nice project with
19
    this. And it continued beyond the patchy work.
20
21
         0.
              But the Coal Creek site wasn't the only place
    that you were doing studies; is that right?
2.2
23
              That's right.
         Α.
              I think you had mentioned you were doing at
24
         Ο.
    least one other study of an infiltration pond south of
25
```

1 Gillette? 2 A. That was an on-cha

- A. That was an on-channel pond where they
 worked -- actually built a dam across the channel,
 enhancing existing ranch pond life.
- Q. And I think you'd mentioned also that you had conducted some studies in the small ponds in Montana?
 - A. That's right.

- Q. But the best data set you had was from the
 Coal Creek site?
- 10 A. That's correct.
- Q. So let's turn the page, which I believe is page 5 of Exhibit 237. Describe that -- what's depicted in that photo.
- 14 A. I'm going to hold mine up to make sure we're 15 all on the same page 5.
- Q. No, that's page 6. And I apologize. These aren't numbered or Bates numbered. I didn't get them in discovery.
- A. So we're looking at the picture of the pond.
 Okay.
- 21 Q. Yes, sir.
- A. Slightly photo shopped. I have highlighted
 our monitoring wells. They're not really that large.

 But what you see in the white bars are the locations of
 our monitoring wells, some of them. There's still a

```
few, about ten more, that are not visible from this
    locale.
             They're down closer to Coal Creek.
                                                 The pond
 2.
    itself, which has coalbed methane produced water in the
 3
   pond, the wells in the pond are at three different
 4
   depths, and the wells around the pond where there's
 5
    pairs, there's a shallow and a deep well. And then the
 6
 7
   pump rig and equipment there is sitting at one of these
   paired wells where there's a shallow and deep.
   we're pulling water quality samples. We have
 9
10
    transducers and data loggers in the pone and in quite a
    few of the wells. Not all of them.
11
              And let me clarify what I said a few minutes
12
13
          I didn't get this particular version of this
14
    PowerPoint in discovery, which is why it doesn't have
15
   numbers. I believe we got it in discovery, however.
    think I caused some heartburn.
16
              Oh, look, it's up there.
17
                          Thank you very much. State of
18
              MR. BROWN:
19
    Montana threw up the picture on the screen so everybody
   makes sure they are looking at the same thing.
20
   BY MR. BROWN:
21
2.2
              Let's turn the page. And it's got the --
    well, it's on page 6 of Exhibit 237. Describe what is
23
    depicted in that slide.
24
25
         Α.
              So it's a graph -- let's start on the
```

```
right-hand Y axis, says pond water depth. That goes from 0 to 8 feet. And offset that upward so that we can see the graph better. That's the depth of the water in the pond. On the X axis is time starting in June 2003 and continuing through September 2007. On the -- to the left Y axis is volumes of water. And those are monthly rates.
```

That axis, the left axis relates to the bar graphs. And there's two bar graphs. And one shows vertical infiltration from the pond, my calculation.

And the other, the red one, is evaporation off the free water surface.

- Q. Describe how you made your calculation with regard to the percentage of water that evaporated as compared to the percentage that infiltrated.
 - A. So we have the bathymetry of the pond.
 - Q. And what is that?

8

9

10

11

12

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14

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19

20

21

2.2

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24

25

A. That's the shape and volume of the pond, the shape of the bottom.

And we have the stage, the water level of the pond. So by that, we can calculate surface area of the free water surface using standard evaporation, free water surface evaporation rates. I calculated from that surface what the evaporation from the free water surface would be from the pond. That's the red bar.

And you see that going up and down because the water level, as it's higher, there's a larger area to evaporate. So there's more volume lost to water. I think free water evaporation in this area is about 40 inches per year, almost 3 and a half feet.

Then the yellow bars are the remainder of the water that's not accounted for in the pond water level. So by doing the volume of the pond, subtracting free water surface evaporation, the remainder, since there's no outflow from the pond, must infiltrate.

- Q. Okay. And at least through this particular study, if I'm correct, you calculated that 70 percent of the water in the pond infiltrated into the ground?
 - A. At that point in time.

2.2

- Q. But I think you told me in your deposition that just through your experience with all of the ponds that you had investigated, that you thought that it was probably more accurate around 50 percent of the infiltration rate; is that right?
- A. It would depend on the pond and the timing of the use. If we look at this pond, the typical life of a well is about seven years. And this well pumped for a year and a half. The ceiling occurred, what, seven months after it really started. You know, that might be less than that. And once it seals, no matter how

- long you pump into the pond, there's not going to be any more infiltration. The clays have flocculated, 2 disbursed and flocculated. 3 So once the clays flocculate, then it reduces 4 the infiltration? 5 Pretty much blocks it. Α. 6 7 Q. So that there cannot be any additional infiltration? 8 There's a rare occasion when it can. But if 9 Α. 10 the pond goes completely dry, you can actually form desiccation cracks. There's, I think, a picture. 11 I think there is. 12 Ο. 13 Yeah. And you can get a little bit more. 14 That's very short lived. As soon as that mud 15 rehydrates, it will stop again. The remainder of that particular presentation 16 Ο. deals predominantly with water quality issues; right? 17 Yes. Let's look at it real quick. 18 Α. 19 Ο. Sure. Since I can't remember this one. Uh-huh. 20 Α. 21 And the Beaver Creek pond which is --2.2 Ο. And the Beaver Creek pond was the one near
- 24 A. Right.

Gillette; is that right?

23

Q. Okay. I think you told me at your deposition

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```
that at least up until that point in time, you've never
    spoken with anybody by the name Steven Larson; is that
2.
    right?
 3
              Right.
         Α.
 4
              And you weren't ever asked to review any work
5
         0.
    that he did for this case?
6
              I've never reviewed his work.
7
         Α.
              And you weren't ever asked to review any work
8
         Ο.
    that was performed by a Dr. Schreüder; is that right?
9
10
         Α.
              That's right.
              MR. BROWN: I think that's all I have.
11
                                                        Thank
12
   you.
13
              SPECIAL MASTER: Thank you, Mr. Brown.
14
              Mr. Draper?
15
              MR. DRAPER: Thank you, Your Honor.
16
                       CROSS-EXAMINATION
   BY MR. DRAPER:
17
              Good morning, Mr. Wheaton.
18
         Q.
              Good morning.
19
         Α.
20
              I'd like to ask you about a couple of the
         Ο.
21
    exhibits that Mr. Brown discussed with you. Do you
2.2
    have still there with you the pamphlet -- Information
    Pamphlet 6, which is designated Exhibit W236?
23
2.4
         Α.
              Yes.
              I'd like to ask you to turn to page 13 with
25
         Ο.
```

```
me, please. Do you have that page?
         Α.
              I do.
2
              Do you see there's a heading on the page at
 3
         Ο.
    the top of the right-hand column, says Infiltration and
 4
    Evaporation Ponds?
5
         Α.
              Yes.
6
7
         Q.
              The second paragraph starts out with a
    statement that says, "The utility of infiltration ponds
8
    can be reduced if the interaction of sodium in the
9
    coproduced water with the floor of the pond causes the
10
    floor to seal greatly restricting infiltration";
11
    correct?
12
13
         Α.
              Correct.
14
              In that statement, what do you mean by the
         O.
    word "infiltration"?
15
              The water -- maybe the best picture is to
16
         Α.
    think of watering your lawn. The water that isn't
17
    absorbed and used by the grass infiltrates into the
18
    soil.
19
20
              You mean infiltrates to the immediately
         Ο.
21
    adjacent soil below the grass in your example or below
2.2
    the ponds in this --
              Infiltration can be a fairly generic term.
23
         Α.
    don't think it's implying a specific depth. But it's
24
    going below the base, in this case, below the base of
25
```

1 the pond.

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

- Q. Does it necessarily mean infiltration to the regional aguifer system?
- A. Let's see. We're on IP6. It doesn't imply that.
- Q. What does that statement generally mean, that I just read to you?
 - A. The part about the sealing and the reduced infiltration?
 - Q. Yes. "...the interaction of sodium in the coproduced water with the floor of the pond causing the floor to seal greatly restricting infiltration." Can you describe what you're talking about there?
 - A. The material in the Fort Union Formation, the Tongue River member, has a lot of fine material, and a lot of clays. For lack of a better analogy, just try imagining clumps of clays that are actually boxes of playing cards that have never been opened. And so we have a bucket of those playing cards. And if we pour water through it, those boxes in random position can allow water to flow through. We can picture that fairly easily.

But if there's sodium in the water and the sodium goes in between the playing cards, instead of the playing cards being held closely together, the

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```
sodium will displace the calcium and magnesium and
   allow the individual cards to float apart and form sort
2.
   of a gel structure within the structure of the clays.
 3
   And if that gets wide enough and there's enough water,
4
   then those playing cards would come out of the box and
5
   migrate away from each other and settle into the bottom
   of the bucket of water.
7
              Now, instead of random blocks, we have a
8
   stack of many layers of platelets. Now that prohibits
9
   the movement of water through there. And if you try to
10
   get those cards back in the box, they won't go back in
11
   the box. You can dry it up and make some cracks
12
13
   between them.
              Did you find that -- in your work, that this
14
         Ο.
15
   phenomenon of the sealing caused by the presence of
   sodium to be relatively widespread?
16
              In the Tongue River member, it's common.
17
         Α.
18
              Now, you go ahead in that same paragraph and
         Ο.
   further state, "Additionally, if an impermeable layer
19
20
   such as shale is present, infiltrating water maybe
21
   diverted horizontally to form unwanted saline seeps."
2.2
              What do you mean by the horizontal diversion
   of the water?
23
              Groundwater flow follows an energy gradient,
2.4
         Α.
    just like a ball rolling down a hill. It goes from
25
```

```
high to low following the path of least resistance.
   Now, this is high energy to low energy, not necessarily
2.
   downhill to be coming up.
 3
              But if it's flowing through a sand layer, for
4
   example, and there's a shale underneath it, a lower
5
   permeability layer, then it would preferentially flow
6
   along the top of that until it either reached daylight
7
   or found another pathway down.
              And you mentioned saline seeps in this
9
10
   statement. In your experience, do these saline seeps
   or horizontal movement of water typically discharge to
11
   surface streams?
12
13
              We have not, in an infiltration pond,
   questioned -- we never did find surface discharge.
14
              Let me turn now to the next exhibit that
15
         Ο.
   Mr. Brown discussed with you, which is W237. It's the
16
   PowerPoint presentation. And he questioned you about
17
   the Coal Creek infiltration pond. In the graph, it
18
   appears -- I think it's slide 6. We're projecting it
19
20
   on the screen. Were you able to get back to that
21
   figure?
2.2
         Α.
              Yes.
              Now, he had you describe what was going on as
23
   depicted in this figure. Is this figure consistent
24
   with your previous testimony about the tendency for the
25
```

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pond floors to seal in the presence of sodium in these ponds? 2. 3 Α. Yes. Q. Please explain how so. 4 Could we flip to the next slide? 5 Α. 6 Ο. Sure. 7 Α. If that's okay. The red line on the next slide is vertical hydraulic conductivity. That's 8 calculated using the previous slide that you were 9 asking about. In order to move that water out of the 10 pond to infiltrate it, there has to be an ability for 11 12 that forced medium to accept and transmit the water, 13 hydraulic conductivity. And if we look at the pressure 14 gradient and the area of the pond and the rate of movement, we can back calculate hydraulic conductivity 15 below the pond. That red line shows -- and it's on the 16 right-hand Y axis is the indicator for that. 17 18 As the pond material saturates, the vertical 19 conductivity increases until it's moving water pretty 2.0 well. And then you see it start to come down and then 21 finally just drop to near zero where there's much 2.2 smaller amounts of water capable of moving through that 23 profile. So when that red line goes to zero, 2.4 Ο. essentially that means there's no passage of liquid 25

1 | through the floor of the pond?

6

7

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

- A. We want to be careful about saying zero in
 hydrogeology. I was taught by one of my early
 professors the only true aquiclude is permafrost. So
 there would still be some, but it would be very small.
 - Q. And just for the record, the term aquiclude means?
 - A. An absolute barrier to water.
 - Q. So turning back to the previous figure then, how is that reduction essentially to zero -- I guess I would use the word essentially to conform to your point -- how is that shown in the information on the graph that Mr. Brown took you to?
 - A. The bar graph, the yellow bar graph drops dramatically in October 2004 and picks up a little bit with time after that, but a small amount. At that point, it wouldn't matter how long you used that pond. With very little infiltration, that's going to occur after that.
 - Q. So there is some seepage in that area where we have the tall yellow bars during the sealing process. And then it goes to essentially a sealed pond condition?
- A. Essentially, it goes -- certainly reduces vertical migration significantly. And it's very

1 dramatic, as you can see there.

- Q. How long was this pond used? I think you stated in your direct testimony.
- A. I think that they started pumping in -- oh,
- 5 | they did their test pumping in the summer of 2003. You
- 6 can see when that -- well, if you look at the blue
- 7 | line, the stage graph, you can see it really kick up
- 8 there in the spring of '04. But they stopped pumping
- 9 | in -- I think that they stopped pumping in
- 10 October 2004, very close to that. It might show in one
- 11 of these others.
- 12 Q. And this chart shows that it went dry where
- 13 | it's indicated --
- 14 A. Right.
- 15 | 0. -- in blue?
- 16 A. And increases in the stage after that where
- 17 | snow and rain accumulated and collected in it, in the
- 18 | pond.
- 19 Q. Now, I noticed that in the far right, there
- 20 | is a yellow bar that comes up below the minimal level
- 21 | shown since the original sealing. Does that mean that
- 22 | the pond began to allow infiltration again at that
- 23 | time?
- 24 A. Let me glance through the rest of this talk
- 25 | and see. There's pictures that I use sometimes.

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1 Q. Sure. Α. No. 2. Well, if I may direct your attention to two 3 Ο. slides on, there's a picture which is on the screen. 4 That picture on the bottom, there's 5 Oh, yes. a picture you don't see on a sandy beach. When the 6 water drains out of a sandy beach, you have a nice, 7 flat, dry layer afterwards. When the water drains out and you have some sun baking on a clay flocculated 9 material, a flocculated clay, you get desiccation 10 cracks. And that's what you're seeing there. I placed 11 my pencil for scale amongst those desiccation cracks. 12 13 My interpretation of the yellow bar back in 14 summer of '07 on Figure -- that one. Slide 6? 15 O. Slide 6, is that those desiccation cracks are 16 allowing migration of the rain water until they swell 17 back up and seal off again. 18 So there's a short-lived small amount of 19 Ο. infiltration until it rehydrates the floor of the pond? 20 21 Α. Right. 2.2 Q. And then once again it would seal? It would seal. 23 Α. So if this pond had been used during the 24 Ο. regular, say, seven-year lifespan of a set of CBM 25

```
1 | wells, would it have allowed significant infiltration?
```

A. Well, significant, I'm not sure of the term
in this sense. But infiltration would not have
increased back to the summer of 2004 levels.

2.2

- Q. And the indication that you give at the bottom of this graph of infiltration, 70 percent would not apply, would it?
 - A. That applies for the period of this specific site and its use, uh-huh.
- Q. And if it were -- if this site had been used for disposal of CBM produced water, would the infiltration have been significantly less than that?
- A. It would certainly be less, yes.

 Significant -- we measure things in feet rather than significant. So it's just a term I'm not comfortable -- I'm not quite sure how to apply it. But it certainly would be a lot less. Significant may be a fine term.
 - Q. And if you go from the period of use of this pond, which is about a year and a half, the other, say, four and a half, five and a half years of normal use of a pond would have seen infiltration values that are down in the type of values you see on the right-hand side of this graph rather than the left-hand side; isn't that right?

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```
1
              MR. BROWN:
                          I'm going to object. Assumes
   facts not in evidence with regard to other typical
2.
   ponds, I quess, towards the CBM usage. I don't know
 3
   that we've established that.
4
              SPECIAL MASTER: So I think the question can
5
   be rephrased in this particular case as to the
6
   witness's experience with ponds that are in use for a
7
   longer period of time and what happens to the
   infiltration levels during the overall period of use.
9
   BY MR. DRAPER:
10
              Mr. Wheaton, based on your personal
11
         Q.
   experience and observations, would the values of
12
13
    infiltration that we see on the right-hand side of this
14
   graph and the low hydraulic conductivity that we saw on
15
    this other graph, would those remain in the life of the
   pond, based on your experience?
16
              From my experience, I would expect that to
17
         Α.
18
   happen.
19
              SPECIAL MASTER: And I'm sorry. Just to be
   clear, you said expect that to happen?
20
21
              THE WITNESS: As opposed to having measured
2.2
   CBM pond coral.
23
              SPECIAL MASTER: But when you said expected
24
   that to happen, what do you mean by "that"?
                            Oh, that. To see a continued
25
              THE WITNESS:
```

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```
low vertical hydraulic conductivity would maintain.
   would not expect to see infiltration increase over
2.
   time.
 3
              MR. DRAPER: Thank you.
4
   BY MR. DRAPER:
5
              Mr. Wheaton, the water that did discharge in
6
         Ο.
   the sealing process, did you determine what the fate of
7
   that water was? Did it discharge, for instance, to
   surface drainages?
9
10
         Α.
              We did not ever actually see it show up at
   this site. We had a spring down-gradient, and we did
11
   not see that water show up in the spring during the
12
13
   study. We had monitoring wells that were 8 feet to
14
    80 feet deep in and around the pond. Those showed a
15
   mounding where the water came down to that depth and
   mounded up. And then that mound dissipated. We had
16
   another set of wells 120 to 150 feet deep. We did not
17
18
   see mounding occur in those wells.
19
              So our interpretation is that the water went
   to approximately 100 feet and then moved on, moved on
20
21
   horizontally.
2.2
              MR. DRAPER: Your Honor, if I may have a
   brief moment?
23
2.4
              SPECIAL MASTER:
                               You certainly may.
                           That should do it, Your Honor.
25
              MR. DRAPER:
```

```
Thank you, Mr. Wheaton.
 2
              SPECIAL MASTER: Thank you. So I have some
    questions of my own. But I'm wondering, rather than
 3
   breaking it up, whether it makes the most sense just to
 4
    stop now. And then we'll come back at about 25 after
 5
    the noon hour to finish up.
 6
 7
              MR. DRAPER: Very good.
              SPECIAL MASTER: Okay. Sounds good.
 8
                        (Recess taken 11:25 to 12:27
 9
10
                        p.m., November 19, 2013)
11
              SPECIAL MASTER: Okay. Everyone can be
    seated.
12
13
                          EXAMINATION
14
   BY SPECIAL MASTER:
              Okay. Again, I think my questions are going
15
         O.
    to be relatively short because I think counsel for both
16
    sides did a good job of covering the documents and
17
18
    making the questions fairly clear on the record. But I
19
    do have a couple of questions.
20
              So the first one deals with Exhibit W228,
21
    which is the groundwater monitoring program and
2.2
   perspective coalbed methane areas of southeastern
   Montana. This is the Montana Bureau of Mines and
23
24
    Geology open file. You have that document?
              Yes, I have it.
25
         Α.
```

- Q. Great. If we could start out just by turning to page 31 for one second.
 - A. Okay.

3

12

13

14

15

16

17

18

19

20

21

2.2

23

24

25

Ο. So there was a passage that Mr. Brown 4 referred you to on page 31. And I'm looking in 5 particular about, oh, halfway through the second main 6 paragraph. It says, "Mining at the west Decker mine 7 has not lowered the water levels in the Squirrel Creek alluvium, which indicate the lack of vertical 9 communication between the coal and shallow aguifers." 10 And then, just hold that particular sentence in mind. 11

If we then turn to page 46. And on page 46 in the second paragraph, the second sentence says, "groundwater levels in overlying and underlying aquifers are expected to show little response to drawdown in the producing coal beds through the presence of shale dominated stratigraphic sequences."

And my question is: Is that referring to the same phenomena?

A. Geologically, it's the same phenomena. The deposition environment is very fine grain material. So if we look in a cross-section across the Powder River Basin, it's really a clay or shale, a very fine grain material with interbedded sand lenses or channel sand lenses and laterally continuous coal seams.

- Q. And is this -- you suggested a moment ago that this is a general phenomenon across the Powder River Basin?

 A. That trend is fairly general.

 Q. So it's a general phenomenon?
 - A. That layering of the clays and the sands.
- 7 Q. Okay.

6

17

18

19

20

23

24

- It's a very heterogeneous setting. 8 it's river deposits. We typically think of coal as 9 10 deposited in a swamp next to the ocean. These are river deposited with raised swamps where the coal was 11 actually developing, and then river systems. And so a 12 13 river system is constantly moving back and forth and 14 depositing different materials in different areas. But 15 as a general rule, we think of it as a very fine-grained material with interbeds of sand and coal. 16
 - Q. Okay. So even though you would tend to find this stratigraphic sequencing throughout much of the basin, the impact would be different in different areas?
- A. Not at depth. Once you're at depth, it would be fairly similar.
 - Q. Okay. Then on page 46, at the end of that particular paragraph, it says, "In larger surface water bodies such as the Tongue River, this impact will not

```
1 likely be measurable. And, again, Mr. Brown asked
2 about that.
```

- And my question is: What do you mean by "measurable" here? Are you talking about physically trying to measure the impact?
- A. I am. Can I make an example?

2.2

- Q. Yes, you certainly may. Again, try to describe as much as possible so it actually turns out on the record.
 - A. I'm used to a more classroom-type setting.
 - Q. You can go ahead and use those. Physical demonstration is great. I just want to make sure you try to narrate it as much as possible.
 - A. If I pour some water from this water pitcher into the glass, we could have marked that, the glass, and probably seen the change in the water level of the glass. I don't think we would have seen a change in the pitcher. It's maybe -- to use that significant term, that's awkward for me to use, it might be significant here, but it's not significant in the pitcher.
- It's that degree of measurability. How accurately can we measure? That's not to say that there's not a change. There's less water in the pitcher.

```
1
         Q.
              That's what I thought you were referring to.
   And I just wanted to make absolutely clear. So when
2
   you said that in measuring, I believe you said like a
 3
    5- to 10-percent error?
4
         Α.
              Correct.
5
              And is -- that's, again, the physical
         Ο.
6
7
   measurement of exactly how much water there is in a
   water body?
              Correct, absolutely. We can calculate, but
9
         Α.
10
   we can't always measure the changes.
              So those were my only questions with respect
11
         Q.
   to that document.
12
              And then if we could turn for a second to
13
14
   Exhibit W236. And both Mr. Brown and Mr. Draper asked
   you about this document. And on page 13 of the
15
   document.
16
              I'm sorry?
17
         Α.
18
         O.
              Page 13 --
19
         Α.
              Thirteen.
20
              -- of the document, there was a passage that
         Ο.
21
   Mr. Draper referred you to during his
2.2
   cross-examination. Second paragraph in the right-hand
   column that says, "The utility of infiltration ponds
23
   can be reduced if the interaction of sodium in the
24
   coproduced water with the floor of the pond causes the
25
```

```
floor to seal, greatly restricting infiltration."
2
              My question is: Is that what you were
   referring to when you mentioned the term deep
3
4
   flocculation?
         Α.
                      Exactly. The clays dispersing from
5
              Right.
   each other and then forming a floc or a layer that's
6
7
   very tight.
             Okay. So that's where that particular term
8
   comes from?
9
10
        Α.
              Correct.
              And when that happens, that is deep
11
         Q.
   flocculation, or is that floc?
12
              I think that's flocculation.
13
14
              That's flocculation. Okay. Because I was
         Ο.
15
    looking through here. Initially, I thought it was
   flocculation. But then I saw another mention of deep
16
   flocculation. But that's flocculation?
17
18
         Α.
              I think that's -- make sure we've got that
   right. Dispersion and flocculation.
19
20
              And then finally, on Exhibit W237, which is
         O.
21
   the PowerPoint presentation. So I just had a couple of
2.2
   questions on this one.
              So the first one was, I know you don't
23
   remember exactly when you gave this talk. But do you
24
   recall why you would have been talking about these
25
```

```
particular infiltration ponds; the one on Coal Creek
and then on Beaver Creek?
```

2.2

A. This talk or similar talks would have been given at our -- we had a team that worked on water management, and so we had annual meetings, and we all got together. And it's part of the peer review process. If we have 20 co-researchers that are working on not these infiltration ponds but on the project, they're familiar with it, we can give a talk and then get feedback from them. So we used talks frequently as a way of getting feedback.

When we go to a conference and give a talk, we're expecting and looking for feedback.

The other potential for this talk would have been one of the working groups, like, the interagency work group may have asked or the Yellowstone River Compact Commission. I've given talks to a number of places that have asked for specific talks on parts of coalbed methane. And so this is -- could have been for any of a number of those.

Interagency working group comes to mind because it says look for the upcoming monitoring report. This could have actually been the controlled groundwater area task. It could have been an update for them.

Q. I guess my question, I need to ask it a different way. So these were not the only infiltration ponds that you monitored?

2.2

A. This was the ones that we did the most thorough monitoring on. We had a couple of places -- well, there's the one that's mentioned in the annual reports that we had wells, a long creek history adjacent to a new pond that came in. So we can watch that water soak into the shallow aquifers but not make it to the deeper aquifer. But we didn't have the record of the pond levels.

We had two sites with Dr. Jim Bauder out of Bozeman where he built a controlled pond that he put a plastic liner and salt when he put the 20-foot ponds in. And he built an unlined pond adjacent to it. And it filled those. We put some wells around and watched that process. Those were from the groundwater with respect to incomplete projects. And then we had a few other sites where we just opportunistically looked at ranchers' flowing wells discharging across the landscape and drilled some holes in the channel and didn't find water underneath the channel.

- O. And where is Coal Creek?
- A. Coal Creek is in Wyoming, east of Sheridan.
- Q. Okay. And is -- this infiltration pond

1 you're describing, was it lined or unlined? Α. Unlined. 2 So that helps. I thought this was probably 3 Ο. something in Montana because so many other things 4 were -- discussed were in Montana. And then I had 5 noticed in one of the reports that you prepared, going 7 back to W236, on page 13 in the -- towards the top, it notes that "Both lined and unlined ponds are used extensively in Wyoming; however, ponds in Montana are 9 currently all lined." 10 So this falls within the category of unlined 11 ponds in Wyoming? 12 13 Α. That's correct. Okay. And then, again, I just want to make 14 Ο. 15 sure I totally understand the chart which is two pages farther along, which is a chart that we were referring 16 to earlier. So, again, the blue line with the 17 18 triangles shows the depth of water in the pond? 19 Α. Right. And then the evaporation rate, which is --20 Ο. 21 are the red bars, that, you're calculating based on a 2.2 combination of the pond depth of the contour of the 23 pond and standard evaporation rates; is that right? 2.4 Α. Correct. Okay. And then what I didn't totally 25 Q.

```
1 understand, and maybe you can walk me through it on
2 here, is how you then calculated the infiltration?
```

2.2

A. So we converted first the pond water level to a pond volume, so every month. Then we did what's really a standard water budget approach. We had this much water. And what's not here is how much water came into the pond from different sources. We didn't put that. But it's implied by the stage of the pond.

By converting that to a volume, which it's shown here as a stage, not a volume because it seemed relevant, then we just subtract the evaporation from that volume. The remaining water, that represents change from each month. The change in storage volume each month has to represent either precipitation coming in, coalbed methane water coming in, evaporation going off, or infiltration going in.

We have a rain gauge, so we knew the precipitation. We've done evaporation studies in the area. So we knew that the standard charts were valid. We could take out the evaporation. And so then the change in storage volume that's left over becomes infiltration.

Q. Okay. So, for example, if you look for what appears to me to be April of 2004, I noticed that there was a large infiltration rate. But it was also very

```
defined when the pond water depth is going up.
    that's because what's not shown here would be things
 2
    that are coming into the pond which could be CBM water
 3
    or it could be precipitation?
 4
 5
         Α.
              Correct.
              Okay. And then turning to the next chart, I
         Ο.
 6
 7
    understood that you calculate vertical hydraulic
    conductivity based on the data from the prior page.
    But could you just define what vertical hydraulic
 9
    conductivity is?
10
              Okay. Yes. The hydraulic conductivity is
11
         Α.
    the ability of a force being transmitted through it.
12
13
    And that's used as the -- one of the factors, one of
14
    the parts of the equation when we calculate flow. Here
15
    we're using a fairly simple approach called the Darcy
    equation. So it's the vertical -- or well, let's first
16
    just start with conductivity. Hydraulic conductivity
17
    times the area it flows through times the gradiant, the
18
    change in head, that's the energy gradiant gives the
19
    flow through the system. If we just turn that up and
20
21
    do it vertically, then we have the same thing.
```

So hydraulic conductivity represents the ease with which a fluid moves through a medium in the simplest terms. And here it's whether we're calculating the vertical movement of the water was

2.2

23

24

```
horizontal movement, and we're specifying vertical
   movement.
2.
             And I notice that the units of measurements
 3
        Ο.
   are feet per D. What does D stand for?
4
5
        Α.
              Day.
              Okay. So that measures how many feet, then,
         Ο.
6
7
   the water would move vertically in a day?
              No. Unfortunately, the unit on hydraulic
8
   conductivity doesn't -- gallons per day, foot squared
9
10
   are another common unit, cubic feet per square foot per
   day. Let's see. I don't even work in those anymore,
11
   so I'm not sure I got that right. So it's not a
12
13
   velocity measurement that's important.
14
              The material is, at the max, in a clean beach
15
   sand, 20 percent pore space. And these materials may
   be 1 percent pore space. The velocity is occurring in
16
   that pore space. And so this is not -- we really can't
17
   think of it as a velocity. But if we calculate the
18
   flux and divide by porosity then come up -- divide by a
19
   porosity, we can get a velocity.
20
21
        0.
              So then vertical hydraulic conductivity would
2.2
   be a measure of what?
```

A. The ease with which water could move

- 24 vertically.
 - Q. Okay. And then you said that you had looked

```
at some other -- you also studied some other
    impoundment ponds. Were there any impoundment ponds
2
   that you studied as part of this research that did not
 3
   encounter flocculation?
 4
              We studied a pond in the south of Gillette
5
         Α.
   that was on channel. This was essentially cut into the
6
   gravel alluvium on a small tributary to Beaver Creek.
7
   So it didn't really change with time. It leaked and
8
   overflowed.
9
10
         Q.
              Which creek was that?
              That's on Beaver Creek.
11
         Α.
              So was that the other --
12
         Ο.
13
         Α.
              That's the other site that shows up here.
14
              And then I have to ask, even though I'm sure
         O.
   it won't be relevant, but is saturated paste relevant
15
   to flocculation?
16
              It's not why we did saturated paste.
17
   Saturated paste was done to calculate the chemistry
18
19
   changes when the water moves through that material.
                                                          Ιt
   dissolves salts and the quality of the water changes.
20
21
   And so we were doing laboratory experiments to predict
2.2
   that.
23
              Okay. And I guess the final thing on
   flocculation. So flocculation is -- the determinants
2.4
   of flocculation is the chemical makeup of the water; is
25
```

Recross-Examination by Mr. Draper JOHN WHEATON - November 19, 2013

```
that correct?
         Α.
              Uh-huh.
2.
              And what else?
 3
         Ο.
         Α.
              And the rock material. So a sand grain will
 4
   not come apart. But a clay, because the structure
5
   internally, that stack of platelets, of clay platelets,
6
7
   will come apart.
              So in the case of the Coal Creek infiltration
8
   pond, the flocculation was a combination of the sodium
9
10
    in the water, in the CBM water, and the high clay
   content of the soil; is that correct?
11
12
         Α.
              That's correct.
13
         O.
              Okay. Great.
14
              SPECIAL MASTER: Those are the only questions
15
   I have. Thank you.
              But at this point, Mr. Draper's entitled to
16
   ask any other cross he wants on those particular
17
18
   issues.
19
              MR. DRAPER: Thank you, Your Honor.
20
              SPECIAL MASTER: You're welcome.
21
                      RECROSS-EXAMINATION
2.2
   BY MR. DRAPER:
23
              Just wanted to follow up, Mr. Wheaton, on a
   couple of the Special Master's questions. He was just
24
   now asking you about Exhibit W237, the PowerPoint.
25
                                                         And
```

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```
we were looking at the two graphs. I think they're
   slides 6 and 7 in that. First, as to vertical
2.
   hydraulic conductivity, which is on the screen right
 3
   now, that graph -- and you were talking about units.
4
   Well, the units can be kind of confusing to us
5
   laypeople. When hydraulic conductivity goes to zero,
6
7
   there's no flow through the medium; isn't that right?
              If it actually went to zero. But I want to
8
   reemphasize what I said earlier. It would very rarely
9
10
   go to zero. It did not go negative.
              I'm not suggesting any particular situation
11
         Q.
   or anything. But when hydraulic conductivity goes to
12
13
    zero, flow through the medium goes to zero?
14
        Α.
              It would, yes.
15
              SPECIAL MASTER: Can I just ask one guick
   question? If I actually look at the chart on that
16
   page, it looks as if it goes below zero.
17
18
              THE WITNESS: That is part of the error of
   measurement. And while I would not report a negative
19
   number, I presented all the data on the chart.
20
21
              SPECIAL MASTER: That's good.
2.2
   BY MR. DRAPER:
              And then turning to the previous graph that
23
   you discussed with the Master. You discussed
24
   infiltration. Now, just to be clear, the type of
25
```

```
infiltration that you're referring to here is not
    infiltration to the regional aguifer system, is it?
2.
              Not -- and I think I said that in my original
 3
         Α.
   testimony. At this site, we had a set of wells that
4
   were 80 to 90 feet deep, another set 120 to 150 feet
5
   deep. We saw the mound in the shallow wells. We did
6
   not see the mound underneath those wells. So I don't
7
   know of a case where it's gone -- where that
   infiltration has gone deeper than, say, a hundred feet.
9
              So you have not seen indications that there
10
         Ο.
   was any infiltration to the regional aguifer system?
11
12
         Α.
              Not in my work, I haven't.
13
         Ο.
              Would an assumption of 25 percent, getting
14
   back to the regional aquifer system, seem appropriate?
              Based on my work. And that's all I can base
15
         Α.
    that on. I haven't seen a site where any water made it
16
   to the original aguifer. So the 50 percent that leaked
17
   out of the pond, that's just leaking out of the pond
18
19
    into the shallow system. 25 percent could be a random
20
   number.
             I just haven't seen anything get to the deeper
21
   system.
2.2
         Q.
              Nothing at all?
23
              Nothing. In my data.
         Α.
24
              SPECIAL MASTER: I'm sorry. I just have one
   other question regarding this chart. The 30 percent
25
```

Recross-Examination by Mr. Draper JOHN WHEATON - November 19, 2013

```
and 70 percent, so 30 percent evaporation, 70 percent
    infiltration, is that simply taking up the total of the
2.
   yellow bars and the total of the red bars and have
 3
   turned out, and in this case, it was 30 percent?
4
              THE WITNESS: Correct.
5
              SPECIAL MASTER: And that was over this
6
7
   entire period?
              THE WITNESS: Over this period. And that's
8
9
    just, if we imagine the pond edges to be a boundary, it
10
   crossed the boundary. That's not addressing the fate
   of the water.
11
12
              SPECIAL MASTER: Correct.
13
              MR. DRAPER: Very good. Thank you. Your
14
   Honor, no further questions.
15
              SPECIAL MASTER: Okay. Thank you.
              Mr. Brown?
16
             MR. BROWN: I'm trying to decide if we've
17
18
   flocked that one enough.
              SPECIAL MASTER: I just like saying deep
19
   flocculation so much that I had to ask those questions.
20
21
             MR. BROWN: I don't think I have anymore
2.2
   questions. Thank you for coming, Mr. Wheaton.
              THE WITNESS:
                            Thank you.
23
24
              SPECIAL MASTER: So, again, thank you very
25
   much.
          And so you can step down now.
```

```
1
              THE WITNESS:
                            Okay. Thank you, Your Honor.
              SPECIAL MASTER: You're welcome.
2
 3
              MR. KASTE: At this time, the State of
   Wyoming would call Mr. Fassett to the stand.
4
5
              SPECIAL MASTER: Mr. Fassett, you can come
   forward.
6
7
              (Gordon Fassett sworn.)
              THE CLERK: Have a seat. And if you'd state
8
9
   your name and spell it for the court reporter, please.
10
              THE WITNESS: My name is Gordon, G-o-r-d-o-n,
   W. Fassett, F-a-s-s-e-t-t.
11
12
              SPECIAL MASTER: So good afternoon,
13
   Mr. Fassett. Thank you for coming today.
14
                       GORDON W. FASSETT,
15
   having been first duly sworn, testified as follows:
16
                       DIRECT EXAMINATION
   BY MR. KASTE:
17
18
              Mr. Fassett, you started off today, but I
   want to put it on the record as well so it's absolutely
19
   clear. We'll often see your name in various documents
20
21
   in this record as Jeff; correct?
2.2
         Α.
              That's correct.
23
              Okay. And do you often go by the nickname
         Ο.
   Jeff?
2.4
25
         Α.
              I almost always go by the name Jeff.
```

```
1
         Q.
              All right. How do you get Jeff out of
 2.
    Gordon?
              A grandparent, a long, long time ago, used to
 3
         Α.
    call me by my initials, G.F. And he'd say G.F.
 4
              It turns into Jeff.
 5
    quickly.
              And it stuck?
 6
         Ο.
              Don't ever do that to your children because
 7
         Α.
    I'm now 61 years old still explaining my name.
 8
              Well, I have a daughter and I call her J.J.
 9
    So I've already screwed that up. Her name is Jamie.
10
    And she's rebelling against that moniker at this point.
11
              Obviously, everybody here has been here for a
12
13
    long time and are aware that you are the former state
14
    engineer for the State of Wyoming. And so you're here
15
    to testify about your time in the state engineer's
    office. That's what we're here to do. And he's also,
16
    as a former and long-time state engineer going to talk
17
    to you a little bit about the question you raised with
18
19
    regard to how reservoirs are operated and accounted for
20
    and regulated in Wyoming.
21
              So what I'd first like to do is give
2.2
    everybody a more complete picture of your background.
    And so if you could give us a brief history of your
23
    educational background, that would be helpful.
24
```

I went to University of Wyoming in

Α.

Sure.

```
1 Laramie. And I graduated with a bachelor's of science
2 degree in civil engineering in 1974.
```

- Q. And do you have any other, say, non-degreed educational experience?
- A. I took some graduate level classes as part of that. I was on a four and a half year program at that school. So I had the opportunity to take some graduate classes, did not get an advanced degree.
- 9 Q. I was going to say, graduate classes in what?
- A. Well, one of them, as it turns out, was
 helpful for my future career. Because it was an
 elective called Wyoming Water Law that I took at the
- 13 law school as an engineer. I then took --
- SPECIAL MASTER: Can I just ask, who did you take that course from?
- 16 THE WITNESS: That was from Professor
- 17 Trelease, the author of the book.
- 18 MR. KASTE: And you got it from the man's
- 19 | mouth.

3

- 20 BY MR. KASTE:
- Q. And can you give us a brief history, then, of your professional employment beginning with the -- say,
- 23 | your first job after you obtained your degree?
- A. Sure. I went to -- my first job out of
- 25 school was with the Denver Water Department. Denver

Water is what they call themselves now. They are the major Denver metropolitan area water supply agency. 2. Ι worked there for about five years. 3 And that entire time, I was in what they 4 called, at that time, sort of the raw water operations 5 I was the part of the staff that was involved 6 with making the decisions about how to run the 7 reservoirs in delivering water down to the water treatment plants, which then treated the water and 9 delivered it to the citizens and customers of the 10 11 Denver Water Department. So as part of that job, we were very much 12 13 involved with the reservoirs, the water supply 14 collection systems in the mountainous areas of Colorado that they depended on almost exclusively in the 15 tunnels. Much of the water of the Denver Water 16 Department is imported from the West Slope, the 17 Colorado River Basin into the South Platte River Basin. 18 19 So all of those facilities to divert, gather, store, and manage the untreated water was the responsibility 20 21 of the group that I worked in. 2.2 And as part of that, I got my real life first introduction into the water law in the state of 23 Colorado through their water court system. Because 24 often it would be the data we collected of how much 25

water was diverted, which was then used by the
attorneys representing the Denver Water -- or in water
court to prove up their water rights usage. And that
was all part of the staff work that I had done through
my years there.

Q. All right. And after the five years you spent with the Denver Water Department, what was your next professional experience?

2.2

A. Left and went to work in a private engineering consulting practice. I worked for a firm called -- again, at that time, it was called Leonard Rice Consulting Water Engineers. And it was a small firm of about 15 people. It's much bigger than that now. But back then, there was about 15 people. And, again, it was a consulting engineering practice, private engineering practice working for a variety of private, governmental, different sorts of clients.

Again, actively involved with the water rights activities. They were what we would term back then sort of a specialty firm. It was a firm that was very much focused on surface and groundwater hydrology and water rights activities, water supply studies for our clients, and then representing those clients again in front of the state water court system that the state of Colorado uses to handle water matters.

```
Q. And that position, you were there from, I think, in 1979 through --
```

2.2

- A. Through March of 1984. Probably the most significant activity during my time at Leonard Rice was during that time, we became -- that firm was retained to the Wyoming Attorney General's Office. And we were provided much of the technical support on hydrology and water rights analysis and water rights modeling for, at that time, the new Big Horn River general adjudication case.
- It was the general adjudication case in the state of Wyoming that was started in the late 1970s.

 Leonard Rice was retained by the Attorney General's Office to support the outside legal counsel to provide technical work, investigations, testimony work for that adjudication proceeding which was about a quarter of the state of Wyoming was involved with that case.

During my time with Leonard Rice, I was the lead technical person for our firm among a whole bevy of experts that had been hired to support the state of Wyoming in that adjudication process.

- Q. And is that adjudication process done today?
- A. It is not done.
 - Q. Still working on that one; right?
- 25 A. We are. Waiting for the last 40.

Q. We can take comfort in these proceedings that it's not going to last as long as the Big Horn adjudication.

So you said that that position with Leonard Rice ended in March of 1984. Where did you go from there?

2.2

A. From there, I was retained by the state of Wyoming, took the position of deputy state engineer. I'd gotten to know the state engineer's office very well through all of our activities. I was living in Wyoming almost full time or at least a lot of the time doing our work for that case. The major body of that initial adjudication on their tribal reserved water rights was the first phase of that case, which you said is still going on 40 years later. But the first phase dealt with the tribal-based reserved water rights. And all of those trials were in primarily '79 and '80. And some of the early rulings flowed thereafter.

Because of my knowledge, and I got to know the people at the state engineer's office, then State Engineer George Christopulos offered me a position as his deputy. And so I left Leonard Rice and moved to Cheyenne.

Q. And can you give us an idea, sense, of what the duties of the deputy Wyoming state engineer were at

that time? 2 Sure. Under Mr. Christopulos' leadership, he Α. looked at that position as what the title might 3 suggest; as his deputy. So I had the quite good 4 fortune, actually, to sort of be involved in most 5 everything that went on. I was not the decision maker 6 7 he may have been, but he was very aggressive in involving me in many of the activities and responsibilities of the state engineer's office as the 9 10 deputy. The deputy, back then, again, had a very --11 had a few sort of formal roles. One of the formal 12 13 roles of the deputy state engineer was actually the 14 secretary to the State Board of Control, which is the 15 adjudicatory body for the water rights in the state of Wyoming. And changes to water rights is through the 16 State Board of Control. And the deputy had a formal 17 role back then as being secretary to the board. 18 19 So I really got very good exposure of working for Mr. Christopulos as his deputy in both -- whether 20 21 it was sort of the agency operational things dealing with budget or whether he would, again, allow me to 2.2 accompany him to compact commission meetings. He would 23 involve me in decisions dealing with the permitting, 24 things of that nature. So I had a fairly comprehensive 25

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exposure to the entire agency.
              Did you have any opportunities to become
2
         Ο.
    involved, as deputy state engineer, with the
3
   Yellowstone River Compact Commission?
4
              Yes, I'm pretty sure I didn't -- it was back
5
   a long ways, but I'm pretty sure I -- he would have
6
   routinely asked me to join him at those kinds of
7
   meetings. And so I often accompanied him to the
   Yellowstone as I did other interstate compact meetings
9
10
   or similar interstate organizations dealing with water
    issues.
11
12
              I think this is worth asking. In your
         Ο.
13
   position as deputy state engineer, did you get the
14
   opportunity to gain an understanding of
15
   Mr. Christopulos' relationship with the folks in
   Montana as it may relate to the Yellowstone River
16
   Compact?
17
              Well, yes. I mean, again, I was with him.
18
         Α.
   My office was physically next door to his in our
19
20
   office. And I, like I said, accompanied him to many of
21
   the meetings. Sometimes there were -- I believe back
2.2
    then there were even some sort of conference call type
   sessions that he would have allowed me to sit in.
23
   quess my sense, Mr. Kaste, is the relationship was
24
```

certainly professional. It was a state-to-state

relationship that we always take very seriously. I think I came at a time when there was a 2 There were strong differences of opinion on a 3 dispute. 4 couple of points. And I think that as a new party, sort of showing up and beginning to learn about those 5 issues, I could sense sort of the frustration, if you 6 7 will, between the parties at times. But I always deemed it as professional and sort of legitimate differences of opinion on certain points. 9 And we're going to get to a point in our 10 Q. discussion where we talk about what those issues were. 11 But what I'd like to do is to finish out 12 13 talking about your employment history. And there did 14 come a point in time when you moved from deputy state engineer to state engineer. When that was? 15 I did. In March of 1987. Mr. Christopulos 16 Α. had retired from state government. He was also at the 17 end of his term. State engineer in the state of 18 19 Wyoming is -- actually operates on a term. And so I 20 sought and was appointed by the governor to become the 21 next Wyoming state engineer. So the Wyoming state engineer is appointed by 2.2 23 the governor of Wyoming? It is. And you are confirmed by the state 24 Α. legislative senate. And then you serve a six-year 25

term.

2.2

- Q. All right. And can you describe for us, just generally, what the responsibilities of the Wyoming state engineer are? And I guess I would break those up into some different concrete packages, first being within the state of Wyoming, and then in your role as state engineer on an interstate basis.
- A. Sure. Well, the state engineer's office, the way Wyoming state government is structured, you are the chief water official. The statutes and the state constitution, the State of Wyoming creates that position. And you are the chief water resources, water rights official for the state. And that's what the agency does.

The shorthand we used to use was sort of the three A's we called them: appropriation, adjudication, and administration. And so the state engineer was sort of a one-agency package for all things water, all things water rights in the state of Wyoming. Whether you were seeking to use water, you need to appropriate that. And the only way you can appropriate water in the state of Wyoming is to get a permit to do so from the state engineer's office.

So that's a major function of the agency.

The agency, through the Board of Control, is also the

```
entity that adjudicates those water rights. A process
    that's going on against the statehood, the Board of
 2.
    Control has also created that statehood in our state
 3
 4
    constitution.
              And then part of the state engineer's office
 5
    is the administration or the regulation of the prior
 6
    appropriation doctrine. So all of the officials,
 7
    starting with the division superintendents, the termed
 8
   hydrologist, the water commissioners, all of the
 9
10
    network of people that are scattered around the state,
11
    again, all report back up through the agency to the
    state engineer.
12
13
              So as state engineer, you're really the
14
    agency head over all of those sort of water right
15
    functions, as well as being an agency head of state
    government and dealing with the politics and the budget
16
    and the personnel management and all the other
17
    functions that comes with the state agency of state
18
19
    government.
20
         Ο.
              Let's take a short detour. Because in the
21
    course of that, you talked about the Board of Control.
2.2
    And it's sort of a weird looking animal. And I don't
    know that anybody has explained that very well yet to
23
    the Special Master about how the Board of Control is
24
    made up and what its responsibilities are.
25
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And if you could give us some idea about those subjects, that would be great.

2.2

A. Okay. Wyoming State Board of Control, again, as I mentioned, was created in our state constitution. It then -- it is made up of a five-member board. It's made up of the person who holds the position of state engineer and the four water division superintendents.

The state is divided into four major river basins, some have multiple basins, but basically quadrants following the hydrologic divides of the state. And each one of those geographic areas had a division superintendent, is what that's termed. It's the chief regulatory official for that portion of the state. So the four superintendents and the state engineer sit as the State Board of Control.

Board of Control has the primary responsibilities to deal with the final step or the adjudication of water rights. You first receive a permit. The water user then puts that water to use, notifies the state that they made beneficial use of that water. Once that notice is submitted to the Board of Control, then that goes out, goes through what the user did, how he put the water to use, was it conformance with the permit or not. And then that — those documents and that evidence comes back before the

```
Board.
           And it's the Board of Control, five-member
   board, who then approves the adjudication. It issues
 2
    what we call certificates of appropriation.
 3
              The Board of Control, though, importantly
 4
   handles all changes to water laws. So if somebody
 5
    wanted to make a change of use, the change of type of
 6
    use, a change in point of diversion, any sort of
 7
    changes to those water rights once they have been
 8
    adjudicated, that requires a process called
 9
10
   petitioning.
              You submit a petition or a request to the
11
    State Board of Control. And it's that five-person
12
13
    entity who then reviews and approves, holds hearings on
14
    whether those changes should be approved or denied.
              So those are sort of the main activities.
15
    And the people who staff that are part of the state
16
    engineer's office. While the state engineer makes the
17
    initial decision on the appropriation of water by
18
    issuing permits, it's the five-member board who does
19
20
    the adjudication process and then handles changes to
21
    those water rights subsequent.
2.2
              So the division superintendents wear two
23
    different hats. And do I get this right, when they're
    acting in their capacity as superintendent, you're
24
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their boss, and when they're acting on the Board of

Control, you're all members of the board?

- A. And we each get one vote; that's correct.
- Q. That seems a little odd.

2.2

- A. The constitution actually says almost the identical thing, for both the state engineer and the state...
 - Q. Well, I think that's helpful to understand a little bit about the administrative process in Wyoming. And I kind of interrupted your answer. I wanted you to explain the state engineer's interstate role.
 - A. Again, in addition to being appointed as state engineer, it is the governor of the state of Wyoming that independently needs to appoint somebody to be the compact commissioner to all the various compacts and a variety of the non-compact types of interstate entities. The tradition in Wyoming has always been that it was the state engineer that was appointed to be the compact commissioner or the state's representative at any of those sort of interstate water organizations, whether they were in a regulatory setting or in a policy setting.

So in addition to being appointed state engineer in 1987, I was, at the same time, appointed to be Wyoming's representative to all the different interstate compacts that Wyoming is a party to.

The good or the bad part of being in Wyoming 1 is our geography. And our geography in the state of 2 Wyoming is you're at the top. And all of our water 3 flows downstream to somebody. So the state of Wyoming 4 is surrounded with interstate relationships with our 5 neighboring downstream states. Some of those are 6 7 through compacts. Others of those are through equitable apportionment decrees of the United States 8 Supreme Court. And the state engineer in the state of 9 Wyoming spends a lot of time on those issues. 10 We are at the top. We are of a small 11 population. We are still growing into our water uses. 12 13 And we have many, many downstream neighbors who are 14 more quickly growing into their water use. And those neighbors always have an eye on the upstream source of 15 the water at some time. So the state engineer has that 16 interstate responsibility to monitor, to stay abreast 17 of issues that are occurring not only in the legal 18 sense under formal compact commissions or other 19 organizations, but even on a policy level. We would 20 get involved with matters dealing with the Endangered 21 2.2 Species Act, things of that nature, where the endangered species weren't in the state of Wyoming; 23 they were downstream from the state of Wyoming but 24 clearly can have a ricocheting effect if you go up our 25

1 river basins to the state of Wyoming.
2 So those interstate respons

So those interstate responsibilities were important to the bevy of in-state issues of handling the water rights system of the state of Wyoming.

- Q. So as part of your coming into the state engineer position, were you appointed commissioner -- Wyoming's commissioner for the Yellowstone River Compact?
 - A. I was.

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- Q. All right. And did you have opportunities in these intrastate dealings with our neighbors all around Wyoming to get to know the water officials of the surrounding states?
- A. Yes. Quite definitely. Either through the direct sort of compact commission type entities, but really through other water resource organizations as well.
 - Q. And what are you referring to there?
- 19 Well, for instance -- well, there's a number Α. But there is an organization called the 20 of them. Western States Water Council. That is a entity that 21 2.2 grew out of the Western Governors' Association, where there are three members from each of the western 23 states. If you are a member of the Western States 24 Water Council -- and Wyoming has always been a member 25

```
since the beginning. And it includes almost every
   western state west of the Mississippi, in general
 2
    terms, were members.
 3
              And so often, the chief water resources,
 4
    water rights official, often the chief water quality,
 5
   DEQ type agency, and the chief water attorney for the
 6
    state were often the three members that would attend
 7
    Western States Water Council meetings on behalf of each
 9
    state.
10
              I was appointed one of the members of Wyoming
    for the Western States Water Council, attended their
11
    meetings. They were initially four times a year.
12
13
    they became three times a year. And so I actually
14
    became the chairman of that organization during my
15
    entire tenure.
16
              But it was at those meetings where, again,
    your counterparts from all of the western states or the
17
18
    counterparts to the DEO agencies would gather
   periodically to deal with issues of federal
19
    legislation, water policy, water law issues of
20
21
    interest. And so you would see your counterparts
2.2
    outside of just attending any formal meetings of the
    commission.
23
              And there were multiple organizations like
24
    that.
           The other one that we shared with the state of
25
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Montana, was the Missouri Basin States Association, which I don't think exists anymore. But back then, 2. there were the nine states that were party to the 3 Missouri River Basin States. That organization has 4 been reformulated. It's called something else now. 5 But, again, that would be another 6 organization that would meet sometime each year. 7 And, again, you would see your counterparts in a different 8 environment dealing with different issues. 9 weren't your state-to-state sort of issues. But you 10 were dealing with these broader issues of, perhaps, a 11 Clean Water Act, the Endangered Species Act, things of 12 13 that nature that would bring those entities together to 14 look at sort of the state's view. 15 It was often an organization where the states were sort of circling the wagons, if you will, if there 16 were a particular federal policy that the state water 17 organizations didn't like. That was certainly true in 18 the water rights world where the states' primacy in 19 water rights allocations decision is very closely 20 21 quarded. And whenever there were appearances of 2.2 federal control over water rights sorts of issues, the states would be involved with those kinds of things. 23 That sounds typical for the western states to 24 Ο. be concerned, of course, about the federal government. 25

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So is it a relatively small or a large group of people
    that are involved in these kinds of meetings that
 2.
    you're discussing and these kinds of other
 3
    opportunities to visit?
 4
 5
              They were generally pretty small. The term
    you grow up learning is that they used to call it the
 6
    Water Buffalo Club. And the idea was that it almost
 7
   had a club-like atmosphere. The directors of the
    departments of water resources from 18 states, at most
 9
10
    were 18 people. And you would have different
    combinations with them in different places for
11
   different organizations.
12
13
              So over my tenure, about 13 years, you got to
14
   know those people very well 'cause you saw them in both
15
    a -- as a state-to-state, perhaps, kind of issue,
   between your state and their state if they were one of
16
    our direct neighbors. But I also got to know state to
17
18
    state my counterpart from states that were much farther
    away, that we had a more distance relationship with,
19
    but we're connected by the river basins, if you will,
20
21
    that Wyoming shared.
2.2
              Again, Wyoming's geography puts us in the
    Snake, Columbia, the Colorado, the Missouri,
23
    Yellowstone, part of North Platte. If you follow those
24
    rivers to the end, there weren't too many states west
25
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of the Mississippi that we didn't deal with on a regular basis, when you were in a position that I had.

Q. All right. I'd like to finish up briefly finishing out your work experience. There came a time when you stopped being the Wyoming state engineer and moved on to do something else.

Can you tell us about that?

2.2

A. I did. As I said, the state engineer is on a six-year term. I was appointed in '87, reappointed six years later. Reappointed six years after that. But I only took about a year and a half or so in that last term and had just sort of burned out, if you will.

But I did move on. I went back to private engineering practice. I initially opened my own firm. I stayed in Cheyenne, Wyoming, which is where I'd lived all those years, opened a firm Fassett Consulting. I was a sole proprietorship. And went back to -- at that point in my career, I was sort of ready for no boss, no staff, if I can characterize it that way. You just will burn out on a job like that.

And so I did that for about six years, handled a wide variety of private governmental clients, consulted back to Wyoming and other states during that time. And then I moved to a larger firm. I'm currently with HDR Engineering, a big national

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architectural engineering firm based in Omaha,
   Nebraska, offices almost everywhere in the country.
 2.
    And my small office in Cheyenne became the HDR
 3
    Engineering office for Cheyenne, Wyoming.
 4
              So after going back into private practice
 5
         Ο.
   both on your own and for HDR Engineering, are you still
 6
   dealing with water issues?
 7
                     That's primarily still in the focus
 8
              Yeah.
 9
    area of my career. Water supply; water rights issues;
    represent private landowners; work for municipal
10
    clients; work with state, local, federal government
11
    agencies. If there's water rights, water supply
12
13
    issues, we believe we can be of help. Primarily that
14
    work is in Wyoming. But I've had client relationships
15
    outside of Wyoming and other states as well during my
    return to private practice.
16
              And I think I skipped over this earlier on.
17
    But just generally, are you a member of any
18
   professional organizations?
19
20
              First, I assume you have a license as an
21
    engineer; correct?
2.2
              I do. You have to be a registered
23
   professional engineer to be the Wyoming state engineer.
    But I had it as soon as I could get it out of school.
24
              And what states are you licensed in?
25
         Q.
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A. It's -- well, you get a professional's engineer license for the area of expertise that you're competent to practice in. You have that discretion.

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- Q. My understanding is often you'll get licenses from various states and engineers and geologists and such would say, I have a license from Wyoming and Colorado. Do you have licensure in multiple states?
 - A. Right now, I have just Wyoming and Colorado.
- Q. And I understand that you also hold a position on the Red River Compact Commission?

I did -- or do, excuse me. After I left the Α. state of Wyoming service, again, because of -- in part because of the relationships you build with your fellow water resource state agency heads, it was a couple years, I think it was fall of 2002, I was approached by folks in Texas, Oklahoma, and Arkansas, three of the four states that are part of the Red River Basin of the south and not the Red River of the north, asking whether I would be interested in serving as the federal representative to that compact commission. Those four member states, it had an awful lot of turnover in the federal chairmanship. And they became sort of frustrated with the inconsistency of attendance and participation, to have the chairman be a bit more engaged.

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1
              So they reached out to me, I think in part
   because I'd been on interstate compact commissions
 2.
   before, partly because I had no direct connection to
 3
    those four states. They were looking for somebody that
 4
   knew the prior appropriation doctrine, who understood
 5
    the relationships of compacts and things.
 6
 7
              So they ultimately elevated my name. That's
    an appointment by the president of the United States.
 8
    So I was appointed by President Bush back in 2002. And
 9
    I've remained in that position ever since. And so I --
10
    that is a nonvoting chairman of the compact commission.
11
    There's actually a nine-member commission in that case,
12
13
    four states each, with two members, and a single
14
    federal representative who is also the chairman.
                                                       And
15
    that's the position I hold.
              So you've held that position from 2002
16
         Q.
    through the present?
17
18
         Α.
              Through the present.
19
              And how do they fire you?
         Ο.
              You serve at the pleasure of the president.
20
         Α.
21
    So whenever the president wants to make a change, he
2.2
    can do so.
23
              So they have to complain to the president,
24
    and nobody has done that that you know of?
              Not that I know of. They have come to -- I
25
         Α.
```

think my first meeting there, I wonder who was this guy from one of those funny square states out west. 2. it's been a great experience for me personally to 3 involve myself in a very different river basin. 4 A couple states worrying about flood control 5 and navigation, and a couple others fighting over 6 whether northern Dallas can have water from Oklahoma. 7 So you couldn't ask for a better mix of issues, 8 something that didn't touch the state line. 9 10 Q. Well, congratulations on that appointment. Earlier, I told you that we would talk about 11 sort of the nature of the issues that arose between 12 13 Montana and Wyoming related to the Yellowstone River 14 Compact during your time in the state engineer's office. And there I'm not limiting it to the time you 15 were state engineer but also the three years preceding 16 when you were the deputy state engineer. 17 Can you give us a sense of the issues that 18 19 existed during your tenure for the state engineer's office between Montana and Wyoming related to the 20 Yellowstone River Basin? 21 Sure. There was a variety of things. 2.2 sure I'm not going to remember all of them. But when I 23 first got there, I think that was soon after the 24 commission had first adopted the formal rules on the 25

adjudication of interstate ditches. I think that had just been finalized, if I'm recalling correctly. Ι 2. don't have the exact dates. 3 But that was an issue that had been going on. 4 And I showed up. And that was -- became an ongoing 5 activity and ongoing topic of discussion among the 6 states, dealing with the finalization of the water 7 rights associated with states that have a point of diversion in one state and a point of use in the other 9 10 going both ways. That was one of the issues. We -- the 11 compact commission would routinely talk about sort of 12 13 activities that were going on in each other's states 14 from a water resource standpoint. New water development activity was often a topic of discussion in 15 one of the states or the other. 16 There was often -- during my tenure, quite 17 honestly there was a fair amount of discussion about 18 19 how Wyoming did business, how we did water rights, and 20 our permitting structure, adjudication process, the 21 regulation of water rights. It was, you know, a pretty 2.2 open and free discussion about folks just learning from each other about how things are done in the other 23 24 states, if you will. Why would you be discussing, sounds like in 25 Q.

some detail, how Wyoming did things?

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Α. Well, I think Montana was curious, as we were 2 curious about their processes 'cause they were often 3 quite different. The processes -- some of those 4 processes within the state of Montana were much newer, 5 and I think our basic structure of permitting and state 6 7 adjudications and the regulation of water right all the way back to statehood. So we'd had sort of an 80-year head start on some of those activities because we don't 9 have as much water. And so we had a more rigid system. 10 And I think, certainly my sense was that Montana folks 11 were embarking on a very broad-based, very complex 12 13 adjudication process of their own. So they were 14 curious about how our processes worked.

We were also, during that time, in the middle of the Big Horn River general adjudication process, which was, again, slightly different than our Board of Control process, but involved the tribal reserve water rights. So there was lots of issues about how that process was occurring.

We had discussions about issues of instream flow. Just early in my tenure, our state passed the state instream flow law. And Montana, again, had a different approach to handling instream flows. So there was discussion about that. We had Wild and

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Scenic designation on the Clarks Fork, one of the compact tributaries. So that was a topic of discussion at times as well.
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So it was fairly broad-based set of things that would get talked about.

2.2

Q. One of the things you mentioned is the -- I think you described it as interstate -- see if I get it right -- interstate ditches, and there being certain ditches that cross the state line between Wyoming and Montana and some discussion about how that ought to be addressed by both states.

Did that issue ever get resolved or addressed by the Yellowstone River Compact Commission?

A. It did. They actually went through a very formal sort of rule. They actually adopted a set of rules, was the sort of the mechanism, if you will, under the compact guidelines and the commission itself. And so there was -- I wasn't there for all that history. Although, my understanding is there were some sort of commissioners assigned, work-up forms, what the forms should look like. There was a lot of dialogue among the states and with the federal representative to the commission to talk about how to provide proper notice, the collection of claims to those interstate ditches, how they would be reviewed, how -- depending

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on which side of the state line it was on, either my
   staff would be involved or the Montana staff would be
2.
   involved.
 3
              And so there was a lot of communication about
4
   trying to implement that. But it was ultimately
5
   embedded in a set of rules, and that's what really
6
7
   guided that process.
              So in that particular instance, the
8
   Yellowstone River Compact Commission was able to
9
   effectively resolve the issue?
10
11
         Α.
              They were, yes. I think quite
    satisfactorily, from my understanding.
12
13
              And we've all gotten the impression
   throughout the course of these proceedings that that
14
   wasn't always the case. And there was -- one of the
15
    issues that was apparent between the states during your
16
   tenure was the decision-making process of the
17
   Yellowstone River Compact Commission; is that fair?
18
              That is fair.
19
         Α.
              Can you describe what the issue was and how
20
         Ο.
   it was resolved, if it was?
21
2.2
              Well, as I said, there had been a dispute
   brewing before my time about the role of the federal
23
   chairman and when and how and under what circumstances
2.4
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would that chairman sort of be the tie-breaking vote,

1 if you will, and some dispute that may have gotten 2 elevated to the commission.

2.2

And there was a lot of concern about what kinds of issues could be elevated. There was then a lot of frustration, I think, by some that the federal chairman we had, sort of chose to not get involved with a heated issue between the two states. And so I think that was a source of frustration.

During my time, though, we worked to get through that. And while, perhaps, not tackling some of the issues head on, we did develop a dispute resolution process.

And we actually had some outside folks come from -- actually from the state of Montana that were involved with the mediation and dispute resolution techniques. Those were certainly -- in my view back then, they were relatively new. It's certainly much more commonplace now to -- lots of organizations involved with dispute resolution. But that was sort of a new thing. And we thought, well, let's at least try to put a more structured process in place that would allow these issues sort of -- if you will, to sort of germinate and be worked on through resolution process before you might be confronted with sort of a hard vote or very controversial or very difficult decision in

front of the commission itself.

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- Q. One of the issues, I think that we've heard a little bit about but not terribly much, had do with, I assume, the Middle Fork project; is that right?
 - A. The Middle Fork Dam project.
- Q. Nobody has really explained that, I don't think, very well to the Special Master. What was that about?
- The Middle Fork Dam, as the name suggests, 9 was a proposed dam on the Middle Fork of the Powder 10 River, west of Kaycee, Wyoming. That Middle Fork was 11 one of the better producing headwater area streams for 12 13 the Powder River Basin. And it was a proposed dam that 14 had been proposed a very long time ago. In fact, I believe I recall correctly, the initial permit 15 application for a water right permit for that dam site 16 was originally approved in the 1940s. 1945 is -- I'm 17 not sure if that's exactly right. But it was in the 18 1940s. A permit was issued to build the dam. Under 19 Wyoming law, you have to get a permit. The permit was 20 issued. 21

The project proponents then went on a long period of time of trying to develop the project, get the funding, do the technical engineering studies, to sort of firm up the site with those sorts of things.

1 That -- I don't have the whole history of that project, but it sort of ebbed and flowed sort of 2 over time. But during my tenure as the compact 3 commissioner, it became a bit more heated. 4 Montana was interested in the project because they saw 5 the state itself becoming more interested in the 6 7 project. The state in the late 1970s, State of Wyoming 8 9 set up a water planning and development program that's funded by mineral royalties, natural gas, coal, and 10 oil, going to a special fund for water planning and 11 development activities with a goal of beginning to have 12 13 state funding support to local entities, whether they 14 are irrigation districts or municipalities or the state itself in developing more of our allocated but unused 15 water supplies. 16 The state itself showed some interest, began 17 doing some studies on the Middle Fork project itself. 18 Those studies were shared. Information about all that 19 was routinely shared at compact commission meetings. 20 think -- we can look in the logs. I'm sure the minutes 21 2.2 reflect the project was discussed, the water development program was discussed during meetings. 23 But there became a dispute, if you will, over 24 how, if perfected -- if perfected, what would be the 25

```
effects of that project on the water supplies on the
    Powder River and on the compact and on the compact
 2.
    allocations. There was also concerns about water
 3
    quality that had not yet been fully studied, but
 4
    certainly there were concerns that this dam sort of
 5
   would store some of the better quality water that would
 6
 7
   be put to beneficial use in Wyoming. And that might
   have a degrading effect on the remaining water supplies
    on the Powder River. So those were the variety of
 9
10
    concerns that had been expressed.
              Can you give us a flavor of what the parties'
11
         Q.
    positions and interactions were in the context of the
12
13
    Yellowstone River Compact Commission related to the
14
   Middle Fork project?
15
              I think just the -- my recollection of the
    nub of the argument was as of 19 -- if perfected under
16
    Wyoming law, the priority date of that reservoir would
17
    relate back to the original date the permit was issued.
18
    So it would be a 1945 -- it would be a 1940s
19
    pre-Compact right under Wyoming law.
20
21
              And the issue of concern was whether that was
2.2
    correct or not under the compact and sort of the --
23
    whether it was pre- or post-Compact and how the waters
    and beneficial use of water, water stored in that
24
    reservoir, would be accounted for.
25
```

1 Q. So having a pre-1950 priority date would be of concern to the folks in Montana; right? 2. It would. 3 Α. Q. And it was, wasn't it? 4 5 Α. That's how they expressed it to us. Well, and what was Wyoming's response? 6 0. 7 Α. Well, actually through the studies, at the time, I think we didn't sort of like, sort of 8 addressing an issue as a hypothetical. We didn't 9 10 really think the project was going to go forward anyway. But the issue was -- at times we didn't think 11 it was right. 12 13 But the state did go ahead and do additional 14 studies on the yield and the analysis. It was my 15 understanding -- I think some of this work may have been completed after I left the position. But it was 16 really my understanding that it sort of didn't matter. 17 18 If the storage of water was acted that's pre- or post-Compact the percentage allocations under the V, C 19 compact undeveloped share would have been enough to 20 21 cover the storage anyway. So the compact analysis was 2.2 not germane to the validity of the project being feasible or not. 23 It had to get through other technical and 24 environmental and financial issues before that project 25

1 was going to become a reality. And it never did 2 overcome any of those other hurdles.

2.2

- Q. There is no Middle Fork Dam, is there?
- A. There is no Middle Fork Dam. My successor actually canceled that permit. So it doesn't exist anyway.
 - Q. All right. Is it fair to describe the Middle Fork issue as one of the larger ones that came up during your tenure?
 - A. Well, it would come up routinely. Again, part of that, as I said, we would regularly report on new development activities at the compact commission meetings. I think during my tenure, there were several smaller reservoirs constructed for municipal use. For example, city of Sheridan, I think built a new reservoir during my time. There were some reservoirs on the Big Horn River side.

So the fact that we had this program, I think, the Water Development Program, you know, provided a lot more and more stable funding supply for water development activities to occur. So that was of concern and of interest in Montana. So we routinely shared ongoing activities, ongoing studies, tried to make them aware of what development activities were occurring in any of the drainages that we shared under

```
the compact.
              Now, I think it would be fair to say that
2
   another issue --
3
              SPECIAL MASTER: Mr. Kaste, before you go
4
   into that, I'm just looking at the time and also
5
   thinking of the court reporter who has been going for
6
   an hour and 20 minutes. So would this be a good time
7
   for the first of our afternoon breaks?
              MR. KASTE:
9
                          Sure.
10
              SPECIAL MASTER: Okay. Great. So we'll then
   come back at five minutes to 2:00 by that clock.
11
                        (Recess taken 1:44 to 1:56
12
                        p.m., November 19, 2013)
13
14
              SPECIAL MASTER: Everyone can be seated.
15
              Okay. Mr. Kaste.
   BY MR. KASTE:
16
              All right. When we left off, we were talking
17
         Ο.
   about issues that arose during your tenure as state
18
19
   engineer and deputy state engineer related to the
20
   Yellowstone River Compact. And I want to turn now to
21
   the issue of compact administration. Okay.
2.2
              Can you explain what the issues were with
23
   regard to compact administration while you were deputy
   and state engineer?
2.4
              Well, most of the focus was really on
25
         Α.
```

```
different methodologies associated with the V, C
   portion of the compact. Again, actually starting
2.
   before I got involved directly, there had been
 3
   agreements to do some technical work on both sides from
4
   both states with different proposals.
5
              I think a lot of the early research and
6
7
   proposals that Wyoming did were done by a staff
   gentleman named -- Lou Allen was his name. A person on
8
   the staff for the state engineer's office worked for
9
10
   Mr. Christopulos. I think he may have retired when I
   became the state engineer. But he did some of the
11
   early work for us. There were counterpart staff from
12
13
   Montana agencies working on those issues.
14
              Is that Dan Ashenberg?
         Ο.
15
              Yes, Mr. Ashenberg.
              What do you recall about the different
16
         Ο.
   proposals or methodologies that came from Mr. Ashenberg
17
   and Mr. Allen? What problem were they trying to solve?
18
19
              Well, my recollection of part of the interest
         Α.
   was really on getting, again, back to the fact that
20
21
   with our state Water Development Program, I think there
2.2
   was concerns about whether Wyoming would be more
   aggressive in developing new water supplies. So if
23
   you're going to develop new water supplies, those are
24
   something out of the V, C allocations, if you will.
25
                                                          So
```

there was a concern on, we ought to get a handle on how that's going to be implemented. Never had been 2. implemented. There were not rules of the commission. 3 There wasn't any adopted procedure on how the 4 mathematics and the accounting of the compact would be 5 accomplished. 6 7 And so we started off on these analyses. It's my recollection that Wyoming approached. 8 proposals that Mr. Allen brought forward were sort of 9 very rigidly associated with the math as described in 10 the compact language itself. I think Mr. Ashenberg and 11 some of the concepts coming from other folks in 12 13 Montana, was not that approach. It was a different 14 approach, looking at how there might be another way to 15 sort of monitor the water use, the activities, the accounting, try to make it in a more -- perhaps a more 16 practical approach, things of that nature. So it was 17 clearly a different approach as being presented back 18 19 then. 20 And I take it then, from sort of the tone of Ο. 21 your answer, for purposes of this litigation, has it 2.2 made you go back and read Mr. Ashenberg's stuff? 23 Α. No. I do want you to look at one document with me 24 Ο. quickly to get a sense of one particular issue. 25 Ι'm

```
going to hand you what's been marked Exhibit M140.
    Have you had a chance to look that over?
 2.
 3
         Α.
              Yes.
         Ο.
              Can you tell us what that document is?
 4
              Exhibit M140 is a letter addressed to
 5
         Α.
   Mr. Fritz, head of the Water Resources Division State
 6
 7
    of Montana, sent by me. And as the letter states, it
    was forwarding a copy of the report and information of
    the analysis by Mr. Allen.
 9
10
         Ο.
              All right. And that letter is dated?
              Excuse me. That letter is dated
11
         Α.
    September 9th of 1988.
12
13
              And is this your signature where we see the
1.4
    word "Jeff" on the second page?
15
         Α.
              That's correct.
              MR. KASTE: I'd move for the admission of
16
    Exhibit M140.
17
              MR. SWANSON: No objection, Your Honor. It's
18
19
    just not clear whether the attachment is included.
20
              MR. KASTE: It is not.
              MR. SWANSON: Is it to be offered?
21
2.2
              MR. KASTE:
                          No.
                               I apologize. I didn't put
    the attachment on this exhibit. It was an oversight.
23
    And the point that I intend to make with this exhibit
24
    is unrelated to the substance of Mr. Allen's report.
25
```

```
Okay. I understand.
1
              SPECIAL MASTER:
                                                      So
   Exhibit M140 is admitted into evidence.
2
                        (Exhibit M140 admitted.)
 3
   BY MR. KASTE:
4
              Having said that, that's probably not
5
         Ο.
   entirely true. Because I am going to talk about the
6
7
   substance of Mr. Allen's report, which you
   characterize, I think, in the second paragraph of this
8
9
   letter.
10
              Can you read for us the first three sentences
   of the second paragraph?
11
12
                     "The enclosed report is arranged into
         Α.
13
   two main sections. The first reviews Article V, C of
14
   the Yellowstone River Compact and how, in general,
   allocation should take place. The second portion of
15
    the report focuses on an example computation using the
16
   Tongue River and how allocation would proceed based on
17
   Article V, C."
18
19
              Is that consistent with your recollection
         Ο.
   about what Mr. Allen was looking at when he did his
20
21
   work?
2.2
              It was. As I was remembering that, the focus
23
   was on the V, C allocation, mathematics, and
24
   procedures.
              All right. Now, then the question arises,
25
         Q.
```

```
what -- did you have any discussions or was V-A and the
    application of Article V-A of the compact an issue
 2
    during your time?
 3
              It really wasn't the focus of the discussions
 4
    during my tenure. And, again, it's not that V-A was
 5
   discussed or not discussed. The issue was often
 6
 7
   presented as a discussion about water supply conditions
    that year or in the prior year, depending on when we
   had our meetings. Water supply conditions, the amount
 9
    of regulation that may have occurred was clearly a
10
    routine topic like the other things that we talked
11
    about. That was presented at the compact commission
12
13
   meetings.
14
              So we didn't talk about V, A because the
15
    conversations, in my recollection, were really focused
    about how dry things were in a particular year.
16
    Montana expressing that they were in dry conditions and
17
    us expressing, well, us too, and often sharing
18
    information about -- oh, I would have generally the one
19
    or two superintendents would have joined me at these
20
21
    meetings so they could -- division superintendents,
2.2
    excuse me -- so they could often report directly to
    Montana about what priority enforcements and regulation
23
    activity had occurred that year. We often met in
24
   November, December, so they could kind of summarize how
25
```

1 the prior irrigation season went and what kind of 2 regulations occurred.

2.2

And it was fairly routine that both states were sort of dry at the same time. And so both states were suffering from drought. And there really wasn't any sort of, in my recollection, that much focused discussion about sort of V, A 'cause it was, well, I already got a whole bunch of people off, and so do you. And it really wasn't the topic of the day back then.

This was really -- this work was really focused on the percentage allocations and mathematics, the point of measurements, and trying to implement that V, C thing associated with new development activities that may or may not occur in the state of Wyoming.

- Q. So when we see reference in the documents, say, to, well, the parties discussed compact administration, in your mind, what is that referring to?
- A. My memory is that it was mainly about the V, C types of conversations and the fact that we had staff working on these issues. They were engaged. They were coming up with the proposals. You know, there was activity being assigned. There -- we just didn't have that on the other provisions of the compact. There really -- you had this sort of, no compact was

```
necessary because, like I said, often when dry years
came around, they were dry in both states. And so the
issues of our juniors, they were off, as I'm sure there
were juniors off in the state of Montana. At least
that's how it was reported to us.

O. When the parties, in the various documents,
```

- Q. When the parties, in the various documents, including the compact reports and things like that, talked about administration of the compact or under the compact, in your tenure, did that discussion ever include enforcement or regulation under Article V, A?
- A. No.

7

9

10

11

12

13

14

15

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17

18

- Q. And I think you told us that the meetings of the Yellowstone River Compact Commission were in, you said, November or December?
 - A. They were often -- the regular meetings were often, as I recall, November, December. There were special meetings, sometimes conference calls at other times of the year. But, generally, they were toward the end of the calendar year.
- Q. Would that be the predominant opportunity to talk with your counterparts from Montana about Yellowstone River issues?
- A. Certainly the Yellowstone Compact
 specifically. Those were the times. But like I said
 earlier, we would run into each other at other times

```
1 during the year, talk about lots of stuff.
```

2

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4

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13

1.4

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24

25

- Q. Who was -- and I'm getting the sense that because of the long tenure that you had, who is your counterpart in Montana at the various times you served as deputy state engineer and state engineer?
- A. When I first went to the commission, Gary
 Fritz was the Water Resources director. Sort of in our
 view, he was the counterpart to the position of state
 engineer in Wyoming. And he was the compact
 commissioner.

And then towards the end of my tenure,
Mr. Stults. Mr. Fritz retired and Mr. Stults came -ascended to that position and also became the compact
commissioner.

- Q. And what kind of relationship did you have with Mr. Fritz and Mr. Stults?
- A. Well, I knew Mr. Fritz better because we had served longer. And in addition to the Yellowstone specific issues, I would have seen him in some other forums as well. So I had a longer-time relationship with him. Although, the Yellowstone, obviously, covered the major rivers that are shared between Wyoming and Montana.

But, yeah, I felt I had a good relationship with both of those gentlemen. I was not around as long

```
with Mr. Stults. My successor, Pat Tyrrell, always
    reminds me that I left at the right time because we
 2
   plunged into the drought of the 2000 soon after I left.
 3
              It's better to be state engineer when it's
 4
    wet; right?
 5
              Better to be a state engineer when it's wet.
         Α.
 6
              All right. How much interaction would you
 7
         Q.
    typically have with your counterpart in Montana,
 8
   Mr. Fritz or Mr. Stults, during an irrigation season?
 9
    So outside these compact commission meetings that
10
    happened after the irrigation season and outside things
11
    like Western States Water Council meetings.
12
13
              There weren't as many meetings in the
14
    summertime, I think the irrigation season, summer.
    think most of the formal meetings, like I said, were in
15
    the fall sometimes. There were spring meetings.
16
    they would be earlier ahead of the irrigation season,
17
    perhaps March or April. Some of the other
18
    organizations -- Western States Water Council used to
19
20
    always have a meeting in July. So there would have
21
    been, perhaps, an opportunity to have seen or
2.2
    interacted with those gentlemen if they were attending.
    Sometimes they did; sometimes they didn't.
23
              But it was also another one of the
24
    organizations, I'm not sure I mentioned yet, was the
25
```

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Association of Western State Engineers. That name implies it's another group of just the heads of the water resource agencies of the states. And Montana was a member of that. And that group almost always met in September of every year.
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2

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10

- Q. So, you know, just based on your sort of repeated references to various meetings, I get the impression, and tell me if this is right or wrong, sounds like the vast majority of your interactions with Montana officials occurred during the course of one of these meetings.
- On Yellowstone specifically, I think that's 12 Α. 13 exactly right. There certainly would have been other 14 opportunities to talk about the Yellowstone River 15 issues. When you're focused on just this issue, that was done at our compact meetings or conference calls or 16 other special meetings that may have been handled. 17 There were -- I recall during my tenure, there were 18 some committees, some assigned staff people from the 19 states on both sides to work on certain issues. 20 So 21 then the principals, the commissioners themselves, 2.2 would get back on a call to hear a report, for example, from work that our two staffs would have been working 23 24 on in between meetings. When you meet just once a year, it's hard to make progress unless you're making 25

```
1 assignments and making sure other activities are 2 occurring between those meetings.
```

- Q. Well, let's talk a little bit about the compact commission itself. And, obviously, a report is generated by the compact commission every year?
- A. Yes, it is.

3

4

5

6

7

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9

- Q. And if I understand right, both states have an opportunity to comment on the draft report before it's finally issued; right?
- A. That's correct.
- 11 Q. Did you take an opportunity to comment on 12 draft reports?
- 13 A. I recall that we did. I would often look at
 14 it myself. And then the staff people on the Wyoming
 15 side that were involved, I would ask them to review the
 16 draft as well, compare it to any of their own notes or
 17 things that they may have captured from the meeting.
 18 And we would have sent comments back before or after it
 19 was finalized.
- Q. Did Montana take advantage of the opportunity to comment on these draft reports as well?
- A. Well, I wasn't there, but I suspect they did.
 I mean, both states were given that opportunity. I
 wasn't in their offices to know whether they did or
 didn't. But they wouldn't have necessarily had shared

```
1 their comments with Wyoming. They would have gone in
2 to whoever was -- took responsibility for the minutes
3 of the report.
```

- Q. And at the end of the day, you had to sign that report on behalf of the state of Wyoming; right?
 - A. That's correct.

4

5

6

19

20

- Q. Were these reports an accurate reflection of the Yellowstone River Compact meetings?
- They were. They were -- I'm sure you've 9 10 looked at them. They are quite standard in their approach. There are certain -- the flow information 11 and storage information, a lot of this data is 12 13 routinely included in those. And, perhaps, add or 14 subtract a gauge or a reservoir or things of that nature. But the written stuff was -- it was our 15 document. It was to document the sense of the 16 discussions, the sense of the activities that occurred 17 18 during that year.
 - Q. I assume it wasn't verbatim. It wasn't a transcript like is being prepared in these hearings; right?
- 22 A. It was not, no.
- Q. Now, you've heard this comment a couple of times during the course of this trial. The USGS sanitized all the controversial stuff out of these

```
reports.
             What do you think about that? Did that
   happen?
 2.
             Certainly not to my knowledge. I don't
 3
        Α.
    recall -- I would never have used the word "sanitized."
 4
    They were summaries. But I haven't read them all
 5
    lately. But certainly, issues of disagreement weren't
 6
    avoided in those reports. They talk about issues like
 7
    the Middle Fork, for example, and other things. So I
    think they captured the sense of the meeting. I don't
 9
    think -- it would have been fairly unusual. There was
10
    an awful lot of deference from the federal chairman to
11
    the states. I think to suggest that the federal
12
13
    chairman would have sometimes cleaned up what states
14
    were saying, I think would be -- that would be
    difficult for me to believe that that was occurring.
15
              MR. SWANSON: Your Honor, I just want to
16
    lodge an objection to Mr. Kaste's use of the word
17
    "sanitized." I believe it's mischaracterizing the
18
19
    testimony of Montana's witnesses. I don't believe they
20
    used the word.
21
              SPECIAL MASTER: I think it's fine, though,
    to ask the question whether or not this witness would
2.2
    consider them to be sanitized. And you're free to
23
    point out the difference in the language at a later
24
    time.
25
```

1 BY MR. KASTE:

- Q. All right. Were -- when you were the Wyoming state engineer and you had an opportunity to review these draft reports and ultimately sign your name to them, were the important things in there? I mean, if an issue was important, did it make its way into the report?
- A. Yes. I mean, it was capturing the sense of the written or verbal discussions that occurred certainly at the meetings or things that were reported on that occurred during that year. Now, I can't remember an example where some important issue would have been left out. I can't imagine why. There would be no reason to leave it out.
 - Q. Can -- do you agree that the state of Montana makes a call on the state of Wyoming in a given year, that's kind of a big deal?
 - A. It would be a huge deal.
- Q. Would you expect to see that in the minutes of the compact commission and the reports?
 - A. I would.

15

16

17

18

- Q. If Montana had done that during your tenure, would you make sure it was in the report?
- A. I think it would have been there anyway, but, yeah. We would have wanted it in the report. We

```
probably would have wanted any comments we had on it in
the report as well.
```

- Q. That being said, at any time, any time during the period that you were either the deputy state engineer or the state engineer, did any Montana official make a call or a demand on the state of Wyoming that Wyoming curtail its post-1950 uses for the benefit of Montana, regulate its post-1950 uses,
- 9 anything like that?

21

2.2

23

24

- 10 A. Not that I recall.
- Q. Well, we talked to Gary Fritz at various
 times. Did Mr. Fritz ever request or demand water from
 Wyoming?
- A. He did not. As I said earlier, Mr. Kaste,
 the conversations were there were certainly expressions
 of, you know, we're having a bad year or good year,
 whatever. There were just reports on streamflow
 activities and snowpack, reservoir storage. All that
 information was shared and discussed. But there was
 never any formal request for action.
 - Q. What about an informal request for action?
 What about Mr. Fritz saying, hey, can you turn loose some water for us; we're really low, and we think you've got some post-'50 water, and we're entitled to it?

```
I don't recall those kind of specific
1
         Α.
   requests at all. It really was much more
2
   conversational than how you're describing it in your
3
   question. It was, we're having a tough year down
4
   there. And I would ask my staff. Or if I had
5
   first-hand knowledge, we'd report on the toughness on
6
7
   our side as well. And it never got into the point of
   how each person should do something else.
              What about communications with Mr. Stults?
9
   In your communications with him verbally or otherwise,
10
   did he ever request water from the state of Wyoming in
11
12
   any fashion?
13
         Α.
              He did not. Not during my tenure.
14
              What about Mr. Moy? Same question, did he
         O.
15
   ever come to you and request water from the state of
   Wyoming?
16
              No. No, not Mr. Moy. He wasn't the compact
17
         Α.
   representative. I wouldn't have expected him to come
18
19
   to me with that kind of request anyway. It would have
20
   come from Mr. Fritz or Mr. Stults.
21
         Ο.
              Well, even if he wasn't the compact
2.2
   representative, did he -- and you wouldn't expect it to
   come from a person in his position, did he make a
23
24
   request for water?
              I'm not recalling he did. Again, I think he
25
         Α.
```

```
attended many of the meetings, as I recall. And he was
   a strong advocate for the state of Montana, talking
2
   about the conditions. I think I'm not completely clear
 3
   on the structure of Montana state government. But I
4
   know he was involved with, actually the work of
5
   Mr. Ashenberg and others. So I know he was involved
6
7
   with working on the proposals for the V, C
   administration issues and things of that nature.
8
              But, well, as I said, I don't recall him
9
10
   making a direct request, a call for water from the
              That -- I would have remembered.
11
   compact.
             'Cause that would be a big deal?
12
        Ο.
13
        Α.
              It would be a huge deal. I mean, I just
14
   lived through similar things elsewhere in the state of
15
   Wyoming. So that's not a casual thing.
              Same questions with regard to Mr. Kerbel or
16
        Ο.
17
   Mr. Dalby, either of them request any water from the
18
   state of Wyoming?
19
              Not that I'm aware of. Mr. Kerbel may have
        Α.
   had discussions with Mr. Whitaker. I think they were
20
21
   more sort of counterparts, if you will. They had
2.2
   similar positions in each of our states. But, again,
    the meetings that we had, those people don't -- they
23
   don't speak for the state. It's the compact
24
   commissioner that speaks for the state.
25
```

- Q. Let's talk about Mr. Whitaker and some other folks that maybe worked for you when you were the state engineer. If somebody, anybody, from the state of Montana had talked to Mr. Whitaker or to Ms. Lowry and requested or demanded water, would you expect to hear that from your staff?
- 7 A. Oh, absolutely.

8

9

10

11

18

19

20

21

2.2

- Q. Did you ever --
- A. They better had.
- Q. You would anticipate that that request would go through the chain of command to you?
- A. There's no doubt. Well, certainly that's my view is there's no doubt it would. It's not routine.

 It's not a matter of course under the duties to which those people were assigned. And that would have been an issue that would have been immediately elevated to me as state engineer.
 - Q. Did Mr. Whitaker, Ms. Lowry, or anybody else on your staff ever communicate with you or bring to your attention that the state of Montana had requested or demanded water?
 - A. No.
- Q. If Montana had made such a call on the state of Wyoming, would you anticipate your office generating pieces of paper that would memorialize that?

```
1
        Α.
              Well, yeah. You would take that quite
   seriously. I mean, it wouldn't be a casual thing at
2
   all. It would be memorialized. It would have
 3
   triggered meetings. It would have triggered
4
   investigations. It would have triggered all sorts of
5
   things. You wouldn't -- you wouldn't blow off another
6
7
   sovereign entity raising an issue like that. It's
   serious. It's why we're here today. I would have
   remembered if that would have happened, Mr. Kaste.
9
             All right. I think we've kind of beat the
10
        Q.
   call issue to death. But it's important for this case
11
   as we go through that and sort of explore all the
12
13
   possibilities in which someone could have brought to
14
   your attention requests for water from Montana.
15
              I want to turn to two different subjects; one
   is short, and one is a little longer. The first is
16
   related to an employee of the state engineer's office,
17
   and I'm not exactly sure if your tenure overlapped with
18
19
   his or not. His name is John Buyok. There's been some
   testimony in this case that he was appointed to a
20
21
   technical team related to the Northern Cheyenne Tribe
2.2
   Compact.
              And can you give us a sense of when Mr. Buyok
23
   was employed by the Wyoming State Engineer's Office?
24
              I know John, but I -- I'm pretty sure he
25
        Α.
```

actually left before I became employed by the state. And you became an employee of the state in --2 Ο. 1984, March of 1984. And I believe he -- he 3 Α. was -- I think he was in a group of staff actually with 4 Mr. Lou Allen, we talked about previously. I don't 5 believe he -- he did not overlap. I don't think he 6 overlapped during my tenure. So he never really 7 assisted me on any of the Yellowstone River Compact 9 issues. 10 Ο. Sure. During your time as deputy state engineer and state engineer, did the state of Wyoming 11 have anybody assigned to a technical committee related 12 13 to the Northern Cheyenne Tribe Compact? 14 Α. Not that I recall, not on a committee. Ι 15 mean, we got involved later on in the process but not back -- the timeline when Mr. Buyok may have been 16 around was in the early 1980s, I mean, before I became 17 18 employed there. And it was many years later when I got back involved. 19 When you say "got back involved," you don't 20 Ο. 21 mean as a participant on the technical team, do you? 2.2 Α. Those issues were coming to finalization 23 and being advanced to -- through the state legislature 24 to congress.

And we went down that road.

25

Q.

And I'm not

```
going to go down that road in this trial as a result of
    the Special Master's rulings. So we're going to skip
 2.
    over that portion of your testimony 'cause I don't
 3
 4
    think it's fruitful at this point.
 5
              So I want to turn your attention now to
    regulation in Wyoming and reservoir accounting. And
 6
    obviously, we've heard a little bit in this case, or
 7
   maybe a lot, about the one-fill rule in Wyoming.
              And can you give us a sense of what the
 9
    one-fill rule is and how it relates to reservoir
10
11
    accounting in Wyoming?
                     Sort of the one-fill rule is really
         Α.
12
              Sure.
13
    the application of regulation of a call on behalf of a
14
    reservoir water right as opposed to a direct flow water
15
    right. And the concept is that under the priority
    water right of the reservoir, that right, under its
16
   priority, is entitled to a one fill on a water-year
17
18
   basis.
19
              So you would -- you would look at how much
    water was carried over from one year -- water year to
20
21
    the next. So what was the amount of water in storage
2.2
    on September 30th? And between that and the water
23
    righted amount, that would be your one fill for that
    year if you're under regulation.
24
```

25

Q.

And if you're not under regulation, can

1 reservoirs in Wyoming fill in excess of that amount 2 that you just described?

A. They can.

3

4

5

6

23

24

25

- Q. And so for purposes of application to the one-fill rule, do I understand correctly that the key trigger is regulation or a call?
- 7 Α. That's exactly right. 'Cause you're under regulation, you're then -- you're looking at all of the 8 water users and all of the priorities, junior and 9 senior, that may be affected somehow by that 10 regulation, whether you need to turn people off, turn 11 people down, make whatever adjustments are necessary. 12 13 So that's really when that more rigid accounting occurs 14 in most -- under most circumstances. When you're in kind of a free river, there's no regulation occurring 15 or priority enforcement occurring, then reservoirs 16 could operate differently. They could behave 17 differently and -- because there's no river. The issue 18 is that they're impacting other appropriators, is what 19 we're trying to give some definition to and protect 20 21 seniors and juniors from injury from what activity is 2.2 associated with the reservoir.

So as soon as you ask for a call, then your activities get to be reviewed as much as the activities of the other water right holders.

2.

2.2

```
Q. Well, can you explain that in a little more detail? When you say as soon as you make a call, your activities come under review -- let's say a reservoir operator in Wyoming makes a call on upstream juniors and says, I'd like water to fill up my reservoir. Then what does the state engineer do in response to that call?
```

A. Well, the first thing you always do is you go to the calling facility. In this case, if it's a reservoir, depending on when that call comes in, you're then going to seek the accounting and look for all the information to be able to sort of back up what had been occurring since the end of the prior water year and to sort of take a full accounting of sort of operationally what was occurring at that reservoir and how water was stored.

If -- I guess the clearest example is if somebody requests a call in the spring, anticipating they're not going to get their one fill so they place a call, we're going to go back and look at what they have been doing since October 1st. And if that reservoir had, for instance, passed a whole lot of water through for whatever reasons, didn't take full advantage of the flow that was there, then that water would get accounted against the one fill once they request a

```
call.
          We're not going to let them bypass water or even
    let more water out and then place a call to refill the
 2
    entire reservoir. 'Cause they had a chance to fill.
 3
              But when you look at the information on the
 4
    flows and the situation, you find out that part of that
 5
    water would have gone by. You still may honor the
 6
    call, but you're going to take a full accounting of
 7
    that. And some of those bypasses would be counted as
    if they were stored even though they, in fact, may not
 9
   have been stored at the time.
10
              So when you say -- I think you used the word
11
         Q.
    "rigid accounting" in response to a call. What are you
12
13
    counting? I mean, is it some things and not others?
14
    Is it everything?
15
         Α.
              Oh, no. Again, I'm describing sort of an
    onstream reservoir. But you're taking a count for --
16
    you know, for the inflows, for the change in storage.
17
    You look at evaporation. You'd look at flows being
18
    bypassed, and why were they bypassed? Maybe the
19
    reservoir was bypassing water because it was going to a
20
    downstream senior who the reservoir itself has called
21
2.2
          So you can't be penalized for passing water
    through if it was going to a different appropriator.
23
              But -- so you'd have to investigate the
24
    accounting of all of those operations to determine
25
```

```
what -- in fact, whether the call should be honored and for how much more water are they entitled to under that priority. And once they achieve that, then that call would come off.
```

2.2

- Q. What about, for example, if a reservoir had released water over the course of the winter for flood control purposes and not in response to a demand by a downstream senior? Does that get accounted against their fill?
- A. Well, yes. I mean, you sort of gave me an unusual hypothetical. If you're releasing for flood control, it means the reservoir is real full. So you might not be honoring a call anyway.

But the idea of looking back through the water year to the behavior, to the activities, to how the water was used, what was their water that they would have been entitled to have stored but chose not to? That's really one of the key issues.

- Q. What if they chose not to for a real good reason? What if it makes all kinds of sense for the purposes of maintenance of your dam to send water down that could have been stored? Does it still count against their one fill?
- A. In my view, it does. Again, that's not to say that behaving correctly isn't the right thing to

```
But the issue becomes, when you're placing a call,
   you're now impacting other appropriations, whether they
2
   are upstream or downstream. And those people are
3
   entitled to their appropriation, their beneficial use
4
   of water as well.
5
              So it's really -- it's an issue of injury to
6
7
   other appropriators. Just because you want to be a
   nice guy for whatever reasons, that turns into, then, a
   demand on somebody else. And that -- our laws don't
9
   provide for that. You have to take responsibility. If
10
   you choose to pass water, that's your choice. But that
11
   doesn't mean you get to put that pain on some junior.
12
13
             Have you ever had to deal with these kinds of
14
    issues during your tenure as the state engineer?
   necessarily on the Tongue 'cause as we all know, all of
15
   Wyoming's reservoirs happen to be at the top of the
16
   system. But we have other rivers in Wyoming. So has
17
   this kind of rigid accounting ever come up?
18
19
                      Probably the best example is on the
        Α.
              It has.
   North Platte River Basin. In fact, that rigid
20
21
   accounting is routine, and it's every year. It's not
2.2
    just during dry periods. Even in really bountiful
   years, there's very strict accounting of all the water
23
   activities, conversions, storage, and evaporation,
24
   releases for hydropower, the whole packet of things
25
```

```
that occur. And that's 'cause it's generally a
   water-short basin.
2.
              In that basin, you have two and a half times
 3
   the flow of the river in storage capacity. So you've
4
   got sort of complete control over all the water.
5
   so there is a very rigid accounting of all of the
6
   activities at all of those reservoirs and all the
7
   diversions up and down that system.
              When you say all of those reservoirs on the
9
10
   North Platte, how many reservoirs are there on the
   river?
11
12
              There's --
         Α.
13
         Q.
              In Wyoming.
14
              There's five or six major reservoirs that are
         Α.
15
   all owned and operated by the Bureau of Reclamation.
              And these are big ones; right?
16
         Q.
              Couple of them are over a million acre-feet.
17
         Α.
              And do some of them shut their gates in the
18
         Ο.
19
   winter?
20
         Α.
              Absolutely. The furthest downstream one is a
21
   reservoir called Guernsey Reservoir near the town of
2.2
   Guernsey, Wyoming. It's about 40 miles upstream of the
   state line of the state of Nebraska. And it is shut
23
   tight at the end of the irrigation season every year.
24
              And what about the reservoirs --
25
         Q.
```

```
1
         Α.
              And so all of the -- all the water upstream
    of that point is rigidly accounted and rigidly going
 2.
    into reservoirs. Because they all have different
 3
    priority dates. So you're capturing that water and
 4
    accounting for water in all the reservoirs.
 5
              Well, I get the impression, because Guernsey
         Ο.
 6
    is shut tight, that some of these other reservoirs are
 7
   not?
 8
              That's correct.
 9
         Α.
10
         Ο.
              And some of them have hydroelectric power
    plants associated with them; right?
11
12
         Α.
              They do.
              And there's water going out of these various
13
14
    reservoirs all the time; fair?
15
         Α.
              Fair.
              All right. And does the state engineer's
16
    office hold these reservoirs strictly to a one fill
17
18
    every year?
19
              They do. Absolutely.
         Α.
20
              And these are reservoirs owned by the Bureau
         Ο.
21
    of Reclamation; right?
2.2
         Α.
              Yes.
              Now, these reservoirs are essentially all on
23
```

the same line. Does the Bureau of Reclamation move

water between these reservoirs as it sees fit also?

2.4

25

```
A. It does. They have operational flexibility. They actually have one reservoir that has sort of surplussed, what they call reregulation space so that they can make deliveries upstream and recapture them before they would just go down the river system.

And so you can -- they're actually able to generate hydropower. They're actually able to accommodate some of the needs of the fisheries and
```

1

2.

3

4

5

6

7

9

10

15

16

17

18

19

20

21

2.2

23

24

25

things of that nature. But all of that water is accounted for. It may be released from one reservoir

11 and it's recaptured and it's maintained in the same

12 ownership and the same accounting of where it all is.

13 So no matter which bucket it's in, each priority is

14 | rigidly tracked as to whether it's filled or not.

Because, again, Bureau of Reclamation is entitled to a call. And those calls are enforced against juniors. And state engineer's office has to be assured that the right priority and the right date's being effectuated against the right set of juniors if regulation is necessary.

Q. So even on a system like that that's considerably more complicated than the Tongue River -- and we can all agree the North Platte is a lot more complicated than the Tongue River -- there is, what, every single acre-feet is accounted for purposes of

determining a fill if necessary? Α. Yeah. There really is. There's actually 2 a -- and it's done -- while the Bureau of Reclamation 3 is the primary reservoir owner and operator, actually, 4 not only is the reclamation involved and the state of 5 Wyoming involved, but the state of Nebraska is 6 involved. 7 State of Nebraska is interested because much 8 of the water in the federal reservoirs in Wyoming 9 10 ultimately goes to water users in the state of Nebraska. So this detailed accounting is a system 11 that's done every day, every morning from the 12 13 irrigation season, every single day from May through 14 September. And it's done, I think, weekly through the wintertime. And it's exchanged and shared 15 electronically among both states and the federal 16 government and made available to all the water users. 17 18 So it's complete transparency about how much is flowing, where it's going, whose account it's going 19 20 into. Most of the reservoirs have multiple storage accounts for each of the different irrigation districts 21 2.2 that have contracts for water or municipalities that 23 have contracts for water. So the accounting not only gets a one fill for the water right; that one fill 24 volume is then divided up among the different owners 25

that share that priority date as well. So that occurs, really, on a constant basis. Even in years -- well, it doesn't happen very often, but even in years where the system fills and spills, they are tracking.

- Q. Now, that's sort of the extreme end of complicated.
- A. It is.

2.2

- Q. And you could probably sit here for a day and tell us about the intricacies of that system. But on the less complicated side, do I understand correctly that the rigid accounting or the state engineer's decision to go look at an account for things typically occurs in response to a call by a reservoir?
- A. That's exactly right. Unless there's some other accounting or obligation to track water use, other examples from the North Platte. But the state of Wyoming is limited in how much storage and pools we're allowed to have.

So we've got even high mountain reservoirs that -- where our people will hike or practically snow machine into to get an end of water year number so that we know what that carryover is so that you can track the one fill that following spring. We still want to collect that information, that data, so you can do an accounting, even if it's after the fact.

```
1
         Q.
              Okay.
 2.
              MR. KASTE:
                          May I have just one minute?
              SPECIAL MASTER: You certainly may.
 3
 4
   BY MR. KASTE:
              Having said that we were done talking about
 5
         Ο.
    calls, I do want to ask you maybe one or two more
 6
 7
    questions, not about whether you you received calls
    from the state of Montana. Because we've covered that
    ground. But as the state engineer, have you received
 9
    calls from other states?
10
              Well, we have -- let me see, geez. The North
11
         Α.
    Platte is so unique. It's a little different.
                                                    It's
12
13
    mainly the Bureau of Reclamation 'cause the Bureau of
14
   Reclamation is the appropriator. So they become the
    person making the call. Even though most of that water
15
    goes to the state of Nebraska, it isn't really the
16
    state of Nebraska in that particular example.
17
              Okay. Have you received a call from the
18
         Q.
    Bureau of Reclamation?
19
20
         Α.
              We did.
21
         Ο.
              What did it look like?
2.2
              They wrote us a letter. It's, again, one of
    these first-time events. Again, in the North Platte,
23
    in spite of the fact that we had this very
24
    long-standing, complicated apportionment decree, right
25
```

```
in the middle of the reopening of that case, the Bureau
    of Reclamation, again, in reaction to some very dry
 2.
 3
    years, did request a call.
              And they wrote the state a letter and told us
 4
    which facilities and what priority date they were
 5
    seeking enforcement for. And it was the first time
 6
 7
    that had ever happened since those reservoirs were
   built at the turn of the century. So off we went.
              I think those are all the questions I have
 9
10
    for you, Mr. Fassett. Thank you.
11
              SPECIAL MASTER: Thank you, Mr. Kaste.
              Mr. Swanson, are you doing the
12
13
    cross-examination?
14
              MR. SWANSON: I am, Your Honor.
15
                       CROSS-EXAMINATION
   BY MR. SWANSON:
16
17
              Good afternoon, Mr. Fassett. How are you?
         Ο.
18
              I'm fine.
         Α.
19
         Ο.
              So we just met today; isn't that right?
20
         Α.
              We did.
21
              I'm going to take you through a number of
         Ο.
2.2
    documents.
23
              SPECIAL MASTER: It's a long story.
2.4
              THE WITNESS: It's a long, inside story?
              MR. SWANSON: We've been here too long.
25
```

```
That's the bottom line.
              THE WITNESS: You did introduce yourself,
2
   Mr. Swanson, so thank you.
 3
   BY MR. SWANSON:
 4
              I'm going to just take you through a number
5
         0.
   of documents. I think that would be the best way.
6
   think we can accomplish most of what we need to do by
7
   looking at those documents first. And then I'll
   probably have some follow-up questions based on
9
   Mr. Kaste's examination.
10
              So I'd like to begin with --
11
              MR. SWANSON: And, Your Honor, may I approach
12
13
   freely to hand the witness documents?
14
              SPECIAL MASTER: You may.
   BY MR. SWANSON:
15
              I'm going to begin with Montana 519.
16
         Ο.
              SPECIAL MASTER: Let's go off the record for
17
18
   a second.
                        (Discussion held off the
19
20
                        record.)
21
              SPECIAL MASTER: Okay. We can go back on the
   record.
2.2
   BY MR. SWANSON:
23
2.4
              Do you recognize this document?
         Ο.
                    Looks like -- M519 looks like a portion
25
         Α.
              Yes.
```

```
of the regulations and instructions of the State Board
    of Control. And these were dated June of 1986.
 2.
              And we -- I understand that this is not a
 3
         Ο.
    complete copy. I wondered if you could just look
 4
   briefly at the page which is marked page 4, Bates
 5
   No. MT24212. And specifically, if just -- if you could
 7
    tell us if that page and the preceding page look to be
    accurate representations of the actual full manual.
   probably won't admit this. I just want to ask you a
 9
10
    question about it.
              Oh, it's already admitted?
11
12
              SPECIAL MASTER: What section are you --
13
              MR. SWANSON: I'm actually going to be, Your
14
   Honor, on Section 6 which is on numbered page 4.
15
              SPECIAL MASTER:
                               Okay.
    BY MR. SWANSON:
16
              Now, as I understand your duties as a state
17
         Ο.
18
    engineer, you were in charge of the division
19
    superintendents who were in charge of the water
20
    commissioners; is that correct?
21
         Α.
              That's correct.
2.2
              And these regulations govern how the water
23
    commissioners do their job to administer water?
2.4
         Α.
              Water commissioners, yeah, that whole
25
   hierarchy.
```

```
So looking at Section 6, Administrative
1
         Q.
   Regulation, I wonder if you could look at those first
2.
   two sentences and read those for us, please. Beginning
3
4
    "Any person with a water right"; do you see where I am?
              Yes, uh-huh.
5
         Α.
              Can you read those out loud?
         Ο.
6
7
         Α.
              Oh, I'm sorry. Yes, sure.
              I guess I didn't specify.
8
         Ο.
                    Section 6 administrations --
9
         Α.
    "Administrative Regulation. Any person with a water
10
   right in a stream system may request the water
11
   commissioner to request the stream for his benefit --
12
13
   to regulate the stream for his benefit. The request
14
   should be made in writing on a form provided by the
   State Board of Control."
15
              So is this -- this is the rule always, always
16
         Ο.
   a written request for a call from the water user?
17
              I think there are times when water
18
19
   commissioners might take action without a written
   request. But this is their guidance.
20
21
         Ο.
              So a call could be proper even if it's not
2.2
   fully in writing; is that accurate?
              Yeah. My understanding is that there have
23
         Α.
   been circumstances where water commissioners have
24
```

received and taken action on a request.

25

- 1 Q. So the --Without it always being in written form. 2. Α. Without it always being in written form? 3 O. I'll not ask the next question as rapidly or the court 4 reporter will be unhappy with me. 5 So then the sentence that's after the 6 7 sentence that's in parens, because that appears to be a sample written call. The next sentence says, "Upon 9 receiving a proper request for regulation, the water commissioner will act to limit each water right, " and 10 it goes on from there. So looking at the preface word 11 there or preface phrase "Upon receiving a proper 12 13 request for regulation, " the commissioner could act on 14 a verbal call, and that would be considered a proper 15 request for regulation? Yes. It's my understanding that has 16 Α. occurred. 17 Okay. So would it surprise you to know, in 18 Q. fact, that there's been four Wyoming water 19 20 commissioners who have testified in this trial and they 21 have all testified that they routinely regulate based 2.2 on verbal calls rather than written calls? Would that 23 surprise you?
 - A. No. That's what I just testified to.

24

25

Q. So when we ask the -- I guess the question,

```
talking about a verbal call, and needs to be proper,
    what is a proper call in the state of Wyoming if it's
 2
    verbally, between -- let's say I'm a water user, you're
 3
    a commissioner, and I want to do a verbal call for you
 4
    to regulate my water. What would that look like -- or
 5
    sound like, I should say?
 6
 7
         Α.
              Well, it would sound like either a phone call
    or a meeting in the field and -- between the water user
 8
    and the water commissioner. And then he would have to
 9
10
    go investigate and decide whether any action was
11
    necessary or not.
              So what kind of wording would I have to use
12
13
    for the commissioner to say, this is proper. I'm going
14
    to act upon this?
15
              He would have to make a -- it would have to
16
   be a request for regulation.
              So a man named Tom Koltiska testified, and he
17
         Ο.
18
    said something to the effect -- and I don't want to be
    accused of mischaracterizing his testimony, so I'm not
19
    going to tell you that this is exactly what he said,
20
21
   but something along the lines of, I called
2.2
    Mr. Schroeder and said, hey, I need water down here.
23
    Is that enough, or does it need to be more than that?
24
              Well, I quess if that was his testimony, I
         Α.
    wouldn't have a basis for disputing that that's what
25
```

```
1 | happened. And he went and took action based on that.
```

- Q. So I mean, you wouldn't have -- let's say
 you're the state engineer. You wouldn't have cause to
 call Mr. Schroeder and say, what's wrong with you;
 you're acting on an improper call.
 - A. No, it would probably come to me in a very different manner. It would come to me when a water commissioner took action against some junior. And the junior might allege it was an improper request for regulation.
- 11 Q. And there may be many factors involved in 12 that; is that right?

6

7

9

10

16

17

18

19

- A. And the water commissioner may have to go
 back to the original appropriator and say, I need it in
 writing.
 - Q. But barring no complaint, there wouldn't necessarily be a reason to say, Mr. Schroeder, you can't act on Mr. Koltiska's phone call of, hey, I need water down here, and I need it now?
- 20 A. I wouldn't -- as state engineer, I wouldn't 21 have weighed in on that.
- Q. I want to flip to a memo that is Montana
 Exhibit 263. I'll hand this to you. I don't believe
 you have it.
- This is Montana 263. Could you just describe

```
this memorandum and tell us if you understand this
   document? Is it addressed to you at the top there?
2.
              It is addressed to me, yeah.
 3
         Α.
              Do you remember or recognize this document?
         Ο.
 4
              I'm not recalling it. This is -- well, the
5
         Α.
   date is prior to my going to work for the State of
6
7
   Wyoming. This was written to me, I assume, as I was a
   consultant working for Leonard Rice Engineers and our
8
   work. Mr. Merrill, I think, was one of the attorneys.
9
   And Mr. Sommers was another one of the consultants on
10
               And this was the group that was working for
11
   our team.
    the state on the Big Horn River general adjudication.
12
13
              Do you recognize these gentlemen, James
         Ο.
14
   Merrill and Craig Sommers?
15
         Α.
              I do.
16
              And, yeah, it is October 18th, 1982, which
   would have been when you were at Leonard Rice.
17
18
   believe you testified a moment ago you were retained by
   Wyoming for the Big Horn River general adjudication.
19
   So it sounds like you're saying you believe this memo
20
21
   was pursuant to that contract?
2.2
              Yeah, that's my assumption when I looked at
23
                Those were people that were all involved
    the names.
   with me at that time.
2.4
                            Your Honor, I move admission of
25
              MR. SWANSON:
```

Exhibit M263. 2 MR. KASTE: Well, I'm a little concerned about the foundation laid by this witness who says he 3 doesn't remember this document. The fact that his name 4 is printed on it is one thing. His testimony about it 5 has not provided adequate foundation, moreover. But 6 the little information he does have about it seems to 7 be related to a different matter. So I object on the foundational grounds and relevance grounds. 9 10 MR. SWANSON: Your Honor, he recognized the names on it, and he just told us he believed it was in 11 pursuant to his duties working for the state of Wyoming 12 13 on adjudication matters. And I intend to ask him about 14 the purposes of that. And I don't believe that's 15 necessary to admit it. MR. KASTE: My view is that foundation 16 consists of information sufficient to show that 17 18 something is what it purports to be. And I don't think we have that from this witness at this time. 19 20 MR. SWANSON: That's actually a different 21 objection. That would be more authenticity. I believe the Court can determine for itself the relevance of the 2.2 23 document. I believe the authenticity has been verified 2.4 by the witness. SPECIAL MASTER: So why don't we do this 25

```
because I understand Mr. Kaste's objection on this.
   Why don't you ask the witness about the particular
2
   portions of this exhibit which you consider to be
3
   most -- or you consider to be of relevance in this
4
   particular proceeding and see if the witness has any
5
   memory with respect to those portions of it.
6
7
              MR. SWANSON: Yes, Your Honor. And honestly,
   we've probably fought about this more than we needed
8
   to. I had one general question for the witness.
9
   BY MR. SWANSON:
10
              And that is: Mr. Fassett, can you just
11
         Q.
   maybe, if you recall, explain Wyoming's interest in
12
13
   looking at irrigated agricultural demand in Montana and
14
   the methodology of how they may have gathered that
   information?
15
              I actually don't know why we were doing that.
16
   As part of the Big Horn River general adjudication, all
17
   the water rights investigations and all of the focus of
18
19
    the work that we were doing was on activities in the
20
   state of Wyoming.
21
              So I haven't read this whole memo, so I don't
2.2
   know if there's some connection. But the Tongue River
   isn't even -- wasn't part of the general -- Big Horn
23
   River general adjudication. It was outside the basin.
24
   So I'm not -- I'm missing the connection.
25
```

```
1
         Q.
              I wonder if you could look at page 4 of the
    document, please.
2.
 3
         Α.
              Sure.
         Ο.
              Do you see under the heading D, Instream
 4
    flows and prior rights?
5
              Okay.
         Α.
6
7
         Q.
              And it's talking about the Northern Cheyenne
   Reservation irrigation demands. Do you see that in the
    first sentence?
9
10
         Α.
              I do.
              There's a sentence, if you skip one and go to
11
         Q.
    another one, it says, "The total prior rights
12
13
    downstream require an estimated 475 CFS. All these
14
    figures are for a May through September irrigation
15
    season."
              I wanted to ask you how you -- how that
16
    number was arrived at, if you know how that number was
17
    arrived at?
18
              I do not know how that number was arrived at.
19
         Α.
20
              Do you know how you and your team relied upon
         Ο.
21
    that number, to what extent you relied upon it?
2.2
              I can't think of a reason why we would have
23
   been interested in that number as part of the Big Horn
2.4
    case.
```

MR. SWANSON:

25

Your Honor, could I have a

moment? SPECIAL MASTER: You may. 2 BY MR. SWANSON: 3 Do you recall if, in the course of this work, 4 you were focused to assist Wyoming with estimation of 5 Indian reserved water rights on the Tongue or Powder 6 7 Rivers in Wyoming and Montana? I do see on page 7, though, a reference 8 to, it looks like, some BIA projects on the Big Horn 9 10 River side. So that, at least, is in the right basin. But there's no -- we did no analysis. We did no 11 modeling. There was no presentation of anything in the 12 13 Tongue River Basin in the Big Horn River general 14 adjudication. And then -- but looking at pages 6 and 7, the 15 discussions of -- let's look at page 6 under the sub-B, 16 Potentially Irrigable Land; you see that? 17 18 Α. Uh-huh. And begins discussing, "The BIA has provided 19 Ο. an extremely valuable report. It's focused on the Crow 20 21 irrigation project." And then when we go to the 2.2 following page, page 7, and looking again at sub-B near the bottom, Potential Irrigable Land. Do you 23 understand whether the United States and the BIA were 24 using the same kinds of calculations of potentially 25

```
1 irrigable acreage to evaluate reserved water rights
2 throughout this area? Or were they doing different
3 methodologies for different reservations?
```

- A. My understanding was that they were all looking at sort of the PIA, Practical Irrigable Acreage Standard the same way.
- But this really doesn't relate to any of the 7 work we did in that case. So Mr. Sommers was one of 8 our consultants. He may have been responding to some 9 question from the legal team on why he did this 10 research. I could have easily been copied because we 11 were -- we often were looked at as the sort of the 12 13 outside consultant most involved with issues. 14 he may have been simply copying me as a matter of 15 course to keep me informed.
 - But this didn't come from me. This wasn't requested by me. I can't see how -- it may have been for some sort of other legal reason, but not for the technical work that we were performing for the state of Wyoming.
- Q. Okay. And then I just have one last question. Going to the bottom of page 3 of the document.
- 24 A. Okay.

4

5

6

16

17

18

19

20

25

Q. And I understand your point about other

```
basins. But it appears this section is clearly focused
    on the Tongue River Basin. And the reason I say that
2
 3
    is are you familiar with a thing called the T & Y Ditch
    in Montana?
 4
5
         Α.
              Yes.
              Do you see that at the bottom of page 3?
6
         Ο.
7
         Α.
              I do.
              And then when we go to the following page,
8
         0.
   you -- actually, that's the section that I wanted to
9
    focus on was -- it would be the second sentence of that
10
    paragraph under heading C, which is General
11
    Information. It begins, "He estimates" -- and I
12
13
    understand that to be referring to Mr. Griffith.
                                                        "He
14
    estimates," I wonder if you could read that sentence
15
    and the following sentence.
16
         Α.
              On page 4 now?
              Page 3 at the bottom.
17
         Ο.
18
              Oh, sorry.
         Α.
              I apologize. I jumped back from page 4 to
19
         Q.
             So bottom of page 3.
20
    page 3.
21
         Α.
              Okay.
2.2
         Ο.
              Go ahead. Can you read that out loud, those
23
    two sentences? "He estimates" and the following
2.4
    sentence.
                     Reading from the bottom of page 3 of
25
         Α.
              Sure.
```

```
Exhibit M263, "He estimates that approximately
    15 percent of the acreage in the basin, not including
 2
    the T & Y Ditch, is under sprinkler irrigation.
 3
    entire T & Y Ditch is irrigated by gravity systems."
 4
              And then the following, the next sentence.
 5
         Ο.
              "All of the presently irrigated land on the
         Α.
 6
 7
   Northern Cheyenne Reservation is under center pivot
    irrigation."
              So going back to the estimation of water
 9
10
    rights in the Tongue River in Montana, would you agree
    that this is clearly a focus on the irrigation demands
11
    in Montana in the Tonque River Basin?
12
13
              That's what the document appears to read.
                                                          Ι
14
   don't know why that was in the Big Horn case.
15
              MR. SWANSON:
                            Your Honor, I believe we've
    laid sufficient relevance for this document.
16
                                                   It's got
    multiple pages focused on the Tongue Basin.
17
    would point out that the document speaks for itself and
18
19
    that I believe the time for authenticity objections has
    actually passed.
20
21
              MR. KASTE:
                          I don't think Mr. Fassett
2.2
    acknowledges through the course of this discussion that
   he ever even received this document. Certainly he
23
    didn't create it. I quess I'd move to strike all the
24
```

testimony about it in light of the fact that there's no

25

sufficient foundation for it. SPECIAL MASTER: So here's my concern with it 2 is that at least at the moment we have no idea whether 3 this is a draft of a document, whether it was ever 4 received by Mr. Fassett or Mr. Merrill. So it's hard 5 for me, at this particular point in time, to see what 7 the relevance -- it's one of those things where it gets over into the question of foundation -- but what the relevance is in this particular proceeding. 9 10 MR. SWANSON: Do you want me to respond to that, Your Honor? 11 12 SPECIAL MASTER: Yes. 13 MR. SWANSON: One of the things that we have 14 focused on today and will continue to focus on is whether the state of Wyoming was interested in or 15 looking at water demands in the state of Montana and 16 vice versa. And going back to at least October 18th, 17 18 1982, Wyoming had in its possession or a consultant working for the state of Wyoming had in its possession 19 at least an initial analysis of some of those demands. 20 21 Now, I mean, the Court can take this document 2.2 for what it is. But the witness has testified here he was working for the State of Wyoming on this project at 23 this time. He knows these gentlemen. And it's 24 certainly more foundation than has been laid on a lot 25

```
of exhibits that have been admitted to this point.
              SPECIAL MASTER: As I said, at the moment,
2
    I'm not going to permit this into evidence.
3
              But, you know, I'll take it under advisement.
4
   But at the moment at least I'm not going to admit it.
5
              MR. SWANSON: All right. Thank you, Your
6
7
   Honor.
   BY MR. SWANSON:
              You can set that one aside. I believe we've
9
10
   done our best on that one.
              SPECIAL MASTER: But also with respect to
11
   Mr. Kaste's point, I'm not going to strike the
12
13
   testimony since it's all actually regarding the
14
   document and I think relevant to the question of
   whether or not the document should come in.
15
16
              MR. SWANSON:
                            Thank you, Your Honor.
   BY MR. SWANSON:
17
              Mr. Fassett, I'll hand you two documents
18
    together. The first is Montana 81; the second is
19
20
   Montana 79. Rather, let's look at Montana 79 first.
21
              Now, you testified that you took on the
2.2
   position of deputy state's engineer in 1984; is that
23
   correct?
2.4
        Α.
              That's correct.
              And you -- I believe you testified that
25
         Q.
```

Mr. Christopulos involved you in pretty much everything
and anything that went on in the office that somehow
even affected his duties; is that accurate?

A. Yes, that's generally accurate.

Q. Did you get a sense that Mr. Christopulos,
who retired three years later, was kind of preparing

you to take over for that position?

- A. Not necessarily. I think he was looking for me to become well-rounded enough that I could take on things for him so he could focus on other issues. It was really more of a broad-based indoctrination and training.
- Q. And I believe you testified that in the course of, you said -- as a new party that's coming in and learning these issues, you could sense some frustration from both states, in fact, dealing with some of the disputes that were between them. That's accurate as to what you said a little while ago?
 - A. Yes.

2.2

Q. And in doing so, I wanted to ask you to look at a memo that would have been received before you were in the state engineer's office. And that's Montana 79. And then it appears to be, and we'll see by its contents, it's related to the next memo that I handed you, which is Montana 81.

```
1
              Let's look at Montana 81 first, just to lay
    the background. The first page is just a cover page.
2
    The second page, do you see some handwriting on the top
 3
    right corner?
4
5
         Α.
              We're on 81 now; right?
         Ο.
              Correct.
6
7
         Α.
              Okay. Yes, I do.
              Are those your initials, J.F.?
8
         O.
9
         Α.
              They are.
10
         Q.
              And the date 4/16/84, was that shortly after
11
    you were hired?
              I think that was my first day.
12
         Α.
13
              Is it fair to say this was your first day on
14
    the job, here's a pile of stuff and start catching up?
15
         Α.
              I think that would be a good
    characterization.
16
              And then below your initials, there's another
17
    date with some initials. And it says 11/18/83, L.E.A.
18
19
   Do you understand that to be Lou Allen?
20
         Α.
              Yeah.
                     I think for these issues, that would
21
   be my understanding.
2.2
              And then could you read the title of this
   memo, this Montana 81?
23
              Says, "Notes on Gary Fritz's letter of
24
         Α.
    October 27th, 1983, on Yellowstone Compact allocations
25
```

```
and administration."
              So did you understand this to be a memo that
 2
   Mr. Allen had produced in the course of his duties and
 3
    was given to you to review after you were hired?
 4
              Yes.
                   Like you said, it would have been part
 5
    of the pile of stuff I got.
 6
 7
              MR. SWANSON: Your Honor, I'd move admission
    of Montana 81.
 8
                          No objection.
              MR. KASTE:
 9
10
              SPECIAL MASTER: Okay. Exhibit Montana 81 is
    admitted.
11
                        (Exhibit M081 admitted.)
12
13
   BY MR. SWANSON:
14
              So looking at the title of Montana 81, Gary
    Fritz's letter of October 27th, 1983, on Yellowstone
15
    Compact allocations and administration, could you look
16
   back at Montana 79? And does this -- is this that
17
18
    document to which the memo refers?
              Sure looks like it.
19
         Α.
              And we know that, right, because if you look
20
         Ο.
    through Mr. Allen's memo, Item 1 is referring back to a
21
2.2
    statement within Mr. Fritz's letter; isn't that right?
              Mr. Allen's first line says, "In Mr. Fritz's
23
    next to last paragraph, he refers to a statement." And
24
    then if we go to page 3 of M79, do you see the second
25
```

```
to last paragraph, it says, "Lou Allen states that
    'Diversions to pre-1/1/1950 rights'" and goes on from
2
   there? Do you see that?
 3
         Α.
              T do.
4
              So it's clear that these two documents are
5
         Ο.
   referring -- or I should say the second document is
6
   referring back to the first?
7
8
         Α.
              Yes.
              And at the bottom of page 3, I see a
9
         O.
10
   signature by Gary Fritz. And at the top of page 1 of
   M79, I see it addressed to Mr. Christopulos; you see
11
   that?
12
13
        Α.
              Yes.
14
              And that -- is that the address for the state
         O.
   engineer's office at that time?
15
              At that time.
16
         Α.
              MR. SWANSON: Your Honor, I move admission of
17
18
   M79.
                          Until I hear that Mr. Fassett's
19
              MR. KASTE:
   reviewed that letter, I object on foundational grounds.
20
              SPECIAL MASTER: Well, in this particular
21
2.2
   case, I'm going to admit this particular exhibit. And
   it might seem inconsistent, but in this particular
23
   case, it shows other signs of actually being sent.
24
                          I understand. But not to him.
25
              MR. KASTE:
```

```
And so all we need is the question to say --
   Mr. Fassett obviously he reviewed one initial and
2.
   looked at the letter. Did you review the letter?
 3
                                                        And
   then we have adequate foundation for the letter.
4
              SPECIAL MASTER: Given -- you know, I realize
5
   I'm not bound, it's going to be one of those situations
6
7
   where I'm going to go probably beyond where the Federal
   Rules of Evidence are. But given the time period that
   we're involved in in this particular case, I'll go
9
   ahead and admit M79.
10
                        (Exhibit M079 admitted.)
11
              MR. SWANSON: Thank you, Your Honor.
12
13
   BY MR. SWANSON:
14
              So, Mr. Fassett, let's go ahead and look at
         O.
15
    that first paragraph of Mr. Allen's memo. Actually, I
    think what would make sense is to go back to
16
   Mr. Fritz's letter, which would be page 3 of M79. And
17
18
   that second to last paragraph, do you see about halfway
19
   down the paragraph, there's a sentence that begins
    "Well, only post-1950 diversions"; do you see that?
20
21
        Α.
              I do.
2.2
         Ο.
              Could you read that down to the end of the
23
   paragraph?
              "While only post-1950 diversions are included
24
         Α.
   in the allocation formula, all diversions would have
25
```

```
been monitored in both states for bookkeeping purposes
   and to make certain there is no overuse by pre-'50
2.
   appropriators. Unless there are water measuring
3
   devices in pre-'50 canals, there would be no way to
4
   regulate pre-'50 use. Also, many pre-'50 and post-'50
5
   water rights may flow through a single headgate."
6
7
         Q.
              Do you agree -- did you agree with the
   statements, all diversions would have to be monitored
8
   in both states, and then skipping, to make certain
9
   there's no overuse by pre-1950 appropriators? Do you
10
   agree with that statement?
11
12
              Do I agree with Mr. Fritz?
         Α.
13
         O.
              Yes.
              I'm not sure if I follow all of that
14
        Α.
15
   argument.
              Okay. I think Mr. Allen actually explains
16
         Ο.
        If we could flip back to his memo. And looking
17
   at, again, that first paragraph, and you see -- really,
18
   beginning after the colon in the first sentence.
19
   says, quote, "'Diversions to pre-1/1/1950 rights,
20
21
   whether from direct flow or storage releases, would not
2.2
   need to be monitored for compact administration, ' " end
           There I understand Mr. Allen's referring back
23
24
   to a previous statement.
              And then Mr. Allen states, and this is
25
```

```
without quotes, "He correctly takes issue with the word
 2.
    'administration,' which should have been written
    'allocation calculations.'"
 3
              And then if you go to the second paragraph,
 4
    this is Mr. Allen's kind of summary of that, of his
 5
    analysis. If you could read that first sentence of the
 6
 7
    second paragraph that begins "I readily concede."
              You want me to read that?
 8
         Α.
 9
         O.
              Please.
10
         Α.
              Of out of 81?
11
         Q.
              Correct?
              "I readily concede that for administration
12
         Α.
13
    both states need to monitor pre-'50 diversion and
14
    storage, not only for internal water administration but
    also for interstate verifications."
15
16
         Ο.
              So it appears that when we talk about
    allocation calculations, Mr. Allen and Mr. Fritz seem
17
18
    to be discussing this idea of post-1950 uses. And when
19
    they talk about administration, they are talking more
    about regulating water uses. Is that -- I mean, do you
20
21
   have a view on that? Because you reviewed this. Could
2.2
    you tell us whether you agree with Mr. Allen and
    whether that's what he means -- or whether that's what
23
    you understood him to mean?
2.4
              I guess I -- I haven't read this in 30 years.
25
         Α.
```

```
So I just -- I'm not recalling my review of this
    document. I think it speaks for itself.
 2.
 3
         Ο.
              So --
         Α.
              Mr. Allen's views are stated clearly here.
 4
              But in terms of the office, you and
 5
         Ο.
    Mr. Christopulos, when you use the word
 6
    "administration," could you just explain generally what
 7
    that is meant in the context of the compact
    commissioner?
 9
10
         Α.
              As I stated earlier -- and perhaps my
    recollections are different than this memo. But as I
11
    said earlier, my recollections were that the
12
13
    administration, most of the focus of the work was on
14
    the percentage sharing allocations under V, C. And
    that's where the effort and the work was being
15
    attended. And there wasn't as much on what was going
16
    on on the pre-'50 side.
17
18
              So when you say "pre-'50 side," that's what
    you refer to when you use the word "administration,"
19
20
    and post-'50 is when you use the word "percentage"
21
    allocations"? Is that accurate?
2.2
                   I think they're more intermingled than
23
    that, in my view. I don't recall that rigid a
    distinction in the use of the terminology.
2.4
              If we could look at page 6 of the same
25
         Q.
```

```
exhibit, M81. And the Bates number at the bottom is
2.
    000086.
 3
         Α.
              Okay.
         Ο.
              And the paragraph 7, beginning with the words
 4
    "we do not need." And, again, this is Mr. Allen.
5
   I believe when he says "we," he refers to the state of
6
7
   Wyoming. Could you tell me if you disagree with that?
              I'll just read this out, and I'll ask you a
8
   question. So the statement is "We do not need a
9
   storage limit calculation. Storage is limited by the
10
   reservoir permit and physical capacity and, at least in
11
   Wyoming, by the one-filling per year restriction.
12
13
   water administrative accounting in each state should
14
   suffice."
15
              So the statements seem to suggest that the
   one-filling limitation on reservoirs is focused on
16
             Do you agree with that?
17
   Wyoming.
18
         Α.
              In this sentence, yeah, I do.
19
              Did you disagree with this statement when you
         Ο.
20
   reviewed it and correct Mr. Allen and say, I think
   Montana has a one-fill rule?
21
2.2
              No, I don't think we knew what their laws or
23
   procedures allowed for.
              So at this point, you didn't have an opinion
24
         Ο.
   on whether Montana had a one-fill rule like the state
25
```

```
of Wyoming?
              I -- no. I'm recalling that we did not have
 2
 3
    an opinion.
         Q.
              Okay. Thank you.
 4
              SPECIAL MASTER: I wonder whether this would
 5
   be a good time for the second afternoon break.
 6
    let's come back at 25 minutes to 4:00.
 7
                        (Recess taken 3:23 to 3:37
 8
                        p.m., November 19, 2013)
 9
10
              SPECIAL MASTER: Okay. Everyone can be
11
    seated.
12
              You can proceed.
13
              MR. SWANSON: Thank you, Your Honor.
14
   BY MR. SWANSON:
15
         O.
              You ready, Mr. Fassett?
16
         Α.
              Sure.
              We left off discussing a number of documents
17
         Ο.
    that you -- well, we looked at two documents that you
18
19
    reviewed when you first came to the state engineer's
    office in Wyoming. I'm going to hand you two more that
20
21
    I believe are in the same vein. And I'll ask you if
2.2
    that's the case. These are Montana 87 and Montana 88.
23
              SPECIAL MASTER: Just to be clear, I think
    the witness testified that he would have reviewed the
24
    document with his initials. But I don't think he ever
25
```

```
actually testified he reviewed M79.
              THE WITNESS:
                            I think that's correct.
 2
 3
              SPECIAL MASTER: Do you recall whether you
    reviewed M79?
 4
              THE WITNESS: I don't recall.
 5
              SPECIAL MASTER:
                              Okay.
 6
   BY MR. SWANSON:
 7
              All right. So I'll approach and hand you M87
 8
         Ο.
              So, Mr. Fassett, first looking at M87, can
 9
    and M88.
    you just identify what this document is?
10
              It's a memorandum dated June 22nd, 1983, to
11
         Α.
    Mr. Christopulos, the State Engineer, from both
12
13
    Mr. Buyok and Mr. Allen.
14
              And that was prior to your working at the
         O.
15
    state engineer's office; correct?
16
         Α.
              It was.
              And if you look at the very top right corner
17
         0.
18
    of that document. Is that the same situation, your
19
    initials and the date there at the top?
20
         Α.
              Yes.
21
              Was that the first day you started? I can't
         0.
2.2
    recall.
23
         Α.
              It was.
              So this was a memo that was produced and kept
24
         Ο.
    in the files by the Wyoming State Engineer's Office?
25
```

```
1
         Α.
              Yeah, I assume so.
              And by your initials, do you know whether you
2
         Ο.
    would have reviewed this document when you began your
 3
    employment there?
4
5
         Α.
              Yes, that's what my initials would have
    identified.
6
7
              MR. SWANSON: Your Honor, I move admission of
   M87.
8
              MR. KASTE:
9
                          No objection.
10
              SPECIAL MASTER: Okay. Exhibit M87 is
    admitted into evidence.
11
                        (Exhibit M087 admitted.)
12
13
   BY MR. SWANSON:
14
              So looking at the first paragraph of that
         Ο.
15
    memo, could you just read the very first sentence,
16
   please?
              Sure. "The Yellowstone River Compact
17
         Α.
    Commission Technical Committee met on June 21st, 1983,
18
19
    to discuss the 'Draft Proposal for the Formulation of a
    Cooperative Plan Based on Streamflow Forecasting to
20
21
    Administer the Yellowstone River Compact.'"
2.2
              And if you look down at the attendance list
    for the June 21 meeting, do you see any employees of
23
24
    the State of Wyoming that are on that list?
              Yes, Mr. Allen and Mr. Buyok.
25
         Α.
```

- Q. So looking at the top, Phil Farnes, and it
 has the letters SCS after him. Who would that person
 work for?
- A. Oh, I think at this time SCS could have stood for the Soil Conservation Service. But that's changed today.
 - Q. And then looking at the next person, Chuck Parrett, do you understand the initials after that to be United States Geological Survey?
 - A. That's correct.

7

8

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10

16

17

18

19

20

- Q. And then Mr. Dan Ashenberg, Montana DNRC. Do
 you know who he is?
- A. Yes. I forgot his name, but I remember he was one of the lead staffers for DNRC working on these issues.
 - Q. And then the next two individuals, Rick
 DeVore, and I believe those USBR initials mean United
 States Bureau of Reclamation, and Tim Felchle, who
 apparently will forever be memorialized as the person
 who was late for the meeting.

So looking at the next sentence -- or the
first sentence of the next paragraph, "Dan Ashenberg"
who you identified as Montana DNRC employee "opened the
meeting with a request for comments from Wyoming. We
expressed our reservations," and it goes on from there.

```
1
              Do you understand that Mr. Ashenberg and the
    state of Wyoming produced this draft proposal that they
2.
    are discussing?
 3
              I don't know if that was a joint
4
   presentation.
5
              So this may have been a document that Montana
         Ο.
6
7
    and Wyoming worked on together?
              I'm sorry, the memo?
8
         Α.
              The draft proposal that it references.
9
10
         Α.
              Yes.
                    I'm not recalling it specifically.
11
    if Mr. Ashenberg opened the meeting seeking comments,
    it sounded like it was their proposal looking for
12
13
    comments from Wyoming. I didn't recall that as being a
14
    joint proposal.
              So if someone else, if Mr. Moy from Montana
15
    had testified that Montana produced such a document,
16
```

would he be the best source of that information?

17

18

19

20

21

2.2

23

24

25

- I mean, it sounds like the meeting was Α. Yeah. a meeting of the technical committee and that proposal was apparently on the agenda for that discussion.
- Then if we look at the next document I handed Ο. you, which is M88, and if you look at the title of that document, it matches the title of the first paragraph. And I see your initials at the top.

Did you understand this to be that draft

```
proposal that they reviewed and that you, in fact,
   reviewed it yourself when you began employment in
2
   Wyoming?
 3
              SPECIAL MASTER: Just to divide it up, I
4
5
   think there's two questions.
              MR. SWANSON: I'll divide it up, Your Honor.
6
7
              SPECIAL MASTER: And maybe start out by just
   asking him to confirm those are his initials.
8
   BY MR. SWANSON:
9
10
         Ο.
              If you look at the top right, again we have
   some partial initials that are handwritten and the date
11
    4/16/84, partial initial. Are those your initials?
12
13
              It sure looks like it, yep.
14
              And then if you look at the title of this
         O.
15
   document, it appears to match the title referenced in
   M87?
16
              It does.
17
         Α.
18
              Do you believe you reviewed this document
19
   when you began employment at the state engineer's
2.0
   office?
21
         Α.
              You can see I had a busy first day.
2.2
              MR. SWANSON: Your Honor, I'd move admission
   of Exhibit M88.
23
              SPECIAL MASTER: Any objection?
2.4
                          No objection.
25
              MR. KASTE:
```

```
1
              SPECIAL MASTER: Okay. Then Exhibit M88 is
    admitted.
 2.
                        (Exhibit M088 admitted.)
 3
   BY MR. SWANSON:
 4
              I'd like to look at M88 on the page that's
 5
         0.
    numbered page 11 at the bottom. And there's a
 6
 7
   paragraph there that begins "after the determination";
   do you see that paragraph?
 9
              I'm sorry. What page are we on now?
10
         Q.
              It's page 11 at the bottom. The Bates number
11
    is Wyoming document 000136.
12
         Α.
              Okay. I've got that page.
13
              I'm interested in that bottom paragraph and
14
    then the numbered items 1, 2, and 3. Could you read
    those out loud, please?
15
              Starting the paragraph?
16
         Α.
              Yes, "after the determination."
17
         Q.
18
              Sure.
         Α.
19
         Q.
              Read that paragraph and numbered Items 1, 2,
20
    3.
              Okay. "After the determination of the
21
         Α.
2.2
    allocable flow has been made and the water apportioned
    according to Article V, the administrative model would
23
    calculate the minimum flow that should cross the state
24
    line each day of the" -- looks like it's been crossed
25
```

```
out on my copy and a 10 was put in there, "10-day
   period."
2.
              Yes, I have the same thing. Go ahead.
 3
         Ο.
         Α.
              "This minimum flow is equal to the sum of:
4
   1, All Montana pre-1950 agricultural needs; 2, Demands
5
   for filling any Montana pre-1950 reservoirs; 3,
6
7
   Montana's post-1950 compact allocation."
              So this is -- this document for Montana,
8
9
   would you agree, seems to be saying that we can figure
   out how much water Montana should get under the
10
   compact? Start first with the pre-1950 agricultural
11
   needs. Second, the demand for pre-1950 reservoirs.
12
13
   And then the post-1950 allocation.
14
              Do you understand that to be what their
15
   proposal included in that section?
                    That's just what you had me read.
16
         Α.
              Yes.
              So you mentioned earlier that all of the
17
         Ο.
18
   discussions that were happening during the '80s, you
19
   testified, were focused on Article V, C, not V, A.
20
   Could you explain the difference? What does V, A cover
   as you remember it -- well, first, let's back up.
21
2.2
              Do you remember the Yellowstone River
23
              I know you've been away from the job for a
   Compact?
   while.
2.4
                          I'm getting confused.
25
         Α.
              I'm sorry.
                                                  I mean,
```

- these were proposals that were being exchanged and discussed at meetings before I worked there. So...

 Q. Right.

 A. Nothing I testified to was a recollection of
 - A. Nothing I testified to was a recollection of this. This didn't occur. In fact, I think the memo says we're at an impasse, and they stopped.
- 7 Q. Okay.

5

6

8

9

10

11

15

- A. Before I got there. So that's why my recollection of how things were characterized during my time may be different than what was being discussed this year prior to me going to work there.
- Q. So it's possible that Montana did, in fact, discuss how to meet their pre-1950 water right the year before you came?
 - A. There were proposals on both sides. I mean, that's what I recall. This is Montana's.
- Q. And at an impasse, so you'd agree that
 Wyoming didn't appear to be agreeing with Montana's
 proposal?
- A. Apparently not. It didn't go anywhere, and none of this continued on during most of my tenure.
- Q. Okay. Well, we'll move on. But, actually,
 before we go to the next one, I think it would be
 helpful if you could explain, as you recall, the
 compact itself. And when we talked about Article V, A

```
and Article V, C, you talked about that in your
   testimony.
2.
              Could you just explain to the Court what you
 3
   understood the difference to be between Article V, A
4
   and V, C?
5
              It was really sort of pre-'50 versus
6
         Α.
   post-'50. And I think my recollection, as I said, was
7
   that the focus was on the mathematics of the V, C
   sharing, splitting of the water under the compact and
9
   how that should be mathematically worked out so that we
10
   would know whether the states are in compliance.
11
                                                       To
   make sure that neither state was overusing their share
12
13
   of that V, C water, that was really the focus.
14
              And the V, A, the discussions about pre-'50
15
   during my time was really much more general, as I said.
   It was much more conversational related to sort of
16
   dryness. It was never the detailed focus about what
17
18
   we're going to do about something. I mean, there was
   not that kind of detail.
19
20
              Is it a fair statement that before you can
         Ο.
21
   talk about Article V, C and what water is available to
2.2
   be split for post-'50 rights, you have to figure out
23
   what each state got under its pre-'50 rights?
              Well, yeah. You might have to sort all that
24
         Α.
   out, as well as the issues of the supplemental supply.
25
```

1 Q. What do you mean by "supplemental supply"?

2.

- A. I don't have the compact, but the other provision of it, of course, that talks about water supplemental diversions for the pre-1950 rights.
- Q. So when you mentioned that you wanted to understand that math so that you could know whether each state was in compliance, what if Wyoming determined that Montana was not in compliance? In fact, let's say Montana was using more than its percentage of post-1950 water. What would Wyoming do about that?
- A. We would bring it to Montana's attention and discuss what needed to be done, if anything.
- Q. Did you believe in that time, in the 1980s, when you were the deputy and then when you were the state engineer, that you had the authority under the compact to call on Montana and say, stop using those -- that amount of post-1950 water; that's ours?
- A. That -- I guess we could have. But we didn't have that kind of information.
- Q. But you believe that the compact gave you the authority to make that call?
 - A. Well, you're using the word "call." I think we can make an informational request from a fellow state any time we want, and we did. If we wanted to

```
know about what was going on, Montana, to the extent
they could, they would tell us. They would inform us
as to what was going on. And we did the same with
them. When they asked about what are you doing with
Powder River Dam, we shared what we could and what we
knew where it was and where it was going, the status of
those projects. It was more of a dialogue than the
formality that your question is sort of suggesting.

Q. So let's go back to this idea of figuring out
```

2.2

- Q. So let's go back to this idea of figuring out how much water is used so we know what's left over. If you've got a river that, let's say, has 1000 CFS flowing down it, and let's say you've got two water users, one upper and one lower, and they agree that they are going to divide -- they are each going to use about 400 CFS, and they have equal water rights, and then they say we're going to go ahead and split the remaining 200 CFS, that would be pretty easy to administer, wouldn't it?
 - A. Yeah, under the example you gave me.
- Q. So what if those same water users said, we're going to respect each other's use as of a date, a date certain, January 1st, 1950, and then whatever is left over, we will split between us on a percentage basis? Wouldn't you agree that the first thing they need to do is -- I mean, not the first thing, but they needed to

find out how much they were each using as of that date certain?

A. Sure.

3

4

5

6

7

9

10

11

12

13

14

15

16

17

18

19

20

- Q. So if the lower water user calls up the upper one and says, I'm not getting everything that I'm supposed to get as of my January 1st, 1950, date, and we need to figure out that amount, would it do any good for the upper one to say, we just need to focus on the extra that's left over and how we're going to use it?
 - A. No. I think you'd want all the information.
- Q. So you think that the upper one would reasonably need to say, yeah, first thing we need to do is know how much water we used on that date so you know if you're getting all that you were guaranteed?
- A. Yeah. But you know the compact, it's not that easy. It's not a given day. And it's cumulative for the year. It involves the calculations of lots of diversions, lots of storage. I mean, the mathematics does not fall out under an example like you just gave me, at all.
- Q. The cumulative year calculation goes to the post-1950 share split of water; right?
 - A. Right.
- Q. But the pre-1950, what are we looking at there in terms of water rights? Aren't we looking at

```
the water rights that were in place in both states at
2.
    that time?
 3
         Α.
              Sure.
              And so that isn't necessarily a cumulative
 4
         Ο.
    yearly account, is it?
5
         Α.
              No.
6
7
         Q.
              Isn't it how much I'm using for my irrigation
    claim during the irrigation season?
8
9
         Α.
              Yep.
10
         Ο.
              So do you agree that to know how much you're
    going to get under Article V, C, you first have to make
11
    sure both parties are getting what they needed under
12
13
    Article V, A prior to 1950?
14
         Α.
              Well, you changed it. Your question said
15
    what they needed. That's different than determining
    what their rights are or what they were using.
16
17
              That's a good point. That's a good point.
         Ο.
                                                            Ι
18
    appreciate you clarifying that.
19
              So before you can focus on Article V, C and
    what they would split for later water, wouldn't you
20
21
    agree that first thing they need to do is make sure
2.2
    they're each getting what they are entitled to under
    Article V, A before 1950?
23
2.4
         Α.
              Sure.
```

25

Ο.

And would you consider it to be reasonable

```
that if the lower water user said, I'm not getting
    everything that I got that I'm entitled to under
 2
    pre-1950, that it doesn't do any good to talk about the
 3
 4
    extra that you want to allocate?
              Yeah, that's true.
 5
         Α.
              So let's say these two water users --
         Ο.
 6
 7
         Α.
              Well --
              Go ahead.
 8
         O.
              Again, I don't know if you're trying to
 9
         Α.
10
    create an inconsistency.
              I'm not trying to. If I am, correct me.
11
         Q.
12
              Yeah. Again, like I told you, I recall the
         Α.
13
    expressions of, you know, shortness, dry year, people
14
    are suffering. And we would tell them the same.
15
    You're making it sound like something happened back in
    the '80 and '90s that simply didn't happen. There was
16
    no discussion of, let's go find out what all the water
17
    rights are from top to bottom. Nobody asked that.
18
19
              Was there discussion, though, from Montana
         Ο.
    saying, it's really dry; we're not getting all of our
20
21
   pre-1950 water rights?
2.2
              As I said, that would have been a routine
23
    topic of discussion. And our responses were, we're
    really dry too. And Mr. Whitaker would have shared
24
    details about how his regulation was proceeding at that
25
```

```
time. So it never went beyond that at that time.
              So let me just kind of recapsulate [sic].
2
         Ο.
   Montana says -- you're at some meeting; Montana says,
3
   it's really dry. We're not getting our pre-1950 water.
4
   You know, it's dry. And Wyoming would respond, yeah,
5
   it's dry in Wyoming too. We're regulating down to
6
7
   really, really senior water rights; right?
              And was there any junior water that
8
   Montana -- that Wyoming could have cut down and
9
   regulated and sent to Montana?
10
              There may have been. I don't recall a sort
11
         Α.
   of proceeding to evaluate that. I mean, I think the
12
13
   general sense was that our internal -- our internal
14
   priority administration had turned all the juniors off.
   They were already off by the time things got bad in
15
              They were equally bad in Wyoming or as bad.
16
   Montana.
   And our own internal regulation, separate and apart
17
   from Montana, had already turned off the juniors.
18
19
              And so that, you felt, probably would have
         Ο.
   satisfied Montana to say, hey we're down to 1883 over
20
21
   here. There's no water we can send you?
2.2
         Α.
              Right.
              If we could look at an exhibit that's Montana
23
    218. There are a number of these, Mr. Fritz [sic],
24
   that the state of Wyoming produced for the state of
25
```

```
Montana.
              And I took it to mean that it was -- there
   were some internal notes that your office produced kind
2
   of capturing what happened at meetings.
 3
              Is that the case?
4
              I'm sorry. I was looking at the document.
         Α.
5
   Are you asking whether we would have kept our own notes
6
   of meetings we attended?
7
              Yeah. I'm asking if this would have been
8
   your own notes or if this was a compact commission
9
10
   note. If you could tell us.
              This looks more like the minutes that would
11
         Α.
   have been reviewed and approved. These don't look like
12
13
   an internal memorandum of Wyoming staff, for instance.
14
              So if we look at the top, it says Meeting
   Notes for the Yellowstone River Compact Commission
15
   Meeting November 8, 1988.
16
              You were state engineer at that time; is that
17
18
   right?
19
         Α.
              I was.
20
              And if you look up at the very top right,
         Ο.
   there's some handwriting, some initials again.
21
                                                     I'm
2.2
    just wondering if you recognize those.
              It looks like my handwriting. I think my
23
         Α.
    initials, the stuff that's cut off. K.C. was the
24
```

initials of my administrative assistant at that time.

```
1
         Q.
              So when it says "KC-file," it would have been
   stick one in the file?
2.
              Would have been asking her to file my copy of
 3
         Α.
   this document.
4
              And then if you go back to the list of
5
         Ο.
   attendees, you're listed as an attendee for the state
6
7
   of Wyoming; right?
              I guess we don't -- do we have the annual
8
9
   report from this year to see whether these are in
10
   there?
11
         Ο.
              I don't know. I haven't actually looked at
   that. I was looking at the attendees. You see under
12
13
   the state of Wyoming, you see these three names?
14
         Α.
              Uh-huh.
15
         Ο.
              Jeff Fassett, that's you. Sue Lowry and Mike
   Whitaker, who are they?
16
              Sue, at that time, was a new employee
17
   involved with the Interstate Streams Diversion group of
18
   staff. And Mr. Whitaker, in '88, was fairly new
19
   Division Superintendent for Water Division No. II.
20
21
         Ο.
              And then over at the Montana attendees, do
2.2
   you know those three? You've already spoken about
23
   Mr. Fritz. I believe you've spoken about all three of
```

Was it common to have Rich Moy at these

these actually, Chuck Dalby, Rich Moy, and Gary Fritz.

24

```
meetings in the late 1980s?
              Uh-huh, yes.
2
         Α.
              In fact, he served on some technical
 3
         Ο.
   committees, didn't he?
4
              I believe he did.
5
         Α.
              So I'm looking at -- well, first, at the very
6
         Ο.
7
   bottom, there's a deposition exhibit tag. It says "109
   Fassett." Do you recall this from your deposition?
              I'm not sure I recall it, but, obviously, it
9
10
   was something we used when I was deposed.
              MR. SWANSON: Your Honor, I move admission of
11
   Exhibit M218.
12
13
              MR. KASTE: No objection.
14
              SPECIAL MASTER: Okay. Exhibit M218 is
15
   admitted.
                        (Exhibit M218 admitted.)
16
   BY MR. SWANSON:
17
              So if we look at the bottom of this first
18
   page, under Water Management, this paragraph -- I think
19
   this paragraph is describing exactly what you just
20
21
   spoke about. Could you read this paragraph, the first
2.2
   one, two, three, four sentences?
              Sure. Reading from M218?
23
         Α.
              Correct. Beginning with "Mike Whitaker
24
         Ο.
   stated."
25
```

- A. "Mike Whitaker stated he was regulating tributaries to the Tongue and Powder River back to the 1880s. In many areas only the first right was able to take any water. Many areas in Division III near the reservation, calls were being made on streams that had never been regulated before. No regulation was done on the main stem of the Tongue, only the tribs."
 - Q. So it sounds like a pretty dry year?
 - A. It does.
 - Q. Was it your experience as state engineer that if water users could get water, they would use it to irrigate in a dry year?
- 13 A. You bet.

8

9

10

11

- Q. And so if we go to the second page, under Article V Administration; do you see that heading?
- 16 | A. Okay.
- Q. And there's some discussion about management stuff. And halfway through that paragraph, it begins "A more theoretical discussion"; do you see that?
- 20 | A. Yes, I do.
- Q. Could you read those two sentences, that one and the following one?
- A. "A more theoretical discussion took place as to the value of the compact and what types of problems it really can help alleviate. In a dry year Wyoming

```
has shut off all of her post-1950 rights anyway so
  nothing that should be going to Montana is being
2.
  diverted."
3
        Ο.
             And that's what you told them; right?
4
5
```

- it's a dry year. We can't help you. Is that right?
 - That's correct. Α.

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

2.2

23

24

- Was that discussion a discussion of, if we Q. could shut it down, we would, and send you water, but frankly, there's just nothing to shut down? Or was it a discussion of, there's no call under the compact and that's the way it is?
- No, it wasn't that overt. I think it was much more factual. I think it was a sharing of facts.
- So you don't know whether, in fact, you told Ο. the representatives from Montana, we would help you out if we could, but there's nothing we can do? Or whether you said, hey, there's just no shutting down to send to Montana?
- I mean, I think this seems to capture Α. Right. what I've been trying to testify to, is that we would have gotten a report from the people on the ground stating the facts as to what regulation was occurring. And that was likely -- I guess my sense was that was satisfying demand on Montana. I mean, they accepted that answer.

1 Q. I'm sorry? They accepted that answer. 2. Α. And anybody who would have been -- would have 3 Ο. had water would have been using it; is that your 4 experience? In Wyoming or Montana? I mean, if they 5 had access to water, they would be using it? 6 7 Α. Yeah, in a dry year, I assume that's the case. So I'm looking at that statement we just 9 read. And it says, "Nothing that should be going to 10 Montana is being diverted"; right? But then on the 11 first page, we read a statement that says, "No 12 13 regulation was done on the main stem of the Tongue, 14 only the tribs." Now, wasn't there water -- doesn't 15 the main stem of the Tongue go into Montana? Α. Right. 16 And there was no regulations there. Do you 17 Ο. know if anyone was diverting out of the main stem of 18 19 the Tongue in Wyoming? 20 I don't know that. But I suspect there was. Α. 21 Ο. Did you know whether they were pre-'50 or 2.2 post-'50 water users? I don't know. But if there was no 23 Α. 24 regulation --There was no regulation, so you don't know? 25 Q.

1 Α. Right. Okay. Well, we'll come back to that in a 2 Ο. But that was -- I guess that was helpful. 3 moment. I'm going to ask you to look at another 4 document which I'll hand you, which is M205. Do you 5 recognize this document? 6 7 Α. Excuse me. M205 appears to be -- it's entitled Meeting Notes, Yellowstone River Compact meeting, November 26th, 1985, Billings, Montana. 9 And do you see in the first paragraph, it 10 Q. lists you as an attendee from the state of Wyoming? 11 12 Α. Yes. 13 O. That was before you were the state engineer; 14 right? 15 Α. That's correct. And you see at the bottom, there's a Wyoming 16 0. document Bates No. 004918? You see that at the bottom 17 18 of the first page? 19 Yes, I'm sorry. I was glancing through it. Α. And I think you testified a little while ago 20 Ο. 21 that this was -- well, you testified about a different 2.2 document. So let me ask you about this one. Do you understand this to be a meeting notes 23

that were actually from the compact commission, not

internal notes created by the state of Wyoming?

24

- A. They appear to be. They seem to be a draft cause of the notice. I guess I just ask whether these aren't the same ones that are in the annual report.
 - Q. Okay.

4

5

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7

9

10

11

12

13

14

- A. I mention that only 'cause you can see in the last document you handed me, the font is different, the structure, the memo is different. So this may be a draft. In fact, I see handwriting on here from somebody.
 - Q. That's not your handwriting?
 - A. I don't think it is, actually. All of them look like a gentleman on our staff. So he may have been reviewing these -- this may have been a draft that was reviewed by staff, maybe a copy of the draft minutes.
- 16 Q. Okay.
- 17 A. The final would be in the report.
- Q. Well, and I'm interested in a statement on page 4 of this document.
- 20 A. Okay.
- Q. And I just want to ask you if this is
 something that you experienced in your time. On page
 4, in the second half of the document, you talked about
 how it was common at these meetings to review the water
 conditions for the past year. And the middle of that

```
1
   paragraph, it says, "Gary Fritz asked his customary
   question concerning regulation in Wyoming during the
2.
   past water year"; do you see that?
 3
         Α.
              Yes, I do.
4
              So was it common for Gary Fritz to ask that
5
         Ο.
   every time the commission got together?
6
7
         Α.
              Sure.
              And did he communicate why he was asking
8
         Ο.
   that?
9
10
         Α.
              Well, I guess I don't remember a specific,
   sort of, preface to this is why I'm asking it. I think
11
   it was just -- he was routinely interested in what
12
13
   regulation activity was occurring on the state of
14
   Wyoming side of the line, if you will. So that's why
15
   we had those field people.
16
              Mr. Kawulok, that's quoted here, was
   Mr. Whitaker's predecessor as superintendent.
17
18
   would have been the right person to talk about his
   regulation activities. He would be sharing whatever he
19
20
   knew to Mr. Fritz.
21
         Ο.
              So it looks like he actually responded. He
2.2
   says they regulated down to a priority of 1883.
23
    that a very dry year but it's not the driest, or is
24
   that pretty darned dry?
```

That's pretty darned dry.

25

Α.

```
1
         Q.
              And the next sentence, he says, "The main
    stem Tongue River was not regulated." And this would
 2
   have been two years after the one we just looked at.
 3
              So it looks like it's consistent Wyoming is
 4
   not regulating the main stem of the Tongue River; is
 5
    that right?
 6
 7
         Α.
              Well, at least -- yeah. Well, the other one
    was three years later, yeah. '88. This is '85.
 8
              And then the next sentence, "Park
 9
    Reservoir" -- are you familiar with Park Reservoir?
10
11
         Α.
              A little, yeah.
              Can you tell us roughly where it is?
12
         Ο.
13
              It's way up on the headwaters of Big Goose
14
    Creek, which is a tributary to the Tongue.
              Are you familiar if there is a reservoir
15
         Ο.
    above it? Does Last Chance Reservoir ring a bell?
16
              Yeah, I forget the sequence. There's a
17
         Α.
18
   number of smaller high mountain reservoirs up on those,
   both the Big and Little Goose drainage.
19
              It says, "Park Reservoir stored water to only
20
         Ο.
21
    60 percent of capacity, with about 5900 acre-feet being
2.2
    its maximum storage for the year." So if there's a
    reservoir that doesn't fill, do you recall if there was
23
    a fill order issued that year on Park Reservoir?
24
25
         Α.
              I wouldn't know that, no.
```

```
1
         Q.
              That wasn't something that would always rise
   to your level of attention?
2.
              It would not. It would have remained in the
 3
         Α.
   Division II field office in Sheridan.
4
              So the same with, if there was a reservoir
5
   above Park, Last Chance Reservoir, whether it had a
6
   fill or whether its fill was discounted because it let
7
   water go by in the winter, you wouldn't be the best
   source for that?
9
10
         Α.
              I would not be.
              MR. SWANSON: Your Honor, I move admission of
11
   Exhibit M205.
12
13
              MR. KASTE: Stipulated. I love that one.
                            Is it 205?
14
              MR. SWANSON:
              MR. KASTE: I don't think he has foundation
15
   for it. That's why I'm stipulating.
16
              SPECIAL MASTER: I was going to ask some more
17
   questions if you objected. My guess is you might be
18
19
   able to get the foundation. But in any case, Exhibit
   M205 is admitted by stipulation.
20
21
                        (Exhibit M205 admitted.)
2.2
   BY MR. SWANSON:
              So you mentioned a little while ago that
23
   there was disagreement over the Middle Fork project.
24
   And specifically, what was the disagreement? Could you
25
```

```
tell us what the disagreement was between the two
    states over the Middle Fork project?
2.
 3
         Α.
              Middle Fork Dam project?
         O.
              Yes.
 4
5
         Α.
              Yeah. As to whether it was pre- or
   post-1950.
6
7
         Q.
              And what was Wyoming's view; that it was
   pre-1950?
8
9
         Α.
              That's correct.
10
         Q.
              And Montana's, obviously, would have been
    that it was post-1950?
11
12
         Α.
              That's correct.
13
              So was -- Wyoming's position was that being a
14
   pre-1950 water right, that it was protected under
15
    Article V, A and was not a shared percentage under
    Article V, C?
16
17
         Α.
              Yes.
              And there was a discussion over the term "a
18
    perfect water right, when was it perfected? I think,
19
    in fact, you testified that was Montana's concern.
20
21
              What did you understand that to mean when the
2.2
    water right was perfected for that reservoir?
23
              Well, that water right was -- we don't use
24
    the word "perfected." But in our system, perfected
    would be equivalent to adjudication. It was permitted.
25
```

```
It had a permit to be constructed. That was what was
   at issue in the '40s and canceled here recently.
2.
              So it was never perfected because the project
 3
   never went forward and was never built. So there's no
4
   way to perfect that right.
5
              I thought you had testified earlier it didn't
6
         Ο.
7
   matter whether it was a pre- or post-1950 water right
   because it wouldn't matter in terms of the percentage
9
   owed to Wyoming at that time. That wasn't your
   position?
10
                   I'm saying there were studies,
11
         Α.
              No.
    subsequent studies analyzing that project which showed
12
13
   that the storage and the yield associated with that
14
   project, whether it was pre or post, could have been
15
   accommodated. In other words, it was enough -- I'm
   recalling that there was a study that indicated that
16
   there was enough water remaining under the V, C
17
18
   allocation to Wyoming that that reservoir could have
   been accommodated under an estimated compact sharing.
19
              But your position was it was a pre-'50 right
20
         Ο.
21
   so it should be under V, A?
2.2
         Α.
              (Witness nods head.)
              Okay. I'm going to hand you another document
23
         Ο.
    that is M198. Could you identify this document for us?
24
                     M198 is -- looks like 23 pages of
25
         Α.
              Sure.
```

```
materials.
                It's entitled State Engineer's Notes of
    Conference Call on December 16, 1986, Annual Meeting by
 2.
    Teleconference of Yellowstone River Compact Commission.
 3
         Ο.
              And you're listed as a participant from
 4
    Wyoming?
 5
              Yes, I am.
 6
         Α.
              And Shields. Someone named Shields is
 7
         Q.
    listed.
             Can you tell us who Shields is?
 8
              Yes. John Shields was a staff member of the
 9
         Α.
    state engineer's office involved with Interstate
10
    Streams matters.
11
              So this appears to be notes that were
12
         Ο.
13
    actually done internally in the Wyoming State
14
    Engineer's Office; is that right?
15
         Α.
              That's how I would interpret the notes, that
    these were notes prepared by the Wyoming side, if you
16
    will, 'cause it was being done by call.
17
              And I'm wondering if Mr. Shields, in fact,
18
         Ο.
19
    drafted them. And I would ask you to turn to page 13.
20
    And you may see a reason why I say that. So this
21
   basically is a transcript of a conversation. And at
2.2
    the bottom of a long statement by Mr. Fritz, you see in
   brackets, it says "Shields'," with a possessive
23
    apostrophe "note." And it gives kind of a note about
24
    something of substance; do you see that?
25
```

```
1
         Α.
              Yes, I do.
              And if you go to page 18. In the top
2
         Ο.
   paragraph, near the bottom of that, there is the same
3
   thing, brackets. And then it says "Shields',"
4
   possessive "question." And he offers kind of an
5
   editorial comment.
6
7
              And if you go to page 20, again near the top
   of the page, the fifth line, there's a bracket, says
8
    "Shields'," possessive "note," and another editorial
9
   comment in brackets.
10
              I took that to mean Mr. Shields drafted these
11
12
   notes.
           Do you read that the same way?
13
         Α.
              I do.
14
              MR. SWANSON: Your Honor, I move admission of
   Exhibit M198.
15
              MR. KASTE: Maybe I didn't hear it. Did -- I
16
   don't think the witness acknowledged that he ever
17
   reviewed this.
18
   BY MR. SWANSON:
19
              Do you know if you reviewed these notes?
20
         Ο.
21
         Α.
              I don't know. I don't see my initials on
    this one. This is a draft set. I don't know if
2.2
    there's a final or not.
23
              Do you recall if you attended this meeting?
2.4
         Ο.
              Well, I'm listed, so I'm sure -- I assume
25
         Α.
```

that's accurate. Could I point to another item to perhaps help 2 Ο. you with your memory? 3 Α. Sure. 4 Page 11, under about -- in the bottom half of 5 Ο. the page, there's a heading that says Other Business. 6 7 It's underlined. And then in parentheses, Really Old Business, closed parentheses; do you see that? 9 Α. Yeah. 10 Ο. And then there's a bracketed statement, which says that -- well, beginning in the second sentence, 11 "Due to the item discussed being such a sensitive one 12 13 and the previous conversations and correspondence being 14 somewhat controversial, the subsequent discussion is recorded in full"; do you see that? 15 I do. 16 Α. Do you recall this meeting when the state --17 Ο. 18 or the Yellowstone River Compact Commission or Wyoming 19 actually recorded the teleconference? 20 Actually, I don't. That would have been Α. fairly rare. Mr. Shields is still on staff and is 21 2.2 quite famous internally for having detailed notes. not surprised that he's the author of this. But I'd 23 forgotten that this was taped, if that's what it sounds 24

25

like.

Quite honestly, I've been in meetings with him

```
where he's captured almost everything that's said as a
note taker.
```

- Q. Are his notes usually pretty accurate?
- A. For the most part, yep.

3

4

5

6

7

8

9

10

11

- Q. So do you have any reason to believe this is not an accurate transcript we can look at to understand the meeting at the time?
 - A. Do you have a final?
- Q. This is what I have. If you look to the bottom of any of those pages, it says Wyoming document and gives a number. So this was produced by the state of Wyoming.
- 13 A. I assume it's something you found in the 14 files at the state engineer's office.
- MR. SWANSON: Your Honor, I'd move admission.

 He's testified he assumes it was kept in a file in the

 Wyoming State Engineer's Office.
- MR. KASTE: Clearly he's the wrong witness
 for this document. He didn't create it. He doesn't
 remember if he received it. He doesn't have adequate
 foundation. His recollection of whether or not he
 attended the meeting is a different question than is
 this document -- should this document be admitted.
- That being said, I don't care. It's great.

 25 | It's wonderful. And it talks about the decision-making

```
fight that he described earlier. So stipulated again.
 2
              SPECIAL MASTER: Okay. Can I just ask one or
    two questions? So, Mr. Fassett, did you or somebody in
 3
    your office frequently keep notes of teleconference
 4
    calls of this nature.
 5
                                  I think because this
              THE WITNESS: Yes.
 6
 7
   meeting was a call, there was probably much more focus
    on us keeping our own internal meeting minutes.
 9
    I -- again, I don't have the annual report for this
    year to know what may have been contained in that
10
    report as well. I mean, Montana was probably taking
11
    notes on their end of the phone call, as was the
12
13
    federal representative. So this is all -- this is
14
    Wyoming's version of how the meeting went.
                               Understood. And Mr. Shields
15
              SPECIAL MASTER:
    would be somebody who, apparently with his great
16
    transcription ability, would keep these type of notes?
17
              THE WITNESS: He would.
18
              SPECIAL MASTER: Okay. Thank you.
19
20
              So then Exhibit M198 is admitted.
21
                        (Exhibit M198 admitted.)
2.2
    BY MR. SWANSON:
23
              So if we go to the bottom of page 19, and
    just to save a little time, I'll agree with Mr. Kaste
24
    that the big argument here is the authority of the
25
```

```
1 federal chairman to make a decision or to cast a vote,
2 which was a hot and heavy issue at the time.
```

And at the bottom of page 19, you see
Christopulos, so Mr. Christopulos is speaking. And you
can see, in fact, he is talking about the controversy
over the Middle Fork Powder Reservoir; do you you see
that?

A. I do.

2.2

- Q. I'm interested in the following page. And if you go to the middle of that long paragraph. And, again, this is Mr. Christopulos speaking. There's a sentence that begins on the right-hand side, middle of the paragraph that says "I certainly can't agree"; do you see that?
 - A. Okay.
- Q. And it appears he's responding to Mr. Fritz who said, "Frankly, this is taking way too long to decide some of these issues." But I'm interested in where it says "I certainly can't agree," if you could read that down to the bottom of the paragraph out loud.
- A. Sure. So page 20 of M198. "I certainly can't agree that we have been or have purposely delayed it because the longer we delay it, the more we are going to be able to continue to divert water is [sic] short years. I can only remember one time of any kind

```
of question was raised as to whether we may be taking
   water or not taking water. I don't remember too much
2.
   about those facts or circumstances, but I remember it
 3
   was on the Tongue River, and I think it was probably
4
   self-regulating. If there were water shortages,
5
   chances are damn good the post-1950 rights didn't get
6
   any water anyway, or damn little, and if they got any
7
   water, it was probably during the high runoff when
9
   Montana was getting water also. That would be my
10
   response."
              He's referring to some point prior to 1986
11
         Ο.
   when this discussion came up. Do you have any idea
12
13
   what instance or year he was referring to?
14
         Α.
              I don't. This whole discussion is related to
15
   Middle Fork, Powder; right?
16
         Ο.
              Well, it is. But it appears here, I take
   this to mean that we're talking about post-'50 and
17
18
   pre-'50 rights on the Tongue River; do you take it to
19
   mean that?
              Okay. I'm sorry, I read more of it. Yeah,
20
         Α.
21
   these notes indicate that the context changed at the
2.2
   bottom of page 19.
23
              Yeah, it actually appears he was answering a
   question, and then he went on to discuss another issue.
24
   You're right about that.
25
```

- A. I don't know -- well, let me see. These were in -- this was November of 1986.
 - Q. Right.

3

4

5

14

16

17

18

- A. So, I guess my view is this seems consistent with my memories of my time as well.
- And that was the question I was going to ask 6 Ο. 7 you. If it wasn't during your time, when you took over as deputy state engineer, did Mr. Christopulos ever 9 talk to you about problems with the compact, I guess, 10 when Montana may have said, we want to make a call, or something like that, on our pre-1950 water rights? Did 11 he ever talk to you about anything like that before 12 13 your time?
 - A. Before I was state engineer, yeah. I mean --
- 15 | O. Well --
 - A. The phrase that jumped out at me was in these notes, Mr. Christopulos used the phrase "I think it was probably self-regulating." I think that's how the discussion often went.
- But, again, you never had the factual
 situation where there was a lot of water in Wyoming and
 none in Montana. So you had a lot of post-'50 on, and
 they would be dry as a bone. It was self-regulated
 because they were dry at the same time. So many
 post-'50 people are already off because of internal

```
Wyoming regulation activities that had nothing to do
   with the compact. I think that's his view. His term
 2.
    is self-regulated. There's no reason to get into a big
 3
    fight about the article because it doesn't matter.
 4
    Because our juniors are off.
 5
              I understand. But you don't recall him ever
 6
         Ο.
 7
    saying, hey, you've just taken over as deputy state
    engineer; there's something important about the compact
    I need to tell you? Montana made a call in X year for
 9
    its pre-1950 water rights?
10
              No, I don't recall any conversation like
11
         Α.
    that.
12
13
              Okay. And we don't need to necessarily --
14
    well, I will just so you can see that I'm giving you
15
    the straight information. I'm going to look briefly at
    Joint Exhibit 36. And I just want to look at page
16
    that's Roman Numeral VI. Bates number on the bottom is
17
    WY015497.
18
19
              And looking at that last page, I just wanted
    to point out that this conference call discussion is
20
    within the joint exhibit, which is the Yellowstone
21
2.2
    Compact Commission Annual Report for 1986. And there's
    a sentence in here, "Mr. Christopulos indicated"; you
23
    see that? It's about a third of the way from the
24
   bottom of the paragraph.
25
```

1 Α. Okay. And the sentence beyond that, 2 Ο. Mr. Christopulos -- it says, "He," so I take that to 3 mean Mr. Christopulos, "could only remember once when 4 pre-1950 water rights may not have been satisfied in 5 Montana." 6 7 But, again, back to you, you don't have any knowledge what that year would be? 8 I do not. 9 Α. I wonder if this next document will just help 10 Ο. us understand that a little more. And that's Montana 11 Exhibit 136. And I'm not going to ask you to -- a lot 12 13 of questions about it. It's already been admitted into 14 evidence. 15 But the date on the front page is May 4th, 1982, and I understand that was before you were 16 employed by the State of Wyoming. But if you look 17 through it, there's already been testimony in this case 18 about this exhibit, in that it's a letter from 1982 19 referring back to phone calls in 1981 and that there's, 20 21 in fact, a number of handwritten notes in 1981 from 2.2 Wyoming employees. And I'm wondering, do you know whether this 23 was the one time Mr. Christopulos would have been 24

referring to when he said there was one year prior to

```
1986 when Montana may not have gotten its water?
         Α.
              I don't know.
2
              Okay. And then you mentioned an interesting
 3
         Ο.
   point about self-regulating. And it -- basically what
4
   you were saying, I think, and tell me if I'm wrong, is
5
   it was so dry it didn't really matter whether we
6
7
   regulated post-1950 water rights because they probably
   weren't getting any water anyway?
              That's correct.
9
         Α.
10
         Ο.
              And if we could look at several pages into
    this document, the Bates number at the bottom is
11
   WY048193; do you see that page?
12
13
         Α.
              I do, uh-huh.
14
              And if I look, it's got several headings
         Ο.
15
   across the top. It's got After 1939. Then it says,
   Post-'39, Pre-'50, and Post-'50; do you see that?
16
17
         Α.
              I'm sorry. I wasn't -- 193?
18
         Ο.
              048193.
19
              I don't have that number of the document you
         Α.
20
   handed me.
21
              MR. SWANSON: May I approach, Your Honor?
2.2
              SPECIAL MASTER: You can. And maybe just for
23
   the record --
24
              THE WITNESS: I found 94, but the page before
   it doesn't have a number.
25
```

```
BY MR. SWANSON:
              Can you see the screen?
 2
         Ο.
              SPECIAL MASTER: Does the witness not have a
 3
    copy of that page?
 4
                            I'm handing it to him now.
 5
              MR. SWANSON:
              THE WITNESS: Actually, that page is in
 6
 7
    there.
            It's just not marked with a number.
    BY MR. SWANSON:
              Here's the rest of it.
 9
         Ο.
10
         Α.
              Okay.
              So there's -- as you can see, there's three
11
         Q.
    headings across the top. And that right-hand column,
12
13
    the heading says Post-'50; do you see that?
14
         Α.
              Uh-huh, yes.
15
         Ο.
              Then you see a number of drainages listed
    down the left-hand side. Tongue River and the --
16
    Wyoming still was not regulating the main stem of the
17
    Tongue River in 1981, do you know?
18
19
         Α.
              I don't know.
              Prairie Dog Creek, Big Goose Creek, Wolf
20
         Ο.
    Creek, Little Tongue River. Are those all within the
21
2.2
    Tongue River Basin?
23
         Α.
              Yes.
24
              And if you look, it appears that there are --
         O.
    they're listing a number of water rights next to each
25
```

```
of those drainage names. And in the right-hand column,
   when it says Post-'50, and it gives a number, like the
2
 3
   top one is 3.58. Do you see at the bottom where they
   total 19.36?
4
        Α.
5
              Yes.
              So this is what happens when you give up your
         Ο.
6
7
   copy.
              Again, I'm sorry. This page is in the copy
8
         Α.
   you handed me. It just didn't have a number on it.
9
10
         Q.
              Okay. Well, within this document, there's a
   notation that someone communicated to Mr. Fritz and
11
   said even if we regulated, we'd probably only get 20
12
13
   CFS or even under 20 CFS, I think it says. So I'm
14
   looking at this. And I take it to be their
   calculations.
15
              So my question to you would be, when you
16
   talked about self-regulating and Mr. Christopulos said
17
    there wouldn't be any water left, does it appear to you
18
    there would be almost 20 CFS if they did regulate all
19
   those streams on the Tonque River?
20
              MR. KASTE: Foundation. The witness hasn't
21
2.2
   demonstrated what the basis for any of these numbers
   are or that he knows what any of them refer to. So to
23
   ask him to then conclude what the total means is
24
   unfair, and it lacks foundation.
25
```

```
1
              SPECIAL MASTER:
                               I think probably the better
   way of asking the question, having shown the witness
2
   this exhibit, is whether he knows if post-1950 water
 3
   rights have been regulated, how much water would have
4
   been made available.
5
   BY MR. SWANSON:
6
7
         Q.
              And do you know that?
8
         Α.
              No.
              So this document may be the best source of
9
    information for that?
10
              This appears to be Mr. Christopulos' work to
11
         Α.
   sort that out.
12
13
              Okay. Do you recognize that handwriting, any
         Ο.
14
   of that handwriting?
                     That table you were just talking about
15
         Α.
              I do.
    is George's handwriting, George Christopulos.
16
              So what would have been the policy in Wyoming
17
         Ο.
   in the 1980s, when you were deputy and then when you
18
   were state engineer? I mean, you talked about
19
   self-regulating. So let's say self-regulating wasn't
20
21
   it.
         In fact, there would have been 20 CFS available in
2.2
   a dry year if Wyoming would have regulated its later
   water rights. Would Wyoming have done that? Would you
23
   have done that as state engineer, regulate those later
24
   water rights and send that water to Montana if Montana
25
```

asked? Probably not. We probably would have to know 2 Α. a lot more about what was going on on the Montana side. 3 So would you have said, no, we wouldn't do 4 Ο. Or would you say, we need to gather information? 5 We need to gather information on our side and 6 Α. 7 your side. What kind of information would you need to 8 Ο. gather? 9 10 Α. We'd need to have a better understanding of the amounts of water, the water rights, the active 11 diversions, the priority dates. All of the factors 12 13 that would have led -- we wouldn't have just said -- we 14 wouldn't have just taken Mr. Fritz's word of, we're 15 short; can you send some down? For us to take regulatory action, we would have had to do a much more 16 detailed investigation. 17 Could you -- you probably weren't here. 18 Mr. Muggli was here and testified that he got in a 19 20 plane and flew down to Wyoming to look at the water. 21 Could you have done that? Could you have flown over 2.2 Montana and looked at fields and said, yeah, clearly 23 they're short. We need to send the water? 24 Α. No.

25

Q.

Why not?

- 1 A. That wouldn't tell you much.
- 2 Q. I'm sorry?
- A. That wouldn't tell you much just looking at
 what's green, what's not. That doesn't give you any
 information about priority, amounts of water, any of
 the activities, return flows. I mean, you need a full
 accounting to understand exactly what the circumstances
 were.
 - Q. So it wasn't -- you never had a conversation where you said, there's no call under the compact, period, for pre-1950 Montana water rights?
- 12 A. No.

9

10

11

13

14

15

16

17

18

19

20

21

2.2

23

24

- Q. Did you have a conversation where you said, we need to clearly gather more data to know what Montana is doing with its water rights?
- A. I don't think we did. I don't think it ever got elevated to that extent during my time. The self-regulating view and expressions of the facts on the ground by the field people who were involved seemed to satisfy the issue. It never got escalated, never turned into any sort of formal call or much more serious request. It was just conversational about we're having tough times down here. And we would express it was tough in Wyoming too.
 - Q. But you would also express that we didn't

```
1 regulate the main stem of the Tongue and there's 20 CFS 2 available if we did regulate it?
```

- A. Well, you don't know that. You don't know if they are diverting or not at that time. I don't know the facts of 1981. But that's what I'm saying. You would have to do an investigation, not only in understanding the Montana side but what's going on on our side as well. Where are they?
- Q. Well, I thought you testified earlier, that's why I asked you, in a dry year, if someone has water they are going to be using it. You testified to that a little while ago?
- A. Yeah, in a general sense, that's true. But you don't know in particular. When you're going to take regulatory action and turn somebody off, you need a better factual base to do that.
- Q. And so, would you have encouraged some information gathering on both sides of the border?
 - A. Would I have?
- 20 O. Yes.

3

4

5

7

9

10

11

12

13

14

15

16

17

18

- A. Yes. I think that's what would have happened had a more formal request been made.
- Q. You would have said, look, for all we know you're going to just waste that water. Show us where you're going to use it. Show us that you actually have

```
pre-'50 water rights. Show us demand levels.
 2
              I'm sorry. You have to answer yes. I'm
    asking questions, and you're nodding. But go ahead.
 3
              I am nodding, yeah. That's the kind of
 4
    information you would need to know before you can turn
 5
    around and regulate somebody off.
 6
              And you also worked with Mr. Stults from
 7
         Q.
   Montana, is that right, after Mr. Fritz?
 8
              I overlapped with Mr. Stults.
 9
         Α.
10
         Ο.
              You overlapped with him? He was at one point
    the commissioner for Montana?
11
12
         Α.
              He was.
              And he, in fact, asked for a lot of that
13
14
    information to be gathered, didn't he?
              I'm not recalling. We may have had those
15
         Α.
    questions. I think we set up some committees to
16
    begin -- I think there was sort of a work plan idea,
17
18
    whether that's Mr. Stults or not. But I know there was
    a sort of let's give this issue some attention, begin
19
20
    to collect information, share information.
21
         Ο.
              Do you remember anyone who would have worked
2.2
    on those committees, the technical committee -- or the
23
    work plan?
              On our side, it probably would have been
24
         Α.
   Ms. Lowry or Mr. Whitaker, would have been those kind
25
```

```
of folks who would have been the ones involved from
 2.
    Wyoming.
              What about Rich Moy on the Wyoming --
 3
         Ο.
         Α.
              Oh, on the Montana side.
 4
              I meant the Montana side. I apologize.
 5
         0.
              Yeah.
                     Yeah.
                            I mean, he had been involved
         Α.
 6
 7
    for a number of years. I don't know if he was still
    involved as actively when Mr. Stults was the
    commissioner. But there were other staffers who likely
 9
10
    would have gotten the assignment to work on a
    committee.
11
12
              When do you think that began, those
13
    assignments to gather that information to understand
14
    each other's water rights? Did it begin under our
15
    watch as Engineer?
              I don't know if it did. We were -- we had
16
         Α.
    committees working on the interstate stuff, the dispute
17
18
    resolution. The early work that Mr. Allen and
    Mr. Ashenberg had done, it sort of died out. I'm
19
    sorry. I'm just not recalling whether there was some
20
    technical committee work before 2000, when I was still
21
2.2
    the commissioner.
              I know after you left, you were still
23
    somewhat involved in those water issues as a
2.4
```

consultant. Do you know if Wyoming ramped up those

```
technical committees in 2000 or in those years?
        Α.
              I don't know that.
2
              SPECIAL MASTER: Mr. Swanson, do you have a
 3
   sense of how much longer your cross-examination is
4
5
   likely to take?
              MR. SWANSON: Wow.
                                  I have three more
6
7
   exhibits, Your Honor. And they will go a lot quicker
   than the last ones have. But I would guess 20 minutes.
8
              MR. KASTE: Mr. Fassett has to get on a plane
9
10
   tomorrow, and coming back isn't a very good option.
                                                         Ι
   would like to finish with him tonight. My redirect
11
   will be exceedingly brief. I don't know how much you
12
13
   would like to ask him.
14
              SPECIAL MASTER: Actually, at the moment, I
15
   don't think my questions are going to be very long,
   partly because I think we have -- this has actually
16
   been very valuable testimony in terms of actually
17
18
   fleshing out these years. Questions on both sides, I
   think, it's been quite valuable. So at the moment, I'm
19
   not anticipating very much.
20
21
              So does anyone have any objection to trying
2.2
   to finish today? And, of course, the court reporter is
23
    the one that gets the -- why don't we go ahead and do
   that. I need to be back at the hotel by 6:00. I guess
24
   we'll finish up in time.
25
```

```
1
              MR. SWANSON: I'll try to expedite it.
              THE WITNESS: Do you want this?
2
   BY MR. SWANSON:
3
              You can set that aside. I'll hand you
4
   another exhibit, Montana 139.
5
              Thank you.
         Α.
6
7
         Q.
             Do you recognize this document?
              Yes. This is a letter dated July 11th, 1988,
8
9
   to Mr. Whitaker, Division Superintendent, from me.
10
              MR. SWANSON: Your Honor, I move admission of
   Exhibit M139.
11
12
              MR. KASTE: No objection.
13
              SPECIAL MASTER: Okay. Exhibit M139 is
14
   admitted.
                        (Exhibit M139 admitted.)
15
   BY MR. SWANSON:
16
              So if you look at the top there, Mr. Whitaker
17
    [sic], it indicates, "The state of Montana recently
18
   alerted us about a number of unpermitted stock
19
   reservoirs in the Hanging Woman Creek drainage." And
20
21
   it references a letter of April 6, 1988.
2.2
              To save time, I'm going to hand you that
23
   letter as well. And that's Exhibit M -- I'm going to
   hand you Exhibit M124, which has a later letter as well
24
   as the April 6th letter. They are included together.
25
```

```
1
              MR. SWANSON: So what we could do, Your
   Honor, if you want, is do M124A would be Bates No.
2
   MT22578. That's a September 19th, 1988, letter from
 3
   Jeff Fassett to Mr. Fritz.
4
5
              And then the rest of that exhibit, M124, we
   could admit it as M124B. And that's several pages.
6
7
   It's Mr. Fritz's original letter and then an attached
   list of reservoirs.
9
              SPECIAL MASTER: Okay.
10
              MR. SWANSON: Just to clear it up.
11
              SPECIAL MASTER: Just for purposes of -- so
   we actually have three different documents; is that
12
   correct?
13
             We have --
14
             MR. SWANSON: That's correct.
15
              SPECIAL MASTER: -- M139, the first page of
   Exhibit M124, and then the remainder of Exhibit M124?
16
              MR. SWANSON: That's correct.
17
18
              SPECIAL MASTER: So for purposes of
   discussion, we will have Exhibit M124 divided into two
19
   parts, M124, which will be the first page, and then the
20
   remainder of it will be Exhibit M124A.
21
2.2
              MR. SWANSON: Did you mean to say B?
              SPECIAL MASTER: B. We'll do 124A and 124B.
23
   BY MR. SWANSON:
24
              Let's look at all three of them together.
25
         Q.
```

```
1
              SPECIAL MASTER:
                               Mr. Kaste.
              MR. KASTE:
                          I was going to not object to any
2.
    of them and proceed directly to admission.
3
              SPECIAL MASTER: Under those circumstances,
4
    to speed things up, we will admit M139 and M124A and
5
   M124B.
6
7
              And thank you, Mr. Kaste.
                         (Exhibits M124A and M124B
8
9
                        admitted.)
10
   BY MR. SWANSON:
              So let's look at what would be M124B.
11
         Q.
    second document I gave you, Mr. Fassett, the second
12
13
    page has an April 6, letter; you see that?
14
              Yes, I see that.
         Α.
15
         Ο.
              And it appears to be a letter from Mr. Fritz
    to yourself and discussing a concern Montana has about
16
    unpermitted reservoirs in Wyoming; do you see that?
17
18
         Α.
              Yes.
19
         O.
              And then it appears that the following pages
    are, in fact, an attached list of those reservoirs?
20
21
         Α.
              Yes.
2.2
         Q.
              And I see, looks like there are 77 of them.
23
              And then the first document I handed you is a
    July 11, 1988, letter from yourself, which M139,
24
    referencing that first letter; you see that?
25
```

```
1
         Α.
              Yes.
2
              I'm looking down at the first page on that
         Ο.
    document, under numbered Item 4. And this explains the
3
    things that you've done to review this list. And I
4
    wonder if you could read numbered Item 4, please.
5
              This is in my letter to Mr. Whitaker.
         Α.
6
7
         Q.
              Yes.
              Item No. 4 was, "Reviewed BLM ownership maps.
8
    Almost all are located on private lands with one on BLM
9
    and one on state of Wyoming lands."
10
11
         Q.
              So does a water users need a permit to put a
    reservoir on state of Wyoming land?
12
13
         Α.
              Yes.
14
         O.
              And on BLM land?
15
         Α.
              Yes.
16
         Q.
              And on private land?
17
         Α.
              Yes.
              And so you testified that for anyone to
18
         O.
    divert water or use it for a beneficial use, they have
19
    to get a permit first?
20
21
         Α.
              Supposed to get a permit first.
2.2
              So do you know what happened here with this
23
    large list of reservoirs?
24
              As far as the follow-up work? I quess I'm
```

not recalling.

1 Q. I'm just --

2

3

4

5

6

15

17

18

- A. I was directing Mr. Whitaker to evaluate them and then get with the landowners and get them to file the permits that are necessary under Wyoming law.
- Q. Did you ever determine how so many reservoirs got constructed without your knowing about it?
- 7 Α. Well, I assume these are -- yeah, I don't know. It certainly wasn't a large number. But we went through the -- not in this degree, but when we went 9 through the Big Horn River adjudication process, the 10 BLM came forth with, unfortunately, many more 11 reservoirs that had been built on rural ranch lands 12 13 that were unpermitted. So we don't have enough staff 14 to keep an eye on all of this rural, wide open country.
 - O. Can't catch it all, can you?
- 16 A. You cannot.
 - Q. I was wondering why Montana was bringing them to your attention. Do you recall what happened there?
- A. No, I don't. It talks about these being stock. I don't know if -- well, no, '88. This was -- initially I was wondering if it was small reservoirs associated with CBM discharge. But this was really the timeline, this is earlier on in the CBM development activity.
 - Q. Yeah, that actually was going to be my

```
question. Do you know if these were CBM reservoirs?
   You don't know whether they were?
2.
              They could have been. It has the landowner,
 3
         Α.
   but that doesn't -- often the -- even under the CBM,
4
   they often file the reservoirs in the name of the
5
   landowner.
6
              So at the bottom of that first page of M139,
7
         Ο.
   you reference that Gary Fritz actually followed up on
8
   this matter on a conference call on June 22nd; do you
9
10
   see that?
11
              Oh, yes. I'm sorry. Yes, I do.
         Α.
              So you said, "So apparently Montana is still
12
         Ο.
13
   thinking about this"?
14
         Α.
              Uh-huh.
15
         Ο.
              And then the next page, you say, "We will
   eventually need to alert the various landowners." And
16
   I'm just wondering if you were communicating no sense
17
   of urgency to Mr. Whitaker when you used the word
18
    "eventually." I wondered what that was all about.
19
20
              I don't think so. I mean, it was a directive
         Α.
21
   for him to go investigate and get it cleaned up. Yeah.
2.2
   If they're physically on the ground and they do not
   have a permit, they need a permit.
23
              So if these are new reservoirs of various
24
         Ο.
   sizes, did you have a view whether they would be under
25
```

```
the compact, the Yellowstone River Compact, and I guess
   whether Mr. Fritz was concerned about that, whether
2.
   this was an issue that he was actually focused on?
 3
              That seems like that would have been his
4
   concern is to the -- and these may not have been new.
5
   I think some of these could have been there for 50
6
7
   years. They may have existed for a very long time --
8
         Ο.
              Okay.
              -- without the benefit of a permit which is
9
         Α.
10
   to the water users' loss.
              And then M124A, which is that second document
11
         Q.
    there, the first page. So it looks like you sent him a
12
13
   letter on September 19th. And the second paragraph
14
   here, you say you are at that point sending letters to
    the stock water reservoir owners; do you see that?
15
              Uh-huh.
16
         Α.
              So in April, when he first alerted you, is it
17
         Ο.
18
   fair to say those reservoirs were probably filling
   during that period of time?
19
              Well, I don't know. This is not -- you know,
20
         Α.
21
   this is out on the dry flat lands north of Gillette.
2.2
   So whether there was, you know, heavy spring snows that
   year, rains or not, I just wouldn't know.
23
              So some of them could have filled either
24
         O.
   earlier or later than that?
25
```

```
1
         Α.
              Yeah.
                     And until we got the actual permit
   applications, that's where we'd find out how big they
2
   really were and did the field work to investigate what
 3
   was going on, whether they were there, how big they
4
   were, and to get them properly permitted.
5
              Do you know where these drainages drain into?
         Ο.
6
   Do they drain into the Tongue and Powder River Basins?
7
              I think, isn't Hanging Woman --
8
         Α.
              Hanging Woman drainage?
9
         O.
              I think that's in the Powder.
10
         Α.
              How about -- well, maybe they are all Hanging
11
         Q.
   Woman. Are they all Hanging Woman?
12
13
              And was 1988 a dry year?
14
              I think, based on some of their materials
         Α.
15
    that you've been handing me, that that was one of the
   years of concern.
16
              Okay. We're down to two exhibits.
17
                                                   I know
         Ο.
   Mr. Kaste is excited about that.
18
19
              MR. KASTE: We can't have too many exhibits.
   Three and now this will be five.
20
21
              MR. SWANSON: They multiplied, that's right.
2.2
   BY MR. SWANSON:
23
              This is Exhibit M101. Unfortunately, I
         Ο.
   counted my folder divisions and not the actual numbers
24
```

on the documents.

```
1
              Looking at M101, can you identify this
   document? And it might help to look at the very last
2.
 3
           Is that last page a memo?
         Α.
              Yeah.
                     I'm sorry. I was just reading.
4
   last page of one -- M101 that you handed me is a brief
5
   cover memo from Sue Lowry to the two water division
6
7
   superintendents indicating that this was a
   Montana-created document on the history of the
9
   Yellowstone River Compact.
10
         Q.
              And you see at the very bottom, are you
   copied on this memo?
11
              Yes. Uh-huh.
12
         Α.
13
              And this, she refers to Montana's history of
14
   the Yellowstone River Compact. Is that the remainder
   of this document?
15
              Yeah, sure looks like it. About 35 pages.
16
         Α.
              And if you look at the very front page of the
17
         Ο.
   Yellowstone River Compact, this document that we're
18
19
   referring to, not the cover memo, but the -- on your
   stapled copy, you would have to actually go back to the
20
21
   front page of the document that has M101 at the bottom;
2.2
   you see that?
23
              Uh-huh.
         Α.
              If you look at the top right-hand corner, do
2.4
         Ο.
   you recognize that handwriting?
25
```

```
1
         Α.
              Yes.
                    The handwritten notes are by Sue Lowry.
              And so she's asking -- so it appears Montana
2.
         Ο.
   gave you this document and Sue is asking for comments
 3
   from employees to give back to you at some point; is
4
   that accurate?
5
         Α.
              Yeah.
6
7
         Q.
              And do you recall actually receiving any
   comments from your employees on this?
8
              I don't recall. We may have.
9
         Α.
              But the memo and the handwriting is from Sue;
10
         Ο.
   is that right?
11
12
         Α.
              Yes.
              MR. SWANSON: Your Honor, I move admission of
13
   Exhibit M101. I'm not sure if Mr. Kaste is objecting.
14
   He's standing up. He might be standing up to stipulate
15
16
   again.
                          Somebody is whispering in my ear
17
              MR. KASTE:
   on the identification of handwriting on the document.
18
   I don't object to the admission. And I think we can
19
20
   probably have one of our witnesses talk about what --
21
              MR. BROWN: You may assume too much.
2.2
              SPECIAL MASTER: Okay. Exhibit M101 is
   admitted.
23
                        (Exhibit M101 admitted.)
24
                            It will comfort you to know I'm
25
              MR. SWANSON:
```

not going to ask about any of the handwriting in the margins. 2 3 Thank you, Your Honor. BY MR. SWANSON:

4

5

6

7

9

10

11

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14

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16

17

18

19

20

21

2.2

23

24

25

So if we go to multiple pages into the Ο. document, it's actually numbered 27 on the very top center of that. And the Bates number is WY081342. And we're just looking at the fact that that's referring to issues. And issue No. 1 is Indian Reserved Water Rights at the bottom of that page. I'd like to go over to the next page.

As I understand this document, it lays out a number of issues that are in dispute between the two states about the compact. And then it lays out in each of them Wyoming's position and then Montana's position.

If we look at page 28, Wyoming's position on Indian Reserved Water Rights, I'd just ask if you could read that and tell us whether this document accurately captured Wyoming's position at that time. And please read it out loud. I should have specified.

- Α. You want me to read the --
- Ο. Read the Wyoming position paragraph -- you don't need to read the rest -- out loud. And tell us whether this accurately reflected your position at the time.

```
Page 28. "Wyoming position: Wyoming
1
         Α.
   believes the founders of the compact determines all
2.
   allocable waters on interstate tributaries based on
3
   percentage of irrigable acreage in the basin including
4
   lands on and off Indian reservations.
                                           Therefore,
5
   reserved water rights in Wyoming would come out of
6
7
   Wyoming's share, and reserved water rights in Montana
   would come out of Montana's share. The minutes of the
   final negotiation meeting held in December 1950 appears
9
   to substantiate this position."
10
              Do you recall, is that an accurate statement
11
         Q.
   as to your position, Wyoming's position, at the time?
12
13
              At the time, yes.
14
              Do you know if that's Wyoming's position --
         Ο.
15
   well, you don't work there anymore. I'm not going to
16
   even ask you about that.
              Then going to the next paragraph, Montana's
17
18
   position. And I won't ask you to read the whole thing.
   But generally it says -- in fact, I'll just read the --
19
   I'll read it, and we'll take turns here.
20
              "Montana believes that the tribal water
21
2.2
   rights predate or are senior to the Yellowstone River
   Compact and that Article V, A also applies to tribal
23
   reserved water rights."
24
```

25

Had Montana communicated that position to

```
1 you? Do you recall if that's accurate as to what they 2 said at that time?
```

- A. I'm just not recalling whether that's changed or not. I mean, this is their document, and they are stating their position. So I guess I have no reason to disagree that was their position. I'm not recalling the particular conversation on that point.
- Q. Okay. So did Wyoming disagree about the priority date of Indian reserved water rights?
 - A. What do you mean?

2.2

Q. Did you disagree about the -- let's say there are Indian reserved water rights. And let's say they are satisfied either through an adjudication or settlement.

Did Wyoming disagree with Montana here which says that they should come out of Article V, A?

- A. I don't know if we had a position on that.
- Q. Okay. If we go to the bottom of the next page, which is the bottom of 29. We just look at the heading, administration of Pre-1950 Water Rights. And we'll ask the question at the bottom and then go to the next page. And this document says, "The question is:

 Does the compact commission have jurisdiction to administer pre-1950 water rights?"

And going to the next page, could you read

```
the Wyoming position and tell us if that accurately reflects Wyoming's position at that time?

A. I'm sorry. You want me to read it out loud?

Q. Please, read it out loud.
```

- A. "Wyoming position: Wyoming believes the commission has no jurisdiction to administer pre-1950 water rights and that the way the compact has been managed historically still applies. That is, Wyoming satisfies its pre-1950 water rights first, then Montana satisfies its pre-1950 rights, and whatever is left over is divided on a percentage basis between Montana and Wyoming on the interstate tributaries."
- Q. Does that reflect Wyoming's position at that time?
 - A. I don't know if it is.
 - Q. Do you recall if you --

5

6

7

8

9

10

11

12

15

16

17

20

21

2.2

23

24

- A. Or was, I should say.
- Q. Do you recall if you gave feedback to Montana telling them to correct this?
 - A. I don't recall. It's marginal notes here on the exhibit. But I don't know what the ultimate -- after Ms. Lowry had gathered all the input, what our response back to Montana was. I'm not recalling.
 - Q. Do you remember, did the position of Wyoming change regarding Article V, A pre-1950 rights from when

```
Mr. Christopulos was state engineer to when you took
   over?
2.
              Well, I'm not recalling that there was some
 3
         Α.
   big philosophical switch of position. Again, my
4
   recollection is it really wasn't much of an issue
5
   during those times.
6
              So Montana is listing it as one of the top 12
7
         Q.
   issues of the compact, but you're saying it wasn't an
   issue?
9
10
         Α.
              It was on the list, but it wasn't the number
11
   one thing that we spent all our time on.
              Did you ever actually clearly enunciate
12
         Ο.
13
   Wyoming's position on the issue to Wyoming -- I'm
14
   sorry -- to Montana?
15
              MR. KASTE:
                          I need to object. I think this
   line of questioning has been mischaracterizing this
16
   document, which says the question is does the
17
   commission have the authority to regulate. And it's
18
19
   being mischaracterized as our position with regard to
   pre-1950 rights in a different sense.
20
21
              MR. SWANSON:
                            I'm actually asking him what is
2.2
   that position, Your Honor. And so far he's -- he's
23
   answering the question in the context that I'm asking
   it.
2.4
                               So I guess, what I would
25
              SPECIAL MASTER:
```

```
suggest, so we have a clear record here, is I'd love it
    if you could ask whether Wyoming had a position at this
 2
    particular point in time and whether or not that was
 3
 4
    conveyed.
   BY MR. SWANSON:
 5
              I'll ask it both ways, Mr. Fassett. First,
 6
         Ο.
    going back to the issue of does the compact commission
 7
   have jurisdiction to administer pre-1950 water rights,
    did Wyoming have a position on that guestion?
 9
              I think that goes back to the dispute over
10
         Α.
    the role of the federal chairman of the commission
11
12
    itself.
             And the dispute over what types of questions
    the commission and the commission chairman would be
13
14
    deciding were not -- that was a lot of the -- some of
15
    the other notes and things that we've talked about here
    talk about the differences between Mr. Christopulos and
16
    Mr. Fritz over that point. I think that didn't change.
17
              There was -- the role of the commission was
18
19
    just unclear.
20
              And then asking about the actual accounting
         Ο.
    of or the satisfaction of pre-1950 water rights.
21
2.2
    Wyoming have a position whether, under the compact,
    Montana was entitled to have all of its pre-1950 water
23
    rights satisfied before post-1950 water rights in
24
    Wyoming were being used?
25
```

```
1
         Α.
              Well, I think that's correct. I mean, that's
    what these other self-regulating comments were talking
 2.
    about.
 3
         Q.
              And do you know if that position was
 4
    communicated to Montana?
 5
              I don't know. I'm just not recalling.
 6
         Α.
                                                       Ιt
 7
    may have been. But I assume you would have found it.
              Well, did you communicate that to your
 8
         Ο.
 9
    successor, Mr. Tyrrell?
10
         Α.
              No.
              So how -- I guess, let's talk briefly.
11
         Q.
12
              MR. SWANSON: And it will be briefly, Your
13
   Honor.
14
   BY MR. SWANSON:
              When Mr. Tyrrell took over for you, did you
15
         Ο.
    do some kind of training and handoff of your duties to
16
   Mr. Tyrrell across the board?
17
              I did not. Mr. Tyrrell came from the
18
    outside; he was not within the agency like I was.
19
20
    had the benefit of being George's deputy before I was
21
    appointed. Mr. Tyrrell came from the outside, from the
2.2
    consulting sector. And so he actually came in almost
23
    eight months after I left. There was actually an
    interim state engineer in between he and I.
24
              And so while I've always made myself
25
```

```
available to him, there was no training, no exercise.
   It was his job.
2.
             And he had to jump in. Okay. This is the
 3
   last document, I promise, that we're going to look at.
4
   And that's Montana 427.
5
              Can you identify this document?
6
              It's a -- well, the first two pages are a
7
        Α.
   memo from Sue Lowry to myself and Mr. Whitaker, dated
   June 4th, 1980. It's captioned Estimated Future
9
10
   Supplemental Supplies for the Tongue River.
              And I think you said 1980.
11
         Q.
             1990.
12
        Α.
13
              There we go.
         0.
14
             Excuse me. I misspoke.
        Α.
15
              MR. SWANSON: Your Honor, I move admission of
   Exhibit M427.
16
              MR. KASTE: No objection.
17
              SPECIAL MASTER: Okay. M427 is admitted.
18
19
                        (Exhibit M427 admitted.)
20
   BY MR. SWANSON:
21
         0.
              So as I understand it -- we don't need to go
2.2
   through all of that. It appears that there are a
23
   couple different versions of water supply estimates out
   there. And Ms. Lowry is bringing that to your
24
   attention so that you can do analysis on them.
25
                                                    Is that
```

```
1 a very easy, short summary? Actually, perhaps you can
2 just tell me briefly what you understand this to be.
```

- A. I can't recall this discussion. I apologize. I was trying to review it. Attached to the exhibit is a 1983 letter from Mr. Buyok and a number of pages of computations and tables.
- Q. I'm interested in the second page on that front memo. If you could read, basically, the first half of that paragraph. You can stop at the sentence, "For discussion purposes."
 - A. At the top starting "Since the Sheridan"?
- 12 Q. Yes.

4

5

6

7

8

9

10

- 13 "Since the Sheridan Canal application was 14 rejected in 1973, and given that any post-1990 15 supplemental supply rights are going to be administered in priority, for the purposes of modeling, we may want 16 to give Montana a revised acreage amount. The other 17 side of the coin would be to keep these estimates as 18 19 high as possible to make the model show there is less 20 water available for dealing with the Northern 21 Chevenne."
- Q. So there were -- how would this affect water availability for the Northern Cheyenne?
- A. I'm sorry. I'm trying to read the rest of the memo. I'm not recalling the context of this. But

```
this was related to the -- I think, the modeling that
was going on with Tongue River Reservoir and the
negotiations, is my assumption.
```

- Q. The negotiations with the Northern Cheyenne Tribe?
- A. Yeah. Between Montana and the Northern Cheyenne Tribe and the United States. And so the modeling folks were obviously reaching out for some information data and estimates from Wyoming.
 - Q. Okay. And then --

5

6

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2.2

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24

25

- 11 A. Sue was just evaluating and sharing that 12 information.
 - Q. And then the next paragraph down, I'll just read it briefly, the part I'm looking at. "As Montana's modeling effort continues, we need to decide among ourselves when or if to push the point of whether the Federal Reserved rights for the tribes are pre- or post-Compact."

And do you know what you ultimately decided to do on that issue?

A. I don't. The general -- we'd had discussions off and on between the states. I think some of them were memorialized in the minutes about the tribal rights litigation that was going on in Wyoming. The settlement negotiations, the policy cut, if you will,

```
was that Wyoming did not want to unnecessarily be
    disrupted by Montana resolving the quantification of
2.
    reserved water rights, as long as it didn't affect us,
 3
    didn't affect Wyoming. We didn't want them resolving
4
    their negotiations with Wyoming water.
5
              Right.
         Ο.
6
7
              It's whatever works out on your side, we're
   not concerned about the details.
              So you didn't nail down a priority date and
9
10
    communicate that to Montana?
              We did not, that I recall.
11
         Α.
              So that's the end of the documents. I just
12
         Ο.
13
    have a couple of questions on this whole thing.
14
    it's about communications between Montana and Wyoming.
15
    In your years there as deputy and then state engineer.
              I understand that you indicated you've never
16
   heard of Montana actually calling and asking for water
17
    for its pre-'50 water rights; is that right?
18
19
         Α.
              That's correct.
              But we looked at letters from 1981 that
20
         Ο.
    indicate that they did, in fact, do that; is that
21
2.2
    right?
              In the materials from Mr. Christopulos?
23
         Α.
2.4
         O.
              Yes.
```

25

Α.

Yeah.

I mean, I didn't read through all the

```
1 notes. I wasn't there. I was not privy to the details
2 of what occurred in 1981.
```

- Q. In 1984, you had a lengthy conference call.

 And it was in the annual report that, in fact, there

 may have been a year in the past when Montana didn't

 get its pre-'50 water rights. And there was no

 discussion going on at that time about that particular

 call?
 - A. Not that I recall, not in the detailed manner in which your question sort of suggests. Like I said, my recollection is the dialogue was much more general than that and the formality, which occurred later, in making a request for regulation.
 - Q. And we talked about that dialogue, and you said that, well, I would have said, I need more information.
 - A. That's correct.

10

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16

- Q. In fact, that's what you did; isn't that
 right? In the late '80s, you began those committees
 gathering information to understand each other's water
 right. And that was what you just testified to, that
 if Montana asked for water, I would have said, let's
 gather information.
- A. We would need more information before any kind of enforcement actions could come -- could flow

I from that.

the states.

2

16

17

18

19

20

21

2.2

23

2.4

- Q. And you began gathering information; correct?
- A. I think that's what I recall. Like I said, I think there was committee efforts. It's a little bit like your example with the stock reservoirs that were unpermitted. I mean, the states just routinely, if asked, would share information about what's going on in
- 9 Q. So Montana's desire and requests for water
 10 never started those information gathering efforts?
 11 They just started on their own?
- A. Well, I think it flowed from the dialogue that, you know -- and the sense of frustration that this is something that, you know, we ought to start taking a look at.
 - Q. And speaking of those reservoirs, Montana went to some effort to find 77 reservoirs that Wyoming didn't know about; would you agree with that?
 - A. Yeah, they did. They're the ones that brought it to our attention.
 - Q. Did you understand that Mr. Fritz was concerned about that because those could be late reservoirs taking water that would have been headed to Montana?
 - A. I guess I don't recall that kind of dialogue.

```
1 But that would be a fair assumption, that that would be 2 the basis upon which he'd bring those to our attention.
```

- Q. And then in terms of the discussions with Mr. Moy, Mr. Moy was involved in some of these technical meetings, he's testified. Do you recall if that's accurate?
- A. He was at some of the meetings. He was actively involved for a number of years.
- Q. And there were a number of other meetings. You mentioned the Western States Water Council and the Missouri River Basin group. So you would see someone from Montana or your staff would see someone from Montana multiple times a year; is that correct?
 - A. Yeah.

4

5

6

7

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10

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12

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14

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17

18

- Q. And it was common to talk about water shortages in all those years?
- A. Not necessarily. You know, I'm not recalling any specific thing. But it could have been a wide range of discussion, whenever we saw each other.
- Q. And those occurred all times during the year or mostly out of irrigation season?
- A. I think most of them were out of irrigation season. Everybody is really busy during irrigation season. But there could have been some during the irrigation season as well.

```
1
         Q.
              And, you know, you mentioned that with
   Mr. Kaste. So I just looked back at just the documents
 2
    that I looked at today. And there's a May 4th, 1982,
 3
    letter that we looked at, that's Montana Exhibit 136.
 4
    There's the phone calls from 1981, all those notes.
 5
    Those were during the irrigation season. There's a
 6
 7
    June 8th, 2004, e-mail, that's Montana Exhibit 136.
   Actually, we didn't look at that one, but it's already
    in evidence.
 9
10
              We'll throw that one out 'cause that's 2004.
    That's after the letter.
11
              There's a July 11th, 1988, memo from you to
12
13
   Mr. Whitaker. And in that one, you reference that
14
   Mr. Fritz called you in April -- sorry. He sent you a
15
    letter in April. Then he called you on the phone on
    June 22nd. There's a September 19th letter back from
16
    you to Mr. Fritz. There's a memo from Sue Lowry, this
17
    is Exhibit 427, June 4th, 1990.
18
19
              So there are a lot of communications during
    the irrigation season; would you agree with that?
20
21
         Α.
              Sure.
2.2
              And when we talked about the formal meetings,
23
    did -- the Yellowstone River Compact Commission,
    there's been some testimony, actually guite a bit from
24
   Montana witnesses, that there were a lot of
25
```

```
conversations and things that happened not in the
    formal meeting but on the sidelines or during the
 2.
   breaks.
 3
              Was that consistent with your experience?
 4
         Α.
              Yes.
 5
              And that there were a lot of conversations
         Ο.
 6
 7
    about water shortages in Montana that happened on the
    sidelines and off the record.
 8
              Is that consistent with your recollection?
 9
10
         Α.
              It is.
11
         Q.
              It is?
              Yeah. There would have been conversations
12
         Α.
13
    outside of the -- you know, like you said, when we took
1.4
   breaks or went to lunch or whatever, conversations
15
    would have continued or talked about a range of issues.
              And then you mentioned, in fact, to Mr. Kaste
16
         Ο.
    that if something wasn't on the record in one of those
17
18
    meetings, that there was a reason it wasn't on the
19
    record. Do you remember saying that? I don't want to
20
   misstate your testimony.
              I don't think I said that.
21
         Α.
2.2
              But I guess the question would be, we heard
    from Mr. Stults that there were reasons he didn't want
23
    to formally put things on the record. And I want to
2.4
```

know in your work with him whether you had

```
conversations with Mr. Stults off the record during
those years?
```

- A. Oh, I could have. I'm actually surprised at what you just said.
 - Q. You are surprised by that?
- 6 A. Uh-huh.
- 7 | Q. Okay.

5

- A. That he would have requested something not be in the record.
- Q. Well, I think more like he talked to you or he talked to other folks not during the formal session.

 Not that something was deleted from the record. I
- 13 don't mean to misstate his testimony.
- 14 A. Okay. I'm relying on your statement.
- Q. And then we looked at all these meetings
 where, in fact, we looked at where it says Gary Fritz
 asked his customary question about water supply and
 regulation. And Wyoming responded and said, we're
 regulating down to this date in these various
 drainages.
- 21 And yet you never regulated the main stem of 22 the Tongue River; is that right?
- A. Nor did we receive a request for regulation from the state of Montana.
 - Q. And so -- I thought in characterizing those

```
1 conversations, did Mr. Fritz say, it's really dry, and 2 is Wyoming regulating it's water rights?
```

- A. And we responded with what actions we were taking, and the discussion moved on. There was not the follow-up. There was not pounding on the table. There was not demands for action. There was nothing, in my recollections, that would make that a call. The formality that was triggered in '04, to my understanding, never happened during my tenure.
- Q. So nobody from Montana said, hey, regulate your post-'50 water rights, and send that water to us?
- A. They did not. They were satisfied. My assumption was they were satisfied that we were taking actions. We weren't ignoring it. Things were dry on our side too. It was much more commodity, with an "eye" than you're suggesting now.
- Q. In each of those times when Montana asked and said, it's dry here; is Wyoming regulating, and you explained how you were regulating, in fact, several of them it says Wyoming didn't irrigate the Tongue main stem. Did anybody pull up the George Christopulos handwritten notes we looked at and said, by the way, that's about this many post-1950 water rights, and it's probably about 20 CFS? Did that ever happen?

2.2

```
1
         Q.
              And then I believe when you talked --
              SPECIAL MASTER: Mr. Swanson, I'm just
 2
 3
    curious.
              We're now half past --
              MR. SWANSON: This is my last one, Your
 4
   Honor.
 5
              SPECIAL MASTER:
                              Okay.
 6
 7
   BY MR. SWANSON:
              When you talked to Mr. Kaste, you said, hey,
 8
 9
    it would be a really big deal if Montana asked for us
10
    to regulate water right. In fact, you said there would
11
    be memos, there would be meetings, there would be
    investigations. I wrote it down. But when we looked
12
13
    at the handwritten notes from 1981 from Mr. Fritz to
14
   Mr. Christopulos asking for water, are you aware of
15
    whether there were any investigations or big meetings
    or even typewritten memos coming out of that 1981 call
16
    from Mr. Fritz?
17
18
              I just don't know. Not that I've seen.
         Α.
19
              MR. SWANSON: If I could confer with my
    colleagues, I believe I'm done, Your Honor.
20
21
              SPECIAL MASTER: In fact, why don't we take a
2.2
    five-minute break right now. And then we'll come back.
23
    And, Mr. Kaste, do you have any idea how long you're
24
    qoinq?
              MR. KASTE:
                          In light of his last couple of
25
```

GORDON W. FASSETT - November 19, 2013 Examination by the Special Master

```
1
   answers, I'm whittled down to about two or three
   questions.
2.
              SPECIAL MASTER: Okay. Then we're just going
 3
   to take a quick five-minute stretch and finger break.
4
   And then we're going to come back.
5
                        (Recess taken 5:31 to 5:36
6
7
                        p.m., November 19, 2013)
              SPECIAL MASTER: Okay. Let's go back into
8
9
   session.
             And I do have, like, two or three questions.
10
              MR. KASTE: It's important for you to get
11
   answers.
12
              SPECIAL MASTER: Mr. Swanson, are you
13
   finished?
14
              MR. SWANSON: It depends on your questions.
15
              SPECIAL MASTER: Well, then maybe I shouldn't
16
   ask any questions at this stage, since I need to get
17
   out of here at quarter to.
18
                          EXAMINATION
   BY SPECIAL MASTER:
19
20
              I just want to understand what your basic
         O.
21
   testimony is with respect to general communications,
2.2
   during your period of time, between Wyoming and Montana
   over shortages of water in Montana. So if I understand
23
24
   you -- and I realize that I'm missing some of the
   detail. And so the record as a whole will reflect the
25
```

GORDON W. FASSETT - November 19, 2013 Examination by the Special Master

1 detail of which you've answered this. But, again, I'm 2 trying to get the general outline.

As I understand your testimony, it is that there were years in which Montana informed you or your staff that there were water users in Montana who were short of water?

A. Yes.

2.2

- Q. And what was your -- why do you believe that they were giving you that information?
- A. Well, as I said, it really was a routine sort of agenda item or topic of discussion at every compact commission meeting. We would talk about streamflow conditions, reservoirs, operational things. And that's why each of us always had those field staff who were directly related to the enforcement of the priority system at those meetings. So they were there so that they could report on those things.

And so it was -- in my view, it was just a matter of sharing the conditions for the year. What was happening? Was it a good year? Was it a bad year? How are things going? I think there's minutes that talk about crops. I mean, there was just a general discussion about general conditions in the basin.

And Montana would have shared their views.

And we would have responded with what the situation was

GORDON W. FASSETT - November 19, 2013 Examination by the Special Master

 $\mathsf{L} \mid \mathsf{on} \mathsf{the} \mathsf{Wyoming} \mathsf{side}.$

2

3

4

5

14

15

16

17

18

19

20

21

2.2

- Q. And did you believe in any of the times when Montana gave you this information that one of the purposes was to see whether or not anything could be done in Wyoming to help?
- Oh, I think to some extent, that's correct. Α. 6 7 I mean, that's why they were interested in our response as to what was going on. And as I stated a couple of times, our response was, it's dry on our side too. And 9 we're regulating a lot of people, perhaps not everybody 10 as the records have indicated. But there was -- the 11 sense was that water users in both states were 12 13 suffering in those conditions.
 - Q. And so that was actually going to be my next question, which was the response that Wyoming would provide in terms of the conditions in Wyoming. Since we've already provided that, then the question -- or my understanding, then, from your testimony, is after that, you did not receive any request from Montana to take any specific actions?
 - A. That's exactly right. We did not.
 - Q. Okay.
- 23 SPECIAL MASTER: Those are my questions.
- MR. SWANSON: Nothing further, Your Honor.
- 25 SPECIAL MASTER: Okay.

1 Mr. Kaste. REDIRECT EXAMINATION 2 BY MR. KASTE: 3 I think it's important to make clear the 4 timing of those communications. When you're having 5 these discussions that you just described with the 6 7 Special Master, I get the impression that's during the Yellowstone River Compact meetings after the irrigation 9 season? 10 Α. That's primarily when that occurred. that's why it's reflected in the minutes and the annual 11 reports of the meetings. 12 13 Did Montana, someone from Montana, in the 14 middle of an irrigation season, call on you the phone 15 and ask you to regulate anybody along the Tongue River? 16 Α. No. And, you know, I just think it's important 17 Ο. for you to get the timing right. Those meetings are 18

Q. And, you know, I just think it's important for you to get the timing right. Those meetings are after the irrigation season, and they are looking back retrospectively at what had happened in the past; right?

19

20

21

- A. That's correct. That was the general sense of the reporting and data collection, things of that nature, was after the end of the water year.
 - SPECIAL MASTER: And, again, just to be clear

```
on that.
              So those are the meetings of the --
              THE WITNESS:
                            Compact commission.
 2
 3
              SPECIAL MASTER: Thank you.
   BY MR. KASTE:
 4
              And it sounds like to me like today was a lot
 5
         Ο.
    of your testimony about your interactions with the
 6
 7
    state of Montana joined with those compact commission
   meetings?
 9
         Α.
              They were. As Mr. Swanson pointed out, this
10
    wasn't all. There was letters, correspondence, would
   have been staff activities that were occurring at other
11
    times. But times when the commissioners were directly
12
13
    engaged and focused on those issues were at our
14
   meetings.
15
              Are they always a retrospective look at what
16
   happened in the past?
              All the ones -- yeah. I mean, like I said,
17
   most of those annual meetings were in November or
18
19
               That's when they generally occurred.
    December.
    records were full of when other meetings occurred as
20
21
    well. But that was the pattern during my tenure.
2.2
              All right. Mr. Swanson talked to you about a
23
    series of notes, that you probably had never seen
    before, from 1981, created by Mr. Buyok and
24
   Mr. Christopulos.
25
```

1 Do you remember that series of documents? Α. Yeah. 2. And I forget the number. But if Montana had 3 Ο. made a call to Mr. Christopulos and they had a 4 discussion about whether Wyoming could deliver some 5 water, is that the important kind of event you might 6 7 see in the Yellowstone River Compact Commission annual report? Yes, in my opinion, it would be. 9 Α. 10 Ο. So you might see that phone call in -- or the discussion show up somewhere in the 1982 Yellowstone 11 River Compact Commission report? You probably haven't 12 13 read it, but it's in there? 14 Α. I haven't. But as I talked to the Special 15 Master about the routineness of talking about streamflow conditions, there's fairly standard portions 16 of all those annual reports, reservoir conditions. 17 There's a lot of overt statements about the 18 administration not being required this year, things of 19 20 that nature. 21 Ο. Sure. 2.2 Seems obvious to me that any sort of formal call would clearly have been documented in the report. 23 Well, and that raises a point that you used 24 Ο.

the word "formal call" a number of different times.

```
Does that necessarily mean that the call for water
    would be in writing? Is that what you're talking about
 2
    when you say formal call? Or could that include a
 3
    verbal call by the state of Montana?
 4
              It could have started verbally. But it no
 5
   doubt that a written request would have been required.
 6
 7
    But, again, that would have triggered the follow-on
    event that I was talking with Mr. Swanson about.
   have been investigations, likely have been meetings.
 9
    Certainly we would be briefing governors, briefing our
10
    legislators, briefing water users. I mean, this is not
11
    a little deal to begin interstate priority enforcement
12
13
    against water users for the benefit of things
14
   downstream. And that is not a routine activity.
15
         Ο.
              When you look at the regulation with -- the
    Board of Control regulations that said calls should be
16
    in writing, and yet you know, as a matter of fact, that
17
18
    calls among water users in Wyoming often are verbal, is
    a call between the states, in your view, somewhat
19
20
    different than a call between two farmers within the
21
    same state?
2.2
         Α.
              I believe it is.
              Now, finally, this is just for fun.
23
         Ο.
              Fun for who?
2.4
         Α.
              Mr. Moy, I think testified, and you weren't
25
         Q.
```

```
here, of course, that he was shocked -- shocked, I tell
   you -- to learn that we hadn't been regulating the main
2.
   stem of the Tongue River. Would you look at 218 with
 3
4
   me?
              Is that one of the ones I have here?
5
         Α.
              Yes. And then I'm going to ask you to look
         Ο.
6
7
   at M205. And, perhaps, I really don't need to get too
   far in it, just the first page. I'll represent to you
   that those were the two documents that Mr. Swanson
9
   pointed out to you where Wyoming told them, we didn't
10
   regulate the main stem of the Tongue River, only the
11
   tributaries. And those are dated 1985 and '86. And I
12
13
    just want you to tell me if Mr. Moy was there.
14
              I'm looking at Exhibit M205. That's the
15
   meeting notes from November 26, 1985. And they
    indicate that Mr. Moy was in attendance.
16
              Exhibit M218, that was the minutes from
17
   November 8th, 1988. They also indicate that Mr. Moy
18
19
   was in attendance.
20
              When you communicated with the folks in
         Ο.
21
   Montana about how we were regulating in the state of
2.2
   Wyoming, did you try to be as accurate as you could?
23
              Certainly.
         Α.
24
              Did you have anything to hide?
         Ο.
25
         Α.
              No.
```

```
1
              MR. KASTE:
                          Thank you. I have no further
   questions.
2
 3
              SPECIAL MASTER: Okay.
              So thank you very much, Mr. Fassett, for
4
   being here today. You can now step down, and you can
5
   actually make your flight tomorrow morning.
6
7
              THE WITNESS: I appreciate that.
              SPECIAL MASTER: And we will be back, since
8
   we actually have probably worn out the court reporter
9
10
   today, but we're going to have a different court
11
   reporter tomorrow. So do you think that court reporter
   can be here at 8:30?
12
13
              THE REPORTER: Yes.
14
              SPECIAL MASTER: Is that okay?
15
              MR. KASTE: Well, I object to not having
   Vonni. But other than that...
16
              SPECIAL MASTER: I agree, it's going to be a
17
18
   loss. We will start up again at 8:30 tomorrow morning
   and continue to try and squeeze as much testimony in
19
   these days as possible. So we are in recess until
20
21
   tomorrow morning. Thank you.
2.2
                        (Trial Proceedings recessed at
                        5:47 p.m., November 19, 2013.)
23
24
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1 REPORTER'S CERTIFICATE 2. I, Vonni R. Bray, a Certified Realtime 3 Reporter, certify that the foregoing transcript, consisting of 308, is a true and correct record of the 4 proceedings given at the time and place hereinbefore mentioned; that the proceedings were reported by me in machine shorthand and thereafter reduced to typewriting using computer-assisted transcription. 8 9 I further certify that I am not attorney for, 10 nor employed by, nor related to any of the parties or attorneys to this action, nor financially interested in 11 this action. 12 13 IN WITNESS WHEREOF, I have set my hand at Laurel, Montana, this 12th day of February, 2013. 14 15 16 17 Vonni R. Bray, RPR, CRR 18 P. O. Box 125 Laurel, MT 59044 19 (406) 670-9533 - Cell (888) 277-9372 - Fax 20 vonni.bray@gmail.com 21 22 23 2.4