

No. 137, Original  
IN THE SUPREME COURT OF THE UNITED STATES  
VOLUME 7 OF 25 VOLUMES  
TRANSCRIPT OF TRIAL PROCEEDINGS

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STATE OF MONTANA  
v.  
STATE OF WYOMING  
and  
STATE OF NORTH DAKOTA  
Plaintiff,  
Defendants.

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

James F. Battin United States Courthouse  
2601 2nd Avenue North  
Billings, Montana 59101  
9:03, Friday, October 25, 2013

Vonni R. Bray, RPR, CRR  
P.O. Box 125  
Laurel, MT 59044  
(406) 670-9533 Cell  
(888) 277-9372 Fax  
vonni.bray@gmail.com

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

## 1 APPEARANCES

2 FOR PLAINTIFF STATE OF MONTANA:

3 Mr. John B. Draper, Special Assistant AG  
4 Montgomery & Andrews  
5 325 Paseo de Peralta, 87501  
6 P.O. Box 2307  
7 Santa Fe, NM 87504-2307  
8 Telephone: (505) 986-2525 Fax: (505) 982-4289  
9 E-mail: jdraper@monand.com

7 Mr. Jeffrey J. Wechsler, Special Assistant AG  
8 Montgomery & Andrews  
9 325 Paseo de Peralta, 87501  
10 P.O. Box 2307  
11 Santa Fe, NM 87504-2307  
12 Telephone: (505) 986-2637 Fax: (505) 982-4289  
13 E-mail: djwechsler@montand.com

11 Mr. Cory Swanson  
12 Deputy Attorney General  
13 602 Sanders  
14 P.O. Box 201401  
15 Helena, MT 59624  
16 Telephone: (406) 444-4774 Fax: (406) 444-3549  
17 E-mail: coswanson@mt.gov

15 Ms. Anne Winfield Yates  
16 DNRC Chief Legal Counsel  
17 1625 Eleventh Avenue  
18 P.O. Box 201601  
19 Helena, MT 59620-1601  
20 Telephone: (406) 444-0503 Fax: (406) 444-2684  
21 E-mail: ayates@mt.gov

19 Mr. Kevin R. Peterson  
20 DNRC Legal Counsel  
21 1625 Eleventh Avenue  
22 P.O. Box 201601  
23 Helena MT 59620-1601  
24 Telephone: (406) 444-5785 Fax: (406) 444-2684  
25 E-mail: KevinPeterson@mt.gov

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## APPEARANCES CONTINUED

FOR DEFENDANT STATE OF WYOMING:

Mr. James C. Kaste  
Water & Natural Resources Division  
Sr. Assistant Attorney General  
123 Capitol Building  
Cheyenne, WY 82002  
Telephone: (307) 777-3535 Fax: (307) 777-3542  
E-mail: james.kaste@wyo.gov

Mr. Chris Brown  
Water & Natural Resources Division  
Sr. Assistant Attorney General  
123 Capitol Building  
Cheyenne, WY 82002  
Telephone: (307) 777-3406 Fax: (307) 777-3542  
E-mail: chris.brown@wyo.gov

Mr. Andrew J. Kuhlmann  
Water & Natural Resources Division  
Assistant Attorney General  
123 Capitol Building  
Cheyenne, WY 82002  
Telephone: (307) 777-3537 Fax: (307) 777-3542  
E-mail: andrew.kuhlmann@wyo.gov

FOR DEFENDANT STATE OF NORTH DAKOTA:

Ms. Jennifer L. Verleger  
Assistant Attorney General  
500 North 9th Street  
Bismarck, ND 58501-4509  
Telephone: (701) 328-3640 Fax: (701) 328-4300  
E-mail: jverleger@nd.gov

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Further Examination by the Special Master

1 FRIDAY, OCTOBER 25, 2013, 9:03 A.M.

2 SPECIAL MASTER: Good morning. You can all  
3 be seated.

4 So good morning, Mr. Smith. So before you  
5 continue -- before you actually begin on the redirect,  
6 I actually have two or three more questions, which, if  
7 you don't mind, I'm going to ask first, 'cause it  
8 probably makes more sense to ask you those now rather  
9 than later.

10 KEVIN SMITH (CONT.),  
11 having been first duly sworn, testified as follows:

12 FURTHER EXAMINATION

13 BY SPECIAL MASTER:

14 Q. So first of all, you understand you're still  
15 under oath?

16 A. Yes, sir.

17 Q. Okay. Thank you. So the first question I  
18 have is, for a lot of federal projects, for a lot of  
19 federal reservoir and dam projects, there are specific  
20 purposes for those projects. So, for example, a  
21 project might be an irrigation project or it might be a  
22 flood control project or it might be a multipurpose  
23 project.

24 Do you know, for the various reservoirs that  
25 are part of the state water project in Montana, are

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Further Examination by the Special Master

1 there specific purposes for the individual projects?

2 A. Yes, sir.

3 Q. And is flood control one of the purposes of  
4 the Tongue River?

5 A. Yes, sir. Under the initial contracts, I  
6 believe flood control was listed as one of the uses for  
7 the project. It did receive some federal loans and  
8 grants. And I believe that was part of the criteria.  
9 Primary purpose is for agricultural -- primary purpose  
10 is for sale primarily for agricultural purposes because  
11 that's what was there at the time. But it addressed  
12 other beneficial uses and issues to account for  
13 changing conditions. 'Cause that's any -- any  
14 structure that's built that way with the design of life  
15 of 50 or 75 years, and hopefully 75 to a hundred years  
16 now after rehabilitation, times change. And I think  
17 there was recognition of that factor in the original  
18 documentation.

19 Q. And is one of the functions of the State  
20 Water Projects Bureau to operate its projects for flood  
21 control purposes?

22 A. Sir, again, yes. Short answer is yes, sir.

23 Q. What's the long answer?

24 A. We are contractually obligated to meet our  
25 deliveries every year. And that's why the projects are

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1 built much larger typically than the contracted shares.  
2 The issue was to market the entire project basically.  
3 That said, we're a state agency; we're a public entity.  
4 And when you have any high-hazard dam, you have to take  
5 that into consideration and operate it and try to  
6 balance those goals.

7           If we were going strictly for flood control,  
8 as a matter of fact, you would probably operate a  
9 reservoir to target 90 or 95 percent full because you  
10 wouldn't want it to spill over a spillway uncontrolled.  
11 So once it starts spilling, you have no control in the  
12 system. So if it's operated strictly for flood  
13 control, you would shoot for elevation something below  
14 your spillway crest and operate it for that.

15           What we are trying do is shoot for something  
16 at or slightly above the spillway crest to ensure that  
17 we meet all of our obligations. And hence, some of the  
18 issues that we have when we operate these projects when  
19 we're trying to project out through the year, how to  
20 operate this project without causing undue damage  
21 downstream.

22           Q. And as just part of prudent and reasonable  
23 operation of any dam, do you need to think about flood  
24 control?

25           A. Yes, sir. And to the extent and extreme



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1 measures of dealing with the matters of the flood  
2 control deals, you have to bring in downstream risk as  
3 well. High downstream risks are, of course, more  
4 conservative in your estimates and your management.  
5 And it goes down. If there's minimal risks, then you  
6 could be less conservative in your management as long  
7 as your structure is safe.

8 Q. So a second totally separate question is that  
9 yesterday we talked about there being years in which  
10 the winter outflows from the reservoir in recent years  
11 have been less than either the 175 CFS or the inflow to  
12 the reservoir; is that correct?

13 A. Yes, sir.

14 Q. Okay. So there have been years in which it's  
15 been less than the lower of those?

16 A. Yes, sir.

17 Q. In any of those years, did you receive a  
18 complaint from any downstream water user that they were  
19 not receiving the water that they needed?

20 A. No, sir. We did not. Some of the issues  
21 involved there was many of the downstream users were  
22 also tied into the capabilities to ensure that the  
23 project is full the next year to get contract water  
24 later on in the system. So there is, I think, a  
25 balance there as well.

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1 Q. So the downstream -- downstream landowners  
2 who are engaged in stock watering during the winter,  
3 are most of them part of the Tongue River Water  
4 Association?

5 A. In my opinion, yes. Verification of that  
6 would be Mr. Hayes.

7 Q. So the bottom line is you're not sure?

8 A. Yes, sir.

9 Q. Okay. That's fine.

10 And then the, I think, final set of questions  
11 here are do you have -- you talked yesterday about the  
12 factors that you take into account now in determining  
13 what the winter outflows should be.

14 My question is do you have any understanding  
15 of what the factors were that went into determination  
16 of the winter outflows prior to 1950?

17 A. No, sir, I do not.

18 Q. Okay. Thank you.

19 SPECIAL MASTER: So first of all, Mr. Kaste,  
20 I don't think that probably led you to have any other  
21 questions that you want to ask. But if you had any  
22 questions specifically on those.

23 MR. KASTE: No, I don't think so.

24 SPECIAL MASTER: Okay. Thank you.

25 Okay. Mr. Wechsler, opportunity for

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1 redirect.

2 MR. WECHSLER: Thank you, Your Honor.

3 Before I begin, Your Honor, yesterday, you  
4 had asked a number of times about the original  
5 declaration that was filed on the water right for the  
6 Tongue River Reservoir. We asked the State Water  
7 Projects Bureau to send that to us. I provided a copy  
8 to Wyoming.

9 It's not something I would intend to ask this  
10 witness about other than to confirm that we did receive  
11 it from his staff. Because I believe yesterday he said  
12 he had not seen it before. But I think there's a  
13 witness later that could lay foundation.

14 Otherwise, I don't know if Wyoming objects to  
15 the admission of this additional exhibit. And so I  
16 might inquire of the Court now if the Court wants us to  
17 offer it and what Wyoming's position would be.

18 SPECIAL MASTER: Mr. Kaste, your thoughts?

19 MR. KASTE: Well, I think it's probably best  
20 admitted through a witness with foundation. And we can  
21 talk about it then with the witness who has knowledge  
22 of its contents and its -- that it is what it is.

23 SPECIAL MASTER: Okay. So first of all, I  
24 think the document would be relevant at some point  
25 given that a lot of the discussion in this particular

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1 case appears to focus on the storage in the Tongue  
2 River Reservoir.

3 Second of all, I think it also would be  
4 better for the record if there was a foundation laid  
5 for the document itself before it was introduced. So  
6 if you think you're going to have another witness who  
7 can lay that foundation, then that's the best process.

8 MR. WECHSLER: Your Honor, I do believe  
9 Mr. Aycock has seen this document before. If it's  
10 okay, I'll ask this witness if the copy that we have  
11 was provided by his staff and if it was something that  
12 came from the State Water Projects Bureau files.

13 SPECIAL MASTER: That would be fine.

14 MR. WECHSLER: May I approach?

15 SPECIAL MASTER: You may.

16 REDIRECT EXAMINATION

17 BY MR. WECHSLER:

18 Q. Good morning, Mr. Smith.

19 A. Good morning, Mr. Wechsler.

20 Q. You're on the homestretch. I just handed you  
21 what's been marked now as Exhibit M558, 558. And is  
22 this a document that you -- or that came from the staff  
23 at the State Water Projects Bureau at your request?

24 A. Yes, it is.

25 Q. And this -- based on your understanding from

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1 staff, this is something that is kept in the files of  
2 the State Water Projects Bureau?

3 A. Yes, it is.

4 Q. The next topic I'd like to talk about is an  
5 issue that has been raised a couple of times in this  
6 proceeding by Wyoming. And it's one that I hope to be  
7 able to put to rest.

8 You were asked by Mr. Kaste about the  
9 marketing contracts from 1937, '38, and 1969. Do you  
10 recall that discussion?

11 A. Yes, I do.

12 Q. Do you have before you Exhibit 529A?

13 A. Yes, I do.

14 Q. What's the date on that contract?

15 A. The date on Exhibit 529A titled "The water  
16 marketing contract between State Water Conservation  
17 Board of the State of Montana and the Tongue River  
18 Water Users' Association" is 7th day of July, 1937.

19 Q. There was an amendatory contract in 1938; is  
20 that right?

21 A. Yes, there was.

22 Q. And that's Exhibit M529B?

23 A. Yes, it is.

24 Q. If you could look at the first page of  
25 Exhibit M529A. And I'm looking at the second "whereas"

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1 clause. Could you read that, please?

2 A. The second whereas clause on Exhibit 529A?

3 Q. Yes.

4 A. "Whereas, the board has acquired the right to  
5 store, control, and/or divert all unappropriated water  
6 of the Tongue River and tributaries thereto, together  
7 with the return flow of all water furnished or supplied  
8 by seeping or overflowing from the previous place of  
9 use of said waters pursuant to a declaration filed to  
10 the 20th day of April, 1937, in the office of the  
11 county clerk and recorder of Rosebud County, Montana,  
12 in Book 3 of Water Rights at page 70, and in the office  
13 of the county clerk and recorder of Big Horn County on  
14 the 21st day of April, 1937, in Book 7 of misc.," I  
15 think it says, "at page 408, all in accordance with  
16 Chapter" -- I believe it says "35, laws of Montana,  
17 1933 to 1934 and has further acquired all other water  
18 and water rights and made all other filings which are  
19 necessary in order to enable it to obtain sufficient  
20 waters so that the project may be operated at its full  
21 capacity."

22 Q. Couple things I want to ask you there.

23 First, in the first part of that whereas clause, it  
24 indicates that there was acquired the right to store,  
25 control, and divert all unappropriated water of the

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1 Tongue River. Do you see that?

2 A. Yes, I do.

3 Q. Was that a common declaration for the State  
4 Water Projects?

5 A. Yes, I've seen this before in other state  
6 water projects.

7 Q. What does that mean?

8 A. At the time that they constructed these  
9 projects, their filings were made to capture and put a  
10 right to any unappropriated water in the system.

11 Q. And that's before a pattern of use is  
12 developed; is that right?

13 A. Yes, it was.

14 Q. You continue down the line next, it says "and  
15 tributaries thereto together with the return flow of  
16 all water."

17 Could you explain how return flows of state  
18 water projects are handled?

19 A. According to the original filing, the issue  
20 was to be able to sell and resell or control the water  
21 as it went down the system.

22 Q. And finally, if you look down at the bottom  
23 here, and it indicates that you "further acquired all  
24 other water and water rights and made all other filings  
25 which are necessary in order to enable its," do you

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1 understand that to be the board?

2 A. Yes, I do.

3 Q. "To obtain sufficient waters so that the  
4 project may be operated at its full capacity." What  
5 does that mean to you?

6 A. That the intent was to ensure that this  
7 project would always be able to be filled to its  
8 capacity.

9 Q. The appropriate --

10 A. Volume.

11 Q. Sorry. The appropriate filings were made  
12 to -- for all the waters at its full capacity?

13 A. Yes, and to collect and control all the  
14 waters that it could.

15 Q. The Special Master asked you about the  
16 purpose of flood control. You remember that?

17 A. Yes, I do.

18 Q. Could you look, please, at the first whereas  
19 clause. That indicates that the board proposes to  
20 construct an irrigation and flood control project. Do  
21 you see that?

22 A. Yes, I do.

23 Q. And that's consistent with your answer to the  
24 Special Master that, in fact, one of the purposes was  
25 flood control?



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1 A. Yes. Yes.

2 Q. Do you have Exhibit M532 with you?

3 A. I'm sure I do.

4 Q. It is the contract with the United States,  
5 dated March 15th, 1938, if that helps you identify it.

6 A. Yes, I do have this document.

7 Q. Again, looking here at the first whereas  
8 clause, and it indicates, "The board proposes to  
9 construct an irrigation and flood control project." Do  
10 you see that?

11 A. Yes, I do.

12 Q. And that's also consistent with the -- your  
13 testimony about flood control?

14 A. Yes. Yes, it is, sir.

15 Q. Going back to Exhibit 529A, if you would,  
16 please. One more provision I wanted to point out, and  
17 that's Section 1 on page 2 of that document.

18 Do you have that before you?

19 A. Yes, I do.

20 Q. Here it indicates that "The board, upon the  
21 completion of the project, will furnish to the  
22 association the total available yield of storage water  
23 from the project, said water to be furnished to the  
24 association each year during the irrigation season  
25 beginning May 1 and ending September 30, for the

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1 purpose of irrigation, watering of stock, domestic  
2 municipal uses and other purposes."

3 And here I want to ask you about this  
4 language about -- it says it "will furnish to the  
5 association the total available yield of storage water  
6 from the project." Do you see that?

7 A. Yes, I do.

8 Q. Is that common language from state water  
9 projects from marketing contracts?

10 A. Yes, it is.

11 Q. What does that language mean to you?

12 A. The intent upon the construction of these  
13 projects was to market all the available water possible  
14 to the associations. There was the issue of paying  
15 back bonds and construction. And the idea was to  
16 market the entire volume of each project.

17 Q. And, in fact, Section 1 actually says the  
18 total available yield will be furnished each year;  
19 right?

20 A. Yes, it does.

21 Q. Yesterday, the Special Master asked you if  
22 there were any rules or regulations concerning storage  
23 rights. Do you recall that discussion?

24 A. Yes. Somewhat.

25 Q. And I believe that you told him there were no

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1 adopted rules but that you're guided by the decisions  
2 of the Water Court?

3 A. Yes.

4 Q. Does that also include ultimately the water  
5 right approved by the Water Court?

6 A. Yes, it does.

7 Q. And I'd like to look at a couple of decisions  
8 that have been made exhibits in this case, starting  
9 with 539. M539. Do you have that?

10 A. Yes.

11 Q. What is M --

12 SPECIAL MASTER: Can you hold on just one  
13 second? I have it. Thanks.

14 Mr. Kaste.

15 MR. KASTE: I want to point out this isn't  
16 one of the exhibits previously shown to the witness and  
17 for which I didn't have the opportunity to  
18 cross-examine him. And I'd like to have that  
19 opportunity at the conclusion of this redirect.

20 MR. WECHSLER: We have no problem with that  
21 so long as I also get a re-redirect. The only reason  
22 I'm bringing it up is because it was raised as part of  
23 cross and also under your questions.

24 SPECIAL MASTER: Let me just ask, how many  
25 exhibits do we have in this category?

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1 MR. WECHSLER: This one and one other.

2 SPECIAL MASTER: Okay. Then under those  
3 circumstances, I will permit Mr. Kaste to ask any  
4 cross-examination questions he wants. And I realize he  
5 will then have sort of a sur-redirect.

6 MR. WECHSLER: Yes, and I should be specific.  
7 There are two more exhibits I'll ask him to look at.  
8 But on this exhibit, the only one that -- there are two  
9 that were not -- both of them were not previously  
10 introduced.

11 SPECIAL MASTER: Okay.

12 BY MR. WECHSLER:

13 Q. So the first one, Exhibit M539, is this a  
14 document you're familiar with, Mr. Smith?

15 A. Yes, it is.

16 Q. What is this document?

17 A. This is a master's report from the Montana  
18 Water Court. The title is "In the Water Court of the  
19 State of Montana, Upper Missouri Division, Jefferson  
20 River Basin (41G)."

21 Q. And is this also a document from the Water  
22 Court?

23 A. Yes, it is.

24 Q. In fact, it's a master's report from that  
25 court; correct?

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1 A. Yes.

2 Q. And this is a document that's kept in your  
3 files at the State Water Projects Bureau?

4 A. Yes, it is.

5 Q. At the back, it's signed by the water master?

6 A. Yes, it is.

7 MR. WECHSLER: Your Honor, we'd move the  
8 admission of Exhibit M539.

9 MR. KASTE: No objection.

10 SPECIAL MASTER: Okay. Thank you. So  
11 Exhibit M539 is admitted into evidence.

12 (Exhibit M539 admitted.)

13 BY MR. WECHSLER:

14 Q. Mr. Smith, this is the master's report. We  
15 learned from Mr. Davis that those are then -- must be  
16 adopted by the Water Court. Do you know if there's an  
17 order adopting this master's report from the  
18 adjudication court?

19 A. Yes, there is.

20 Q. If you'll turn with me, please, to page 5.  
21 Do you have that?

22 A. I'm there, yes.

23 Q. And if you could read here, beginning at "in  
24 the case of appropriations."

25 A. "In the case of appropriations by the State

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1 Water Conservation Board, however, the statutes  
2 apparently gave storage of (life of its own) "-- I'm  
3 sorry, quote, life of its own, quote, "as a separate  
4 and distinct beneficial use of water. The Board's  
5 statutory mission was conservation, development,  
6 storage, distribution, and utilization of water."

7 Did you want me to proceed with that?

8 Q. Please.

9 A. "Under these statutes, it appears that the  
10 board was entitled to store water simply for the sake  
11 of storing it. The board could then later put the  
12 water sole appropriated to any beneficial uses it saw  
13 fit, regardless of whether a specific use was  
14 contemplated when the declaration was filed."

15 Q. Based on your experience as the State Water  
16 Projects Bureau chief, is that consistent with your  
17 understanding?

18 A. Yes, it is.

19 Q. And that's what you testified to yesterday, I  
20 believe?

21 A. Yes.

22 Q. If you could turn with me, please, to Exhibit  
23 M319.

24 A. I have it now.

25 Q. Is this a document you now recognize?

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1 A. Yes, it is.

2 Q. What is this document?

3 A. This is a document from the Montana Water  
4 Court in the upper -- in the Water Court of the State  
5 of Montana Upper Clark Fork Division South End of the  
6 Bitterroot River Subbasin (76HE).

7 Q. And this document has to do with which  
8 project?

9 A. This is our Painted Rocks project on the west  
10 fork of the Bitterroot.

11 Q. You mentioned this particular project to the  
12 Special Master on a question yesterday; is that right?

13 A. Yes, I did.

14 Q. I think it's also identified in the amended  
15 stipulation related to the Tongue River Reservoir; is  
16 that right?

17 A. Yes.

18 Q. It indicates on the first page this was filed  
19 in the Montana Water Court?

20 A. Yes, sir.

21 Q. And page 15 of this document, again, we see a  
22 signature from the water master?

23 A. Yes, sir.

24 Q. Do you know if this water master's report was  
25 also accepted by the Water Court?

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1 A. Yes, it was.

2 MR. WECHSLER: Your Honor, at this point, I  
3 would move the admission of M319.

4 MR. KASTE: No objection.

5 SPECIAL MASTER: Exhibit 319 is admitted into  
6 evidence.

7 (Exhibit M319 admitted.)

8 BY MR. WECHSLER:

9 Q. Mr. Smith, if you turn, please, to page 3.  
10 And under the heading "memorandum," second paragraph,  
11 beginning "In the case of Painted Rocks project." Do  
12 you see that?

13 A. Yes, I do.

14 Q. There it says -- it indicates that "The DNRC  
15 filed four separate statements of claim." That's  
16 consistent with what you testified to yesterday; right?

17 A. Yes.

18 Q. Skipping down to the end of that paragraph,  
19 it indicates, "The DNRC now argues that a more accurate  
20 reflection of its historical water right would be a  
21 single claim with a purpose of 'sale,' a place of use  
22 of the dam outlet and a 'general service area'  
23 encompassing the length of the West Bitterroot River  
24 and the Bitterroot River from the Painted Rocks Dam to  
25 the confluence with the Clark Fork River." Do you see



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1 that?

2 A. Yes, I do.

3 Q. Do you know if that argument was accepted by  
4 the master in the Water Court?

5 A. Yes, it was.

6 Q. So for you, what's the significance of this  
7 particular document?

8 A. This was -- I don't want to say test case.  
9 But this was the first time going in front of the Water  
10 Court to bring our projects back into showing the  
11 actual historical use and the purpose of the projects.  
12 As is pointed out again yesterday, we're not irrigators  
13 or farmers. And rightly so, we are marketers. And we  
14 sell this water.

15 This is a case that basically set the format  
16 for our other projects when we went to amend our claims  
17 to bring it into conformance with our mission.

18 Q. Going forward, other state water projects  
19 have identified purpose of use as sale; is that right?

20 A. Yes.

21 Q. Consistent with that one?

22 A. Yes.

23 Q. Does the Tongue River Reservoir right also  
24 have a purpose of use of sale?

25 A. Yes, it does.

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1 Q. So we looked at the Exhibit 539. Remind me  
2 what project that was for.

3 A. 539 exhibit, this is for Willow Creek and  
4 Cataract projects located on Cataract Creek and Willow  
5 Creek by Harrison, Montana.

6 Q. We looked at the Willow Creek decision  
7 indicating that storage and beneficial use was when the  
8 storage occurred. And that's what you testified to  
9 yesterday; right?

10 A. Yes.

11 Q. And now we are looking here at the Painted  
12 Rocks Reservoir, which indicates that the purpose of  
13 use was sale. And I believe yesterday, you testified  
14 that once the water was stored in the Tongue River  
15 Reservoir and offered for sale, that the water was  
16 perfected to the maximum capacity. Was that your  
17 testimony?

18 A. Yes, it was.

19 Q. So based on your understanding as bureau  
20 chief, how much water was put to beneficial use on the  
21 Tongue River Reservoir as of the completion of the  
22 project?

23 A. The capacity of the project.

24 Q. And how much by January 1, 1950?

25 A. Still the capacity of the project. It was --

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1 when it was built, it was -- water was available for  
2 marketing.

3 Q. And that rule was consistent with the  
4 projects in other basins?

5 A. Yes.

6 Q. What I understood from Mr. Kaste's discussion  
7 with you, is that there seemed to be an implication  
8 that only 32,000 acre-feet of water was put to  
9 beneficial use as of June 1, 1950. And is that  
10 correct?

11 A. The beneficial use for the state was the  
12 marketing for sale. So the full volume was put to use.

13 Q. And let's look at a factual basis for that  
14 32,000 notion, that argument as it relates to the years  
15 or issue for damages. And so you testified yesterday  
16 that water users share shortages. Do you recall that?

17 A. Yes.

18 Q. What do you mean by that?

19 A. From time to time that the reservoir does not  
20 fill, there is a pro rata share amongst -- an equitable  
21 pro rata share amongst all of the shareholders.

22 Q. Did the Tongue River Reservoir fill in 2001,  
23 2002, 2004, or 2006?

24 A. No, it did not.

25 Q. So in those years, was there a shortage of

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1 water?

2 A. Yes.

3 Q. And each share counted for less than one  
4 acre-foot in those years?

5 A. Correct.

6 Q. I think you also testified that in those  
7 years -- or typically the Northern Cheyenne Tribe has  
8 not used all of its water. Is that also right?

9 A. That's correct.

10 Q. And that includes that 7500 acre-feet of  
11 water that they have a contract for?

12 A. It includes the 7500 acre-feet of shares. It  
13 also includes the compact water.

14 Q. An example of the sharing of the shortages, I  
15 believe, occurred in 2002, where the water users only  
16 got 50 percent of their water; is that right?

17 A. I believe so. 2001 or 2002. Probably 2002.

18 Q. So in 2001, 2002, 2004, 2006, did the  
19 reservoir deliver up to 32,000 acre-feet of water?

20 A. I don't think so.

21 Q. Let's talk a little bit about the amount of  
22 water stored each year. And I think this is in some  
23 ways a related topic. And yesterday, Mr. Kaste, at  
24 length, asked you about the elevation and contents,  
25 end-of-month contents of the river -- of the reservoir.

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1 Do you recall that discussion?

2 A. Yes.

3 Q. Can you think of any significance for the  
4 State of Wyoming of these raw historical content  
5 numbers?

6 A. I can't come to any issue or think of  
7 anything of significance for those numbers.

8 Q. As a representative of Montana, do you  
9 understand that the reservoir issue in this case is  
10 about whether Montana was able to store the amount of  
11 water that they are entitled to?

12 MR. KASTE: I object to that question. You  
13 know, this isn't argument. It's redirect.

14 MR. WECHSLER: I'm just asking if he  
15 understands Montana's claim.

16 SPECIAL MASTER: Well, you can ask it as an  
17 open question rather than -- so why don't you be  
18 very -- rephrase the question.

19 But can we go off the record for one second.

20 (Discussion held off the  
21 record.)

22 SPECIAL MASTER: You're going to have to  
23 restate the question anyway.

24 BY MR. WECHSLER:

25 Q. Mr. Smith, do you understand the reservoir

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1 claim in this case?

2 A. Yes.

3 Q. What do you understand the reservoir claim to  
4 be in this case?

5 A. To be the filling of the reservoir.

6 Q. Storage?

7 A. Storage, yes.

8 Q. For that reason, is comparing the amount of  
9 storage in the current period to the historic period a  
10 more relevant inquiry?

11 A. Please say again.

12 Q. We were talking about just the raw  
13 end-of-month contents. And you're saying that -- I  
14 understood you to say that that wasn't -- you couldn't  
15 think of the significance for Wyoming. And then you  
16 said that the claim in this case was about the storage  
17 in the reservoir.

18 And so I'm asking you: Is it a more relevant  
19 inquiry to compare the reservoir storage in the period  
20 after the rehabilitation in the years at issue to the  
21 historic storage?

22 A. Yes.

23 Q. So did you do that comparison? How does the  
24 amount of water stored in any given year after the  
25 rehabilitation compare to the historic storage?

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1           A.    After rehabilitation, we did enlarge the  
2 capacity of the reservoir. That's a physical fact.  
3 However, after 1999 we filled and spilled the  
4 reservoir, and at that point in time, the Northern  
5 Cheyenne Tribe didn't really ever market their compact  
6 water in the system.

7                    And considering that, I think the term was in  
8 my report, the state sacrificed 10 or 11 percent of  
9 capacity to ensure that the tribe -- we met the tribe's  
10 compact obligation of 20,000 acre-feet. Actually, our  
11 volume that we're storing for marketing was somewhat  
12 less.

13                   So I would imagine that after we had the  
14 first filling and we had the tribal compact water in  
15 the system, our actual fill was probably less during  
16 the period of concern than it was during the original  
17 operations.

18           Q.    And based on your review of the records, is  
19 that what those records show?

20           A.    Basically, yes.

21           Q.    Did Montana store more water in any of the  
22 years 2001, 2002, 2004, and 2006 than it did prior to  
23 the compact?

24           A.    2001, 2002, and 2004, I'd say no. 2006 might  
25 be close, but I seriously doubt it did.

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1 Q. Yesterday you were asked about junior rights  
2 by the counsel for Wyoming. Do you recall that  
3 discussion?

4 A. Yes, sir.

5 Q. You mentioned an instream right; is that  
6 correct?

7 A. Yes.

8 Q. And that right, like any junior, is it  
9 entitled to the continuation of the flows that it  
10 relies on?

11 A. Yes, it is. And I think the caveat here I  
12 should throw in is, based on normal operations and  
13 conditions, there should be -- it's all tied to the  
14 basin hydrology. I would say that if we have  
15 historical -- historical practice of operation has been  
16 175 or 225 CFS through the system in the wintertime,  
17 that is more a long-term average. That doesn't  
18 necessarily mean that if we have a dry year, they  
19 should expect 200 CFS. It means, things were adjusted  
20 accordingly to fit the hydrologic cycle so it would be  
21 something less than that.

22 But, yes, given the normal conditions, they  
23 should be -- have the capability to rely on that  
24 practice.

25 Q. And, in fact, we learned from Mr. Davis and



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1 Ms. Heffner that in order to get a new appropriation  
2 after 1973, it was necessary to show the availability  
3 of water. Is that also your understanding?

4 A. Yes, it is.

5 Q. Yesterday, you were asked about the McBeath  
6 memo, which was introduced as Exhibit W11. Do you  
7 remember that discussion?

8 A. Yes, I do.

9 Q. And I think this is -- on direct examination,  
10 you talked about the problems with the McBeath memo; is  
11 that right?

12 A. Yes.

13 Q. And you also -- there's the section in your  
14 rebuttal report about that as well?

15 A. Yes.

16 Q. We also looked at some documents from the  
17 DNRC, I believe Exhibit M284 and Exhibit M310, that  
18 were further analysis of the same issue by the DNRC.  
19 Do you recall those documents?

20 A. Were those the December '82 summaries of the  
21 winter flows?

22 Q. Yes.

23 A. Yes.

24 Q. I believe the Special Master asked you if  
25 those documents were filed as part of the adjudication.

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1 Do you recall that question?

2 A. Yes.

3 Q. Do you know what period the state was filing  
4 the adjudication on the Tongue River Reservoir?

5 A. What period of time they were filing on that?

6 Q. Yes.

7 A. Early '80s, '83. '82, '83.

8 Q. So I think you said you weren't sure whether  
9 those documents were filed as part of the adjudication.  
10 Is the time period roughly the same?

11 A. Yes. Yes.

12 Q. You had some various discussions yesterday on  
13 cross-examination about the winter flows through the  
14 reservoir. And I just want to be clear. Do you  
15 consider the winter flows during the years after the  
16 rehabilitation project to be reasonable?

17 A. Yes.

18 Q. And you were asked by Mr. Kaste about the  
19 rehabilitation project and the intent of the  
20 rehabilitation project, specifically whether the intent  
21 to increase the size of the reservoir. Do you recall  
22 that?

23 A. Yes, I do.

24 Q. And in that same document that he referred  
25 you to, the final environment impact statement, was

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1 there also a discussion of the intent of the winter  
2 flows?

3 A. For the purpose of the project?

4 Q. Yes, the winter flows after the project was  
5 complete.

6 A. Yes. There was a section of that as well as  
7 some other components for the project.

8 Q. Do you recall what those winter flows were  
9 intended to be?

10 A. In the final environmental impact statement,  
11 that was 150 CFS.

12 Q. You had a discussion yesterday at the very  
13 end of the day about carryover storage. Do you recall  
14 that discussion?

15 A. Yes, I do.

16 Q. And I thought I heard you say, as part of  
17 that testimony, that you meet with irrigators during  
18 the irrigation season and decide the amount of  
19 carryover at that time and basically change your  
20 operations or the water users' actions at that time to  
21 allow for more carryover; is that correct?

22 A. I believe that's probably what I said.

23 Q. And does that actually happen?

24 A. Can I plead getting rummy by the end of the  
25 day for this one?

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1 Q. Yes. So do you meet during the irrigation  
2 season with irrigators and talk about the amount of  
3 carryover that you're trying to accomplish during the  
4 irrigation season?

5 A. Insomuch as that entire discussion came forth  
6 from the March meetings of the operating committee  
7 making recommendations and trying to figure out what we  
8 think we might have for shortages and not shortages.  
9 And that's more of an informational issue for Art Hayes  
10 and for the tribe and others to -- and, in fact, we  
11 typically always invite Fish and Game to these meetings  
12 and talk to them as well about what people can plan for  
13 in the summertime if it's short. It's not meant to  
14 determine a carryover value.

15 The actual issues are dealt with as we go in  
16 with projections, and we wait until the reservoir is as  
17 filled as far as it's going to fill. And if it fills  
18 and spills, we're basically good to go on our  
19 deliveries. If it's shy of that, that's when Art Hayes  
20 will calculate pro rata shares amongst what's available  
21 for the deliveries and for the compact.

22 And then at that point in time, we have an  
23 absolute -- we know an absolute minimum level that the  
24 reservoir should be at the end of season. And we meet  
25 with him regularly through the season as evaluating how

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1 the basin is performing. It's not really -- carryover  
2 isn't really determined until the end of season.

3 Q. You say you have the discussion at the  
4 beginning of the year when you're talking about pro  
5 rata shares; is that right?

6 A. Yes, sir.

7 Q. So at that time, let's say the reservoir is  
8 short or hasn't filled, then that's the time at which  
9 you might have to determine the short shares; correct?

10 A. Yes. After runoff and we know exactly what  
11 we have in the reservoir, then that determination is  
12 finally made.

13 Q. And you also have a minimum pool that you  
14 have to be conscious of?

15 A. Yes. And that's another reason to -- when  
16 the shares of pro rata, making sure we're not getting  
17 down into that level.

18 Q. Right. So you talked about that minimum pool  
19 yesterday; right?

20 A. Yes, sir.

21 Q. And so basically, when you take into account  
22 the minimum pool, that helps you figure out, okay, this  
23 is how much water we have. And then you can figure out  
24 on the pro rata shares; right?

25 A. Correct.

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1 Q. So that minimum pool is essentially  
2 carryover?

3 A. It's interchangeable. It's a base level of  
4 water that we have.

5 Q. During the irrigation season, do you change  
6 any of your actions in order to make sure there's more  
7 carryover storage?

8 A. No. No. It's -- there's not much we can do  
9 for that. Because the pro rata shares, the  
10 shareholders for the contracts are authorizing take-up  
11 to their determined amount.

12 Q. In any of the years, 2001, 2002, 2004, and  
13 2006, did you consciously sit down with water users and  
14 take any actions to not use water to make sure there  
15 would be more carryover storage?

16 A. No. Because it was tied back in to the pro  
17 rata shares early in the season.

18 Q. And finally, I want to ask you one last  
19 question about the rehabilitation project and the  
20 related water right. And I want to just confirm with  
21 you that the State Water Projects Bureau did not file  
22 an application for an additional storage right in  
23 connection with the rehabilitation project?

24 A. No. The State Water Projects Bureau in the  
25 state of Montana did not file for a new appropriations

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1 or a new water right for the project. That was taken  
2 care of through the compact.

3 Q. When you say "the compact," in this case, you  
4 mean the Northern Cheyenne Tribe Compact?

5 A. Yes. That was the Northern Cheyenne Tribe  
6 Compact issue.

7 MR. WECHSLER: Thank you, Your Honor. No  
8 further questions.

9 SPECIAL MASTER: Okay. Thank you,  
10 Mr. Wechsler.

11 Mr. Kaste, you have two documents that --

12 MR. KASTE: I have two.

13 SPECIAL MASTER: -- you're free to ask  
14 questions about.

15 FURTHER RECROSS-EXAMINATION

16 BY MR. KASTE:

17 Q. Do you have M539 in hand?

18 A. M539, sir?

19 Q. Yes, sir.

20 A. Yes, sir, I do.

21 Q. And this is the Water Court decision. It  
22 says "storage as a beneficial use"; right?

23 A. This is the decision that describes the  
24 original Conservation Board's purposes, yes.

25 Q. I looked through here and didn't see anything

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1 related to the Yellowstone River Compact, did you?

2 A. No, sir, I did not read through here and see  
3 anything referring to the Yellowstone River Compact.

4 Q. All right. Do you know whether the judge  
5 applied the definition of beneficial use set forth in  
6 the Yellowstone River Compact in reaching his decision?

7 MR. WECHSLER: Objection. Foundation. We  
8 haven't established that he knows what the definition  
9 is under the Yellowstone River Compact.

10 SPECIAL MASTER: I think the question is  
11 probably fine. The question is whether or not he  
12 knows. And if he doesn't know what the definition is  
13 in the compact, then he won't know the answer to the  
14 question.

15 THE WITNESS: I don't know.

16 BY MR. KASTE:

17 Q. Fair enough. The other document is M319, the  
18 Painted Rocks decision; correct?

19 A. Yes, it is.

20 Q. Will you turn to page 8 of that document,  
21 please?

22 A. Excuse you me, sir? Page 8?

23 Q. 8, yes. I'm looking at the footnote on page  
24 8, and it says, "Under the terms of the stipulations of  
25 the parties, the volume for the project is reduced from



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1 202,300 acre-feet per year to 45,720 acre-feet per  
2 year. The DNRC has filed statement of Water Resource  
3 Specialist Ron Roman showing basis for this volume. At  
4 this time there are no objections to the volume  
5 quantification for this claim."

6 My question to you is: Isn't it true that in  
7 this case, this is the product of a stipulation, the  
8 volume quantification?

9 A. Yes, with the first sentence of that footnote  
10 "under the terms of the stipulation of the parties."

11 Q. So nobody fought about the volume of the  
12 quant -- the quantification of the volume in this case?

13 A. No. The discussions on this was how we base  
14 off other projects were the fill, partial refill, and  
15 evaporative losses.

16 Q. Let's look up above the footnote on page 8.  
17 There's two sentences in here that say -- in the middle  
18 of the first full paragraph. "The most significant  
19 factor for junior right owners is the volume of the  
20 project claim. They can only call on this source ahead  
21 of the project when the reservoir has met its volume  
22 cap for that year." Do you see that?

23 A. Yes, I do.

24 Q. And we agree that the volume cap is the most  
25 important thing for a junior appropriator; right?

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1 A. Please say again, sir.

2 Q. Can we agree that the amount of volume  
3 claimed by a reservoir is the most important thing to  
4 the upstream juniors?

5 A. I would have to quantify that with, it  
6 depends. For the Painted Rocks, the issue of volume is  
7 when the state uses its stored right to store water.  
8 It's not an issue of accounting of any flows going  
9 through the system. It's just simply when the state  
10 has determined when to store water.

11 So on this matter, if we have gone through a  
12 full fill and then the partial refill on this issue and  
13 the evaporative losses, then I would think that would  
14 be an important consideration for upstream juniors or  
15 downstream juniors.

16 Q. Can we agree that the volume of water Tongue  
17 River Reservoir is allowed to release in any given year  
18 currently is limited to 60,000 acre-feet; correct?

19 A. The volume of water that Tongue River  
20 Reservoir is allotted to release? During its operation  
21 system from storage would be 60,000.

22 Q. Thank you.

23 SPECIAL MASTER: Mr. Wechsler.

24 MR. WECHSLER: I just have one clarifying  
25 question.

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1 FURTHER REDIRECT EXAMINATION

2 BY MR. WECHSLER:

3 Q. Mr. Smith, I want to make sure Mr. Kaste  
4 asked you about the volume that could be released from  
5 the reservoir. And that is the volume that can be  
6 released from the reservoir to satisfy contract  
7 obligations; is that right?

8 A. Yes. That's what I was trying to get to.

9 Q. That's all spelled out in the amended  
10 stipulation and the abstract attached to it?

11 A. Very much so. It's outlined in the  
12 constraints.

13 Q. Thank you very much.

14 SPECIAL MASTER: Okay. Then at this point,  
15 you can actually be excused.

16 THE WITNESS: Thank you, sir.

17 SPECIAL MASTER: You're welcome. Appreciate  
18 your time here.

19 So, Mr. Draper.

20 MR. DRAPER: Your Honor, with your permission  
21 we will call our next witness, Mr. Art Hayes, Jr.

22 (Art Hayes sworn.)

23 THE CLERK: Please have a seat. Please state  
24 your name and spell it for the court reporter, please.

25 THE WITNESS: My name is Art Hayes, Jr.

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1 A-r-t H-a-y-e-s, Jr.

2 SPECIAL MASTER: So first of all, good  
3 morning, Mr. Hayes.

4 THE WITNESS: Morning, Your Honor.

5 SPECIAL MASTER: It's nice again to see you.

6 THE WITNESS: It's a pleasure.

7 SPECIAL MASTER: Mr. Draper.

8 MR. DRAPER: Thank you, Your Honor.

9 ART HAYES, JR.,

10 having been first duly sworn, testified as follows:

11 DIRECT EXAMINATION

12 BY MR. DRAPER:

13 Q. Good morning, Mr. Hayes.

14 A. Morning, John.

15 Q. What is your address?

16 A. My address is 208 Hanging Woman Creek Road in  
17 Birney, Montana 59102.

18 Q. Thank you. Where is your ranch located in  
19 the Tongue River valley?

20 A. My ranch virtually surrounds the small town  
21 of Birney. And it runs from just south of Birney down  
22 to the Northern Cheyenne border on the reservation.

23 Q. And where does it sit in relation to the  
24 Tongue River Reservoir?

25 A. It's about 30 or 40 miles below the Tongue

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1 River Reservoir.

2 Q. How long have you lived in the Tongue River  
3 Basin?

4 A. I moved there permanently in 1962.

5 Q. So what is that, about 50 years?

6 A. Yes, maybe a few more over.

7 Q. Has your family had a history in the Tongue  
8 River valley in Montana?

9 A. Yes, they have. My great grandfather and his  
10 brother came to the valley in 1884. They established  
11 the ranch. My great grandfather had a couple years of  
12 military obligation in Texas. He went back. His  
13 brother stayed.

14 My great grandfather assembled a cattle herd  
15 in Oklahoma and drove them up here in approximately  
16 1886 and established the ranch on Tongue River. It  
17 was -- his brother stayed to establish the ranch.

18 But he found out very quickly that irrigation  
19 was very necessary. So he began building irrigation  
20 ditches and irrigating.

21 Q. And did he acquire the ranch that you now  
22 operate?

23 A. Yes, he did. And it was quite large at one  
24 time.

25 Q. Larger than it is at present?

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1           A.    Yes, we actually had three ranches in Montana  
2 on Tongue River.  The Nance Ranch is part of the Brown  
3 Cattle Company.  The ranch I had was part of the Brown  
4 Cattle Company.  And also what we call the 4D Ranch,  
5 which was owned by Albert Brown, Jr., was part of the  
6 Brown Cattle Company.  They also owned a ranch on Otter  
7 Creek and had big holdings on the Pine Ridge  
8 Reservation in South Dakota.

9                    The winter of 1919 broke them.  They had to  
10 get rid of the Otter Creek ranch and the ranch in South  
11 Dakota.  And 1949, the family divided the three ranches  
12 up between themselves.

13           Q.    And your personal history, where did you grow  
14 up?

15           A.    I was born and raised here in Billings.  My  
16 father was a veterinarian here.  But I spent most of my  
17 time at the ranch whenever I could.  I went to grade  
18 school here.  I attended a boarding school in  
19 Richardton, North Dakota.  After that, I had attended  
20 Montana State for a couple years.  And then I returned  
21 to the ranch.

22           Q.    And you moved out to the ranch full-time in  
23 the early 1960s?

24           A.    1962, my father retired, and we moved to the  
25 ranch.

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1 Q. Do you have any family members helping you  
2 with your ranching operation today?

3 A. I'm very fortunate that I have two sons that  
4 are home taking care of the ranch: my son Arthur,  
5 who I believe you met on the tour, and my son Patrick.  
6 I'm not sure you met him. He wasn't at the tour.

7 Q. As part of your ranching operations, do you  
8 irrigate out of Tongue River?

9 A. Yes, I do.

10 Q. Do you have direct flow rights?

11 A. Yes, I do.

12 Q. Do you have contract storage rights?

13 A. Yes, I do.

14 Q. As to your direct flow rights, have those  
15 been adjudicated?

16 A. Yes.

17 Q. Do those rights appear in the 1914 Miles City  
18 Decree?

19 A. Yes, they do.

20 Q. I'd like to ask you to turn -- I believe you  
21 have exhibits with you there at the stand -- to the  
22 Miles City Decree, which is admitted as Exhibit M243.

23 A. I have it.

24 Q. Looking at the front of Exhibit 243, do  
25 relatives of yours appear in the first few lines of the

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1 listing of defendants in that case?

2 A. Yes, they do. Mary Brown was my great  
3 grandmother. Albert Brown was my great uncle. Joseph  
4 T. Brown was my grandfather. And Natalie H. Brown was  
5 a great aunt. And Annie May Brown, Willie B. Brown,  
6 were -- Willie B. Brown was my grandmother. And Annie  
7 May Brown was the wife of Albert Brown. And there's  
8 also a Humphreys, who was a cousin.

9 Q. Does this represent the original adjudication  
10 of the water rights for the Brown Land and Cattle  
11 Company?

12 A. Yes, it does.

13 Q. Let me ask you to turn to the third page of  
14 the document. It has, in the lower right-hand corner,  
15 the Montana Bates No. 016777.

16 A. I have it.

17 Q. In the upper middle of the page, there's a  
18 heading "Findings as to the defendants." Do you see a  
19 listing there for Joseph T. Brown Land and Cattle  
20 Company, No. 1?

21 A. Yes, I do.

22 Q. And as you read down the page for the  
23 headings, do you see a similar entry, after the initial  
24 text, of a second water right No. 2 listed for the  
25 Joseph T. Brown Land and Cattle Company?



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1 A. Yes, I do.

2 Q. And does that type of listing continue on the  
3 next page down through Joseph T. Brown Land and Cattle  
4 Company, No. 6 at the bottom of the next page?

5 A. Yes, it does.

6 Q. Are these the sections of the decree that  
7 identify and constitute the basis for the adjudication  
8 of your family's original water rights?

9 A. Yes, it does.

10 Q. And these are direct flow water rights;  
11 correct?

12 A. Yes, they are.

13 Q. Okay. And in each case, the priorities are  
14 shown; is that right?

15 A. Yes.

16 Q. I'd like to ask you, finally, to turn about  
17 11 pages back. There's a page with a listing in the  
18 lower half. It's identified with the Montana Bates  
19 No. 016785.

20 A. I have it.

21 Q. And does that listing summarize the findings  
22 that were the basis for the Miles City Decree?

23 A. Yes, it does.

24 Q. Now, there's a more recent adjudication going  
25 on currently at the Tongue River; is that right?

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1 A. There is, yes.

2 Q. And have you filed a claim with respect to  
3 your current water rights in that adjudication?

4 A. Yes, I have.

5 Q. Do you have a copy of Mr. Book's  
6 retrospective report that's Exhibit M6? It's a big  
7 thick one.

8 A. Yes, I have it.

9 Q. I'd like to ask you to turn to page 121. And  
10 I'm looking at the page numbers at the center of the  
11 bottom of each page. This is the first page after the  
12 cover sheet for Appendix D of Mr. Book's retrospective  
13 report at M6. That appendix is denominated "Montana  
14 Pre-1950 Water Rights Data."

15 SPECIAL MASTER: That was 121?

16 MR. DRAPER: Page 121 in the lower center of  
17 the page.

18 THE WITNESS: Yes, I have it.

19 BY MR. DRAPER:

20 Q. Looking at page 121, which is entitled "Water  
21 right index," do you see your current water rights  
22 listed on this page?

23 A. Yes, I do. Water right No. 21 and 23.

24 Q. Now, there were six findings in the Miles  
25 City Decree. What is the relationship -- the

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1 adjudication of those rights to the two that you just  
2 pointed out here?

3 A. Would you repeat that, John, please?

4 Q. What I'm -- what I'd like to ask you to  
5 explain is what's happened to the water rights of the  
6 ranch that was adjudicated in the Miles City Decree  
7 between 1914 and the present in terms of the divisions  
8 that you mentioned earlier?

9 A. In that time, the ranch has been divided up.  
10 People are using that same ditch and those same water  
11 rights. So my water rights have gone down, but they  
12 say I'll still have the same priority dates as they did  
13 before on the list.

14 Q. All right. Let's turn to the first of those,  
15 No. 21. It lists that as page D-218, which is the  
16 appendix page. And it also is denominated as page 342  
17 in the lower center of the page.

18 A. I have it.

19 Q. This section of the appendix, what does it  
20 contain?

21 A. It contains my water right for what I would  
22 call the west side of the river.

23 Q. Is that what's shown on the aerial photo on  
24 page 343 and in the two following pages?

25 A. Yes.

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1 Q. And following the aerial photos, there is a  
2 listing of the claim followed by a notice of filing and  
3 a master's report regarding that particular water  
4 right?

5 A. Yes.

6 Q. Has that water right been fully adjudicated  
7 at this point?

8 A. Yes, it is. Well, it's in the court waiting  
9 for adjudication. It's been approved. Everybody's in  
10 agreement. And so it's -- it just needs to be, when  
11 the final decree comes out, it will be adjudicated.

12 Q. Is this part of the property that we visited  
13 on our tour of the basin in July?

14 A. Yes, it is.

15 Q. Let me turn your attention, then, to the  
16 No. 23 right, which appears on page 363. If you turn  
17 to that, please.

18 A. I have it.

19 Q. What is shown in this section of the appendix  
20 regarding your other water right?

21 A. This is my other water right in the Tongue  
22 River -- on the Tongue River under the 1914 decree.  
23 And it basically irrigates the east side of the river.

24 Q. Is this an area that we visited on the tour?

25 A. Yes, it is. We actually went to the point of

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1 diversion of this water right.

2 Q. Let me ask you to turn to the last map. It's  
3 page 366.

4 A. I have it.

5 Q. What is shown on that map?

6 A. This map shows the ditches. It shows the  
7 original water right. And what has happened here, in  
8 1950, they put in a new ditch. They actually put a  
9 siphon in under the river. They used one point of  
10 diversion quite a ways upstream. And they were able to  
11 get some more elevation that way and irrigate some  
12 additional lands. And so the shaded area is for the  
13 original rights. The white area amongst those ditches  
14 shows what was later irrigated in 1950.

15 Q. Now, the water resources lands that are shown  
16 by the crosshatched area, those are lands that were  
17 irrigated at the time of the water resources survey in  
18 late 1940s?

19 A. The crosshatched one, yes. They were  
20 irrigated since the 1914 decree, the water right. Any  
21 others, the nonshaded areas were irrigated in 1950.  
22 They were under irrigation in -- I think it was  
23 June 1st, 1950.

24 Q. Now, the other areas that you irrigate, and  
25 there are other areas, I believe, are those irrigated

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1 with your storage water?

2 A. Yes, I irrigate some other areas with the  
3 stored water. I also have one field downriver that I  
4 irrigate with the 1972 water right. Very junior.

5 Q. I'd like to ask you to look at the Montana  
6 Demonstrative Exhibit 2, which is the set of pictures  
7 from the basin tour.

8 A. I have it.

9 Q. If you turn back to page 2-CC, this has a  
10 Montana Bates No. of 21203 in the lower right.

11 A. I have that.

12 Q. Would you describe, if you know, what is  
13 shown in this picture?

14 A. Yes. That is part of my first water right on  
15 the Tongue River. It is on the west side of the river.  
16 And if you look at that picture, that field's been  
17 laser leveled. You see the green lines through the  
18 alfalfa -- I'll try this -- right -- well, right about  
19 there, those are border dikes. They are put in that  
20 laser-leveled field to control the flow of the water to  
21 keep it from spreading out.

22 And the way that field is irrigated, we take  
23 water out of the main ditch, which is kind of at the  
24 edge of the green area toward that high -- this high  
25 bank right in this area here. Those are -- we use

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1 siphon tubes to put that water into those border dikes  
2 and that water will flow down that border dike. It's  
3 about a 2 percent slope or 3 percent slope to that  
4 field. It will never get over 2 inches deep. And it's  
5 a very efficient way of irrigating.

6 Before that was laser leveled, it took me 30  
7 days to irrigate it. And we have it down to about 9 to  
8 11 days or 12 days now.

9 Q. So this picture is looking generally at your  
10 lands on the west side of the river, which was the  
11 first water right that we looked at?

12 A. Yes, it is.

13 Q. Please turn to the next page, which is  
14 page -- or it's identified as Exhibit 2-DD. What is  
15 shown in that picture?

16 A. That is showing my irrigation pump. It's a  
17 Montana manufactured irrigation pump, Glendive by the  
18 Crisafulli company. It's a portable pump powered by  
19 electrical power. And the tractor just kind of holds  
20 it in place.

21 Q. Did we visit this diversion point on the  
22 tour?

23 A. Yes, we did.

24 Q. If you turn to the next page, Exhibit 2-EE,  
25 what does that show?

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1           A.     That shows the discharge of the pump into the  
2 ditch.

3           Q.     In other words, this is the other end --

4           A.     The other end.  It pumps through a rubber  
5 hose.

6           Q.     So we've approximately turned 180 degrees and  
7 are looking at the discharge from the same pump that we  
8 looked at taking the water out of the river?

9           A.     Yes, we did.

10          Q.     And this is the picture -- the picture shows  
11 the water going into the ditch for delivery to the  
12 fields?

13          A.     Yes, it is.

14          Q.     I can't resist asking you to identify the  
15 next picture.  What is that?

16          A.     That was a group picture in front of my barn,  
17 and my dog snuck in.

18          Q.     What's your dog's name?

19          A.     Sarah.

20          Q.     All right.  All right.  Thank you.

21                 I'd like to clarify, what type irrigating do  
22 you practice?  Is it flood or sprinkler or some  
23 combination?

24          A.     Due to the lay of my land, I use only flood.  
25 It's a lot of different levels.  And there's a lot of



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1 trees in my fields. Around my fields, I should say.  
2 But, yes, my flood irrigation is designed to fit the  
3 land. I do not use any sprinkler irrigation.

4 Q. What is your normal irrigation season?

5 A. My irrigation season will begin sometime in  
6 May, usually in -- you know, around the middle of May,  
7 sometimes 1st of May. I have irrigated it as early as  
8 April, and I usually irrigate until around the 20th of  
9 September.

10 Q. What crops do you grow?

11 A. I grow alfalfa. And right now I'm growing a  
12 crop called millet, which I use as a rotation crop for  
13 taking alfalfa out.

14 Q. And is a cattle operation part of your --

15 A. Yes, it is.

16 Q. And what does that generally consist of?

17 A. I have some forest permit on the Custer  
18 National Forest. And I also have some state land,  
19 private land, and some BLM land. And I'm able to run  
20 about 550 head of cows.

21 Q. Do you rotate your irrigation of your lands  
22 at the ranch?

23 A. I do. I irrigate one field at a time. And  
24 it's rotated around the ranch as needed.

25 Q. How long does it take to irrigate a field?

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1           A.     That depends on the size of the field.  Those  
2 borders are set up at different widths.  We try to set  
3 them up on -- so through our trial and error, the width  
4 of the border is set up to run approximately -- takes  
5 approximately 12 hours for the water to -- the time we  
6 put it in the top of the border and the time it gets to  
7 the bottom.

8           Q.     And you mentioned you have laser-leveled  
9 fields?

10          A.     Yes, sir.  Laser-leveled.

11          Q.     And how does that help?

12          A.     That makes it so flat that you're very, very  
13 efficient with your water.  Like I said before, that  
14 water, when it goes down across those border dikes,  
15 will never get over 2 inches deep in any spot.  There's  
16 no ponding.  You don't have to lake it up to get the  
17 high spots or anything like that.  It has increased our  
18 efficiency by about 50 percent or better.

19          Q.     And you mentioned that you have borders.  How  
20 do those operate?

21          A.     The border is just a raised little area.  
22 It's just a grade up, kind of a little hump of dirt at  
23 a certain width.  It's just -- it's raised about 4 or  
24 5 inches higher than the field.

25          Q.     And what is your irrigating schedule?  Do you

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1 just operate a few hours a day? Do you operate around  
2 the clock? How do you do that?

3 A. We irrigate around the clock. My son Art  
4 does most the of irrigation. My son Patrick does some.  
5 And in a real pinch, I will go irrigate.

6 But whenever that water is ready to be  
7 changed, one of us is there to change that water to  
8 change it or move it to a different field or something.  
9 Sometimes it takes two of us to do it.

10 But, yes, we irrigate around the clock. You  
11 know, my son Art will be out there 1:00, 2:00 in the  
12 morning all the time.

13 Q. Did you ever irrigate a hundred percent of  
14 your lands at once?

15 A. No, I cannot do that. My ditch system is set  
16 up where I couldn't do that. I can't pump enough  
17 volume out of the river to do that.

18 Q. So you rotate --

19 A. I rotate around.

20 Q. And when you're going to hay, how -- do you  
21 fit that into the rotation, or do you stop your  
22 irrigation?

23 A. On a field I will usually stop. I'll  
24 irrigate it one time for cutting. I'll try to cut  
25 every 28 to 38 days. So if a field -- say it takes a

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1 week to irrigate it, it will have several weeks to dry  
2 out while it's growing and we can cut it. And then as  
3 soon as I get that hay off, the water will go back on  
4 it.

5 Q. And while you're haying on one field, do you  
6 rotate the water to other fields?

7 A. Most times, yes, I do.

8 Q. How many cuts of hay do you generally get in  
9 a season?

10 A. Three.

11 Q. That depends on the water supply?

12 A. That depends on water supply and weather  
13 conditions.

14 Q. Is your method of operation the method that  
15 your family has traditionally used over the years?

16 A. Yes, it is.

17 Q. How do you -- you mentioned that there was no  
18 ponding. How do you handle water at the end of the  
19 field? Is there some water, tail water at the end of  
20 the field during an irrigation?

21 A. Sometimes there is. It usually runs off into  
22 a low spot that will produce some grass. Sometimes,  
23 very little of it will reach the river, though.

24 Q. Do you find ways to reuse that water?

25 A. It's set up most places to run back onto

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1 another -- you know, a field that may not be leveled or  
2 a small spot that may not be leveled. And we get some  
3 secondary use out of that, yes.

4 Q. Are you familiar with the methods that are  
5 used by other gravity irrigation farmers and ranchers  
6 in the Tongue River valley?

7 A. Fairly. Not with everybody. But, yes, I am  
8 familiar with some of them. Most of the valley has  
9 been laser-leveled to the most extent.

10 Q. Is your method of irrigation and operation of  
11 your ranch for irrigation purposes, is that typical of  
12 the operations for gravity irrigation in the Tongue  
13 River valley?

14 A. Yes, it is.

15 Q. Now, I understand you have something to do  
16 with the Tongue River Water Users' Association?

17 A. Yes, I do.

18 Q. What's your position?

19 A. I am president of the Tongue River Water  
20 Users' Association.

21 Q. How long have you been president?

22 A. Since 1991.

23 Q. Have you been a member or other officer of  
24 that organization prior to that time?

25 A. I was elected to the board in the early

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1 1980s. I can't remember the exact date. But soon  
2 after I was elected to the board, I was vice president  
3 of that organization.

4 Q. Is the Tongue River Water Users' Association  
5 a nonprofit association?

6 A. Yes, it is.

7 Q. Let me ask you to look at one of the exhibits  
8 you have there. It's designated M353.

9 A. I have it.

10 Q. Do you recognize this document?

11 A. Yes. This is the articles of incorporation.

12 Q. The articles of incorporation for the Tongue  
13 River Water Users' Association?

14 A. Yes, it is.

15 Q. Turning to the -- this would be the fourth  
16 page. At the top there's a list of people who are  
17 designated on the bottom of the previous page as the  
18 initial directors at the time of incorporation.

19 Do you recognize any relatives in that  
20 listing?

21 A. Albert G. Brown was a great uncle.

22 Q. So he was one of the founding directors of  
23 the Tongue River Water Users' Association?

24 A. Yes, he was.

25 Q. Based on your association with the Tongue

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1 River Water Users' Association, do you know why it was  
2 set up?

3 A. It was set up to market the water that we  
4 obtain from the State Water Projects to the  
5 individuals.

6 Q. I'd like to ask you to look at Exhibit M --  
7 or perhaps I should stop here.

8 MR. DRAPER: I'd like to -- having identified  
9 it, like to move the admission of Exhibit M353.

10 SPECIAL MASTER: Any objection?

11 MR. KASTE: No objection.

12 SPECIAL MASTER: Exhibit M353 is admitted.

13 (Exhibit M353 admitted.)

14 MR. DRAPER: Thank you.

15 SPECIAL MASTER: Mr. Draper, it's about  
16 10:30. Would this be a good time for the morning  
17 break?

18 MR. DRAPER: It would, indeed.

19 SPECIAL MASTER: Okay. Then let's recess  
20 until a quarter to 11:00 a.m.

21 MR. DRAPER: Very good. Thank you, Your  
22 Honor.

23 (Recess taken 10:30 to 10:46  
24 a.m., October 25, 2013)

25 SPECIAL MASTER: Okay. Mr. Draper.

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1 MR. DRAPER: Thank you, Your Honor.

2 BY MR. DRAPER:

3 Q. Mr. Hayes, by popular demand, I want to ask  
4 you about Demonstrative Exhibit 2-BB, which is one of  
5 the pictures from the basin tour. It's on page, with  
6 the Montana Bates number in the lower right of 21202.

7 A. Yes. That is one of the signs on my ranch on  
8 Tongue River on the road. It is meant to deter  
9 salesmen and other unwanted people.

10 SPECIAL MASTER: I should also point out it's  
11 also now actually part of my property book, because  
12 part of the aspect of property law is the right to  
13 exclude others. And I think that's one of the best no  
14 trespassing signs I've ever seen.

15 THE WITNESS: It's very to the point.

16 BY MR. DRAPER:

17 Q. Very good. Thank you. Now, I also asked  
18 about your cattle operation. Do you have a stock water  
19 right for water from the Tongue River?

20 A. I water cattle in the Tongue River, yes. And  
21 I've been watering cattle -- my family has been  
22 watering cattle there since 1886. Whether it was filed  
23 or not, I can't remember. I believe it was.

24 Q. Is that right a documented and adjudicated  
25 right?



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1 A. I don't know. It probably is, yes.

2 Q. But it's not among the documents that were  
3 compiled by Mr. Book with respect to the pre-1950  
4 rights, is it?

5 A. I'm not sure.

6 Q. It's not necessary that the stock water  
7 rights be filed?

8 A. It's not necessary in Montana for stock water  
9 rights to be filed.

10 Q. Also I'd like to direct your attention to the  
11 map. We have the enlargement of it. It's actually  
12 part of Mr. Book's expert report, Exhibit M5. It's  
13 Figure 1 in that report at page 45. Could you indicate  
14 on this map where your ranch is located and generally  
15 where the irrigated lands and major features of the  
16 Tongue River system in Montana are located?

17 A. Yes, I can. My ranch, as I said earlier,  
18 surrounds the town of Birney. And the irrigation on  
19 this river starts right across the state line at Decker  
20 and continues down to almost the Tongue River Dam,  
21 starts up below the Tongue River Dam, continues down  
22 river, all the way down to Miles City and part of the  
23 T & Y irrigation. It's scattered out the whole length  
24 of the river. There's about 200-some miles. There's  
25 also some irrigation in below the T & Y, below the

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1 T & Y and the Yellowstone.

2 Q. While we're looking at that, what are the  
3 major tributaries in --

4 A. The tributaries are Hanging Woman Creek,  
5 Otter Creek, and Pumpkin Creek, and Prairie Dog, that  
6 runs just across the -- or runs into it just in  
7 Wyoming, are the major tributaries of that. But  
8 there's many other small tributaries that drain a lot  
9 of very rough country.

10 So Cook Creek is a tributary, there's Canyon  
11 Creek and some of the other ones. Liscomb Creek flows  
12 down there. There are quite a few small tributaries.  
13 But it drains a considerable amount of area.

14 Pumpkin Creek is a very, very long creek.  
15 And Hanging Woman actually heads-up in Wyoming, near  
16 the town of Clearmont.

17 Q. What is the relationship between the Tongue  
18 River Water Users' Association and the State of  
19 Montana?

20 A. We have a very close relationship. We've  
21 always maintained a very close relationship since I've  
22 been on the board. We work with State Water Projects,  
23 and we -- in the 1980s, we worked with them on dam  
24 repairs from the flood. We worked very closely with  
25 the State of Montana and the State Water Projects on

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1 the Northern Cheyenne Compact. We were very active  
2 in -- with getting that compact signed. And then we  
3 worked with the state during the rehabilitation and we  
4 worked very closely with state water and DNRC with the  
5 management of that dam.

6 Q. Let me direct your attention to Exhibit M529.

7 A. Was that 529?

8 Q. Yes. Actually shows 529A on the front. It  
9 has an A, B, and C parts. This is the document that on  
10 the front page says at the top, "Water marketing  
11 contract between the State Water Conservation Board of  
12 the state of Montana and the Tongue River Water Users'  
13 Association." And it shows a date in the first line of  
14 7th day of July, 1937.

15 SPECIAL MASTER: Mr. Draper, if you have  
16 another copy of that exhibit there, you can feel free  
17 to approach the witness and supply him with that.

18 MR. DRAPER: Thank you.

19 BY MR. DRAPER:

20 Q. So I think you have a paper copy, and it's  
21 also shown on the screen as well. Does this set of  
22 documents starting with Exhibit M529A that are labeled  
23 water marketing contract, do those represent one aspect  
24 of the relationship between the Tongue River Water  
25 Users' Association and the State of Montana?

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1           A.    Yes, it does.  This shows that we contract  
2 water from the State of Montana and remarket it to the  
3 end users.

4           Q.    So you receive water under these contracts,  
5 and then you market it to your individual members?

6           A.    That's correct.

7           Q.    Is that a contractual relationship that's  
8 been in place since the date shown here on the front  
9 page, of July 7th, 1937?

10          A.    Could you repeat that, John?  I didn't hear  
11 it right.

12          Q.    Is that a contractual relationship that the  
13 Tongue River Water Users' Association has had with the  
14 state since this initial date?

15          A.    Yes, it is.

16          Q.    Thank you.  And, again, what do you do with  
17 the water that you have access to under these marketing  
18 contracts?

19          A.    We remarket it to the water users on the  
20 river.

21          Q.    How many acre-feet of storage water is  
22 committed under contract to your members?

23          A.    40,000 acre-feet.

24          Q.    Where are the users, the members who use the  
25 storage water, where are their lands located as a

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1 general matter?

2 A. They're located all up and down the river  
3 basically, from the Wyoming line down to the confluence  
4 of the Tongue River in the Yellowstone.

5 Q. So it includes even water rights above the  
6 reservoir?

7 A. Yes, we have some water rights, contract  
8 water to individuals above the reservoir. They take  
9 that water out of the river as an exchange for their  
10 contract storage water in the reservoir.

11 Q. Is the area of lands to which this water is  
12 delivered, is it typically the same areas that you just  
13 showed us for the irrigated area down to the confluence  
14 and out the T & Y system?

15 A. Yes, it is.

16 Q. Do you have contract storage users who take  
17 their water below the diversion for the T & Y?

18 A. We have four or five contracts that are  
19 delivered below the T & Y diversion.

20 Q. So that water has to go by the T & Y  
21 diversion?

22 A. Yes, it does.

23 Q. And it's diverted below the T & Y diversion  
24 and put to beneficial use in that area between the  
25 T & Y and the confluence?

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1 A. Yes, it is.

2 Q. Are the irrigators who have contract storage  
3 rights, are they essentially the same irrigators -- are  
4 they essentially the same irrigators who have direct  
5 flow rights under the Miles City Decree and under the  
6 current adjudication?

7 A. Yes, they are. And they use that water to  
8 supplement their direct flow right. There's also a few  
9 people in the water users' association that don't have  
10 a flow right. And they just use contract water. Very  
11 small -- mostly individuals that have gardens and stuff  
12 like that, they may only own one or two shares of  
13 Tongue River Water Users'. And they just use direct  
14 flow -- not direct flow, but storage water.

15 Q. I'd like to ask you to turn to Exhibit M336,  
16 please.

17 A. M2?

18 Q. That is M336. 336.

19 A. Oh, okay. I found it. I have it.

20 Q. Is this a document you recognize?

21 A. Yes, it is.

22 Q. What is it?

23 A. That is a list of contract holder names,  
24 people that have purchased water contracts.

25 Q. And does this contract list have a date at

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1 the top of February 10, 2012?

2 A. Yes, it does.

3 Q. And is this document accurate, to your  
4 knowledge, as of that date?

5 A. As of that date, yes.

6 MR. DRAPER: Your Honor, I would move the  
7 admission of Exhibit M336.

8 SPECIAL MASTER: Any objection?

9 MR. KASTE: No objection.

10 SPECIAL MASTER: Okay. Exhibit M336 is  
11 admitted.

12 (Exhibit M336 admitted.)

13 MR. DRAPER: Thank you. I'll note for the  
14 record that this is also attachment 6 to Mr. Smith's  
15 report, Exhibit M3. Or at least -- I'm not sure it's  
16 the same date, but it's essentially the same list.

17 SPECIAL MASTER: Okay. Thank you.

18 BY MR. DRAPER:

19 Q. Does this show that you have storage rights  
20 under -- as a member of the Tongue River Water Users'  
21 Association?

22 A. Yes, it does.

23 Q. Where is that shown?

24 A. It's shown -- I have a number of contracts.  
25 It's under Brown Cattle Company, about the top --

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1 about, oh about the middle top third of the page  
2 towards the end there, between the third and the half  
3 of the page. I have about six contracts there.

4 Q. Those are the ones that are shown just above  
5 the middle of the page as Brown Cattle Company?

6 A. Yes.

7 Q. And over on the right, are those acre-foot  
8 amounts under each contract?

9 A. Yes, it is.

10 Q. And in your case, do those total something  
11 like 1650 --

12 A. One.

13 Q. 1651 acre-feet?

14 A. That's correct. My wife had one share, and  
15 it's just been recently transferred to the Brown Cattle  
16 Company.

17 Q. So that is in addition to what's shown on  
18 here?

19 A. Yes, it is.

20 SPECIAL MASTER: I have to ask, even though  
21 it's totally irrelevant. Why did your wife have one  
22 share?

23 THE WITNESS: She had some property in  
24 Birney, and I made her buy one share so she could water  
25 her yard.



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1                   SPECIAL MASTER: Thank you.

2 BY MR. DRAPER:

3           Q. Now, just below the middle of the front page  
4 there's a listing for Ceder Hills Ranch, LLC. Whose  
5 ranch is that?

6           A. That is John Hamilton's.

7           Q. And he's scheduled to testify later in this  
8 proceeding; is that right?

9           A. That's correct.

10          Q. Little further down, let's see, down at the  
11 bottom of the first page, the last entry shows  
12 Department of the Interior Indian Service. What is  
13 that?

14          A. That is water held by the Department of  
15 Interior in trust for the tribe, the Northern Cheyenne  
16 Tribe.

17          Q. Is that a contract right that's been in place  
18 since the 1930s?

19          A. It was put in place, yes. It was in --  
20 originally -- it was the building of the dams they got  
21 that water, yes.

22          Q. So the tribe has contract rights in addition  
23 to its other storage right in the Tongue River  
24 Reservoir?

25          A. Yes. This 7500 is contract water. The

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1 20,000 acre-feet of water they obtained through the  
2 settlement of the compact is commonly referred to as  
3 the compact water.

4 Q. And that compact water is separate from the  
5 7500 acre-feet under storage contract?

6 A. Yes, there's a few differences in it.

7 Q. And it's in addition to that water?

8 A. It's in addition to the 7500. The tribe owns  
9 27,500 acre-feet of water.

10 Q. In total?

11 A. In both.

12 Q. Turning the page, the second page of this  
13 Exhibit M336, there are a number of entries for Diamond  
14 Cross Properties. Do you see that?

15 A. Yes.

16 Q. Is the -- are the Diamond Cross Properties,  
17 is that where we had lunch on the basin tour?

18 A. Yes, it is. We had lunch there on the  
19 Diamond -- it's the Diamond Cross Lodge. They have a  
20 lodge there. And it's part of the Diamond Cross  
21 Properties, yes.

22 Q. Is some of your family's former ranch lands  
23 now part of the Diamond Cross operation?

24 A. Yes, they are. The branch that my great  
25 uncle Albert Brown lived on is now part of that Diamond

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1 Cross Properties.

2 Q. Let me ask you to turn to the next page.

3 It's the third page of the exhibit. At the top there  
4 are a series of entries for Les J. and Donna Hirsch,  
5 H-i-r-s-c-h.

6 Is that a series of contract rights for Les  
7 Hirsch, who is scheduled to testify in this proceeding?

8 A. Yes, it is.

9 Q. And did we visit his property and John  
10 Hamilton's property on the basin tour?

11 A. Yes, we did. John was the first person  
12 visited. Les was the person with the gated pipe.

13 Q. Looking further down on that same page, just  
14 for reference I'll give you the Bates number. It's  
15 Montana Bates No. 07347 in the lower right. Looking  
16 further down in the N's, there is a series of listings  
17 for a Nance Cattle Company. Do you see that?

18 A. Yes, there is. Yes.

19 Q. Now, is that the property of Jay Nance who's  
20 scheduled to testify in this proceeding?

21 A. Yes, it is.

22 Q. Is it Mr. Nance who has the No. 1 priority on  
23 the stream for direct flow?

24 A. Yes, it is.

25 Q. But he also has storage rights in addition to

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1 his direct flow right?

2 A. Yes, he does. He has a field that he  
3 irrigates strictly with stored water. And he also uses  
4 it, I believe, in case his first water right is no  
5 good, or not valid.

6 Q. And he can irrigate additional lands with  
7 that storage right?

8 A. Yes, he can.

9 Q. Let me turn, if you would, and ask you to  
10 look with me at the last page of the document. We see  
11 at the bottom the total acre-feet of 40,000; is that  
12 right?

13 A. That's correct.

14 Q. And that is the total the amount that you --  
15 I should say the Tongue River Water Users' Association  
16 has under contract; is that right?

17 A. Yes.

18 Q. Now, low down on the page among the names we  
19 see TY Irrigation. What is that?

20 A. TY Irrigation is the Tongue Yellowstone  
21 Irrigation District at Miles City. They have 5290 feet  
22 of contract water.

23 Q. And that's in addition to their direct flow  
24 right?

25 A. Yes, it is.

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1 Q. And their direct flow right is --

2 A. Their direct flow right is No. 2 for  
3 187.5 cubic feet per second.

4 Q. So it is the major direct flow right on the  
5 river, isn't it?

6 A. It is the biggest direct flow right on the  
7 river, yes.

8 Q. And in addition to that direct flow right,  
9 they have 5290 acre-feet of storage?

10 A. Yes.

11 Q. Do you coordinate with the T & Y Irrigation  
12 District in your role as president of the Tongue River  
13 Water Users' Association?

14 A. I do. I have very close coordination with  
15 Roger Muggli, the manager of the T & Y. We set -- you  
16 know, try to set a delivery date when he tries to turn  
17 on his ditch. We will get together and figure out when  
18 he wants to turn out the ditch so I can make the time  
19 to get to his ditch when he wants it.

20 We also serve on the Tongue River Advisory  
21 Board together. And we work very closely on other  
22 issues.

23 Q. Let me ask you, do you spell Mr. Muggli's  
24 name M-u-g-g-l-i?

25 A. Yes.

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1 Q. Do you have conversations with him  
2 particularly in the irrigation season when you're  
3 determining when to begin releases of stored water?

4 A. Yes, we do.

5 Q. And what do those conversations consist of?

6 A. Both of us watch flows, and we'll try to come  
7 to an agreement, along with the commissioner, when he  
8 is going on to stored water. And most of the time  
9 we're pretty close. You know, we'll discuss it.

10 He will -- may in sometime past say, I'm  
11 going on stored water. So I'm going to cut the flow --  
12 I may cut part of the flow in my ditch so I don't have  
13 to take a full ditch, seeing how I'm on stored water --  
14 let me reword that.

15 He will cut his flow in his ditch when he is  
16 on stored water at times to stretch out his stored  
17 water for a longer period of time.

18 Q. So as the biggest early right on the river,  
19 he uses as much of his direct flow as he can, and then  
20 he supplements to the extent necessary or barely  
21 necessary to meet his district needs?

22 MR. KASTE: Leading.

23 SPECIAL MASTER: Want to rephrase the  
24 question?

25 MR. DRAPER: Yes. Thank you, Your Honor.

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1 BY MR. DRAPER:

2 Q. How does Mr. Muggli coordinate the use of his  
3 direct flow right and his storage water?

4 A. When his direct flow right is dropping, as it  
5 did in the dry years, he will supplement that with his  
6 stored water, and he will probably take part of it.  
7 But a lot of times, he will not keep his ditches  
8 running as full as he normally does and ration that  
9 water out on the ditch to make his stored water last  
10 longer.

11 Q. Does he use his direct flow right to the  
12 maximum extent possible, to your knowledge?

13 A. I believe he does. I don't know for sure.

14 Q. What is the typical water supply situation,  
15 as you go through the spring and into the summer, as  
16 far as the water flows in the river?

17 A. Usually the most typical thing is when the  
18 flows drop below -- the rule of thumb is kind of when  
19 the flows at the state line drop below 200 CFS, there  
20 is only two flow rights valid at that time. And that  
21 is Mr. Nance and T & Y. And as those flow rights  
22 continue, everybody else, that flow keeps going down.  
23 Everybody is on stored water probably after 200 -- when  
24 the flows drop to 200 CFS.

25 And then Mr. Muggli will be able to have to

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1 use some of that stored water to supplement his water  
2 right after -- if it drops down to, say, 100 CFS, he's  
3 going to have to start using some of his stored water  
4 too.

5 Q. Can you describe the transition between the  
6 water supply conditions when most of the direct flow  
7 water rights have enough water and the condition where  
8 they don't?

9 A. We try to keep it as seamless as we possibly  
10 can. The commissioners will inform people when they  
11 are on stored water and on their direct flow right.  
12 But people are pretty well informed on the river. They  
13 watch the flows. And so they will know when they go on  
14 to stored water.

15 And so it's not a foolproof method, but it  
16 works fairly well on -- you know, the river is up and  
17 down and stuff like that, so --

18 It's a long system. It's 190 miles to Miles  
19 City and it's -- we regulate it very well due to the  
20 conditions of that system.

21 Q. Is it general knowledge in the valley when  
22 you go on to stored water, start supplying stored water  
23 to people and people are cut off from their direct flow  
24 rights except Mr. Muggli and Jay Nance?

25 A. Yes, it is.



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1 Q. Do you then begin receiving calls for water?  
2 Or does that come to the commissioners?

3 A. The way that works is we have a phone line  
4 with an answering machine on it. The person calls that  
5 and orders his contract water. The commissioners check  
6 that phone every day and coordinate -- usually two  
7 commissioners working the river, and they coordinate  
8 the flows or the amount of water. And they order gate  
9 changes, and we make gate changes on Mondays,  
10 Wednesdays, and Fridays.

11 Q. And is the transition from direct flow supply  
12 to storage supply, is that a long, drawn-out  
13 transition, or does that happen relatively quickly?

14 A. That can happen very, very fast. You may  
15 have some snow left in the mountain, you have a rain  
16 event take it all out in a few days and that flow can  
17 drop off very fast at times, especially in those very  
18 dry years.

19 Q. And is it your experience that that is what  
20 typically happens in dry years?

21 A. Yes, it is.

22 Q. If the reservoir doesn't fill, and in these  
23 four years there's been testimony that the reservoir  
24 did not fill, what happens to the storage rights that  
25 we see listed in Exhibit M336? Does everybody still

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1 get their full share?

2 A. No, they do not. They will get a prorated  
3 share of the water. Say if you had a hundred -- stored  
4 water of 100 acre-feet and we only fill to 70 percent  
5 of capacity, you would get 70 acre-feet of water that  
6 year out of the reservoir.

7 Q. So everybody is required to scope down their  
8 storage right by the same percentage?

9 A. It is divided up equally between the users,  
10 the tribe, and everybody that has any storage in the  
11 reservoir.

12 Q. And is that true, even if there's still  
13 40,000 acre-feet in the reservoir?

14 A. Yes. We measure our water from the top down.  
15 It has to fill before you get your full rights.

16 Q. Now, you've mentioned commissioners. What do  
17 you mean by "commissioners"?

18 A. Commissioners are people that are employees  
19 of the district court of Montana. We usually -- the  
20 Water Users' Association will hire them and submit  
21 their name to the district judge for approval. We try  
22 to get them to a commissioner's schooling. And they  
23 are an employee of the court and paid out of Tongue  
24 River Water Users' funds.

25 Q. And how is that process initiated?

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1           A.     That is initiated basically on the years that  
2 it really looked dry, the board of the Tongue River  
3 Water Users would try to solicit some people that were  
4 not members or did not have a conflict of interest  
5 to -- and see if they were willing to do it. And then  
6 we would try to get them trained and submit their names  
7 to the courts for approval.

8           Q.     So the Tongue River Water Users' Association  
9 takes a proactive role in that process?

10          A.     Yes, we do.

11          Q.     It's the association that approaches the  
12 court, submits a proposed order, that kind of thing?

13          A.     Yes, it is.

14          Q.     Is that done pursuant to a board decision of  
15 the association?

16          A.     Yes, it is.

17          Q.     Do you typically have more than one  
18 commissioner?

19          A.     It's 190 miles of river from the dam to the  
20 T & Y. So we try to have two. We use the Brandenburg  
21 Bridge as the dividing line. And so, yeah, one  
22 commissioner works the lower end; one commissioner will  
23 run from Brandenburg to the state line. There's, I  
24 believe, more irrigation at Brandenburg, and it's just  
25 a good dividing place.

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1 Q. Is Brandenburg shown on the map that you were  
2 pointing to and is now on the screen?

3 A. Yes, Brandenburg is right there. It's a  
4 bridge crossing. There's no city of Brandenburg or any  
5 town or buildings or anything. It's just a bridge  
6 crossing the river. And there must have been something  
7 there 'cause it's always been called Brandenburg. But  
8 there's also a gauging station there that's been  
9 discontinued by the USGS.

10 Q. Do you interact at all with the  
11 commissioners, either before they're appointed or after  
12 they're appointed?

13 A. I may interview them or the board may  
14 interview them or something like that. My interaction  
15 is mainly with -- they will call me when gate changes  
16 take place and stuff. To -- or if they have a  
17 difficulty or something, I may try to help them out in  
18 a way.

19 Q. But they are officers of the court; is that  
20 right?

21 A. I couldn't hear that.

22 Q. They are officers of the court?

23 A. Yes, they are. They have the same power as  
24 the deputy sheriff in Montana.

25 SPECIAL MASTER: Quick question: Is that

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1 very much?

2 THE WITNESS: That is a good question. But  
3 they -- they do not exercise that power. Let's put it  
4 that way. They are discouraged from it. And if they  
5 have difficulty with a water user, they are encouraged  
6 to go to the local law enforcement to access that  
7 problem or something.

8 SPECIAL MASTER: Okay. Thanks.

9 BY MR. DRAPER:

10 Q. So they go get the sheriff if they need  
11 somebody to help them persuade a water user to shut  
12 off --

13 A. Yes, they do. They will get the sheriff  
14 to -- or a deputy in Custer County to go with them.  
15 Or, you know, we've had people lock a headgate open or  
16 something like that. But we have most of those  
17 problems resolved now.

18 Q. And generally, in seeking the appointment of  
19 these water commissioners -- first of all, your  
20 petitions are routinely approved; is that right?

21 A. Yes, they are.

22 Q. And once the commissioners are appointed,  
23 generally, what are their functions in the river  
24 system?

25 A. Their function is to measure the water that's

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1 being used by the water users. They also regulate the  
2 direct flow rights usually and distribute the  
3 compact -- contract water from the -- to the members of  
4 the Tongue River Water Users' Association.

5 Q. Is it fair to say that you keep a close eye  
6 on water supply conditions during the year?

7 A. Yes, we do.

8 Q. And what do you do if water supply conditions  
9 become very short or very dire?

10 A. We will try to notify our members that they  
11 may have to -- early in the season that we were going  
12 to be short of water. They may want to change their  
13 farming practices. And, like, they may want to put in  
14 a small grain instead of corn. Or if they are  
15 taking -- taking a field out of alfalfa or something,  
16 they may want to leave it in because if they got new  
17 alfalfa going in, they may not have the water to  
18 supplement it in the late season or something.

19 You know, it's basically we try to keep them  
20 informed so they can make a sound business decision.

21 Q. And if low water supply continues into the  
22 beginning of the irrigation season, are you in contact  
23 with any Montana water officials?

24 A. Yes, we keep in contact with State Water  
25 Projects and the head of DNRC.

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1 Q. The State Water Projects Bureau, is that what  
2 you're referring --

3 A. Yes.

4 Q. And who is the bureau chief?

5 A. At this time, it's Kevin Smith.

6 Q. Mr. Smith who just testified?

7 A. Yes.

8 Q. And how often do you interact with Mr. Smith?

9 A. In short years, quite often. Once or twice a  
10 week or something maybe. Or once a week, we will talk  
11 or e-mail each other.

12 Q. And what is the subject of your interactions  
13 with Mr. Smith?

14 A. We're talking about water supply and  
15 management of the dam. And Kevin and I will decide  
16 when the managers' meetings will take place. In dry  
17 years that manager meeting may take place monthly.

18 Q. And by the "managers' meeting," are you  
19 referring to the Tongue River Advisory Committee?

20 A. Yes, I am referring to that Tongue River  
21 Advisory Committee.

22 Q. Is that the advisory committee that Mr. Smith  
23 referred to in his testimony?

24 A. Yes, it is.

25 Q. The one that was set up initially by the

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1 Northern Cheyenne Tribe Montana Compact?

2 A. Yes.

3 Q. And are you a member of that committee?

4 A. Yes, as president of the Tongue River Water  
5 Users, I am a member of that committee.

6 Q. Let me ask you to turn to Exhibit M316, if  
7 you please.

8 A. I have it.

9 Q. Is this the operating plan for the Tongue  
10 River Reservoir that was adopted by the advisory  
11 committee, that you just referred to?

12 A. Yes, it is.

13 Q. And turning to the last page, which is  
14 designated page A8 in the lower center, is that your  
15 signature at the top of the list of signatures there?

16 A. Yes, it is.

17 Q. And this is also signed by -- is that  
18 Mr. Smith's predecessor for the Department of Natural  
19 Resources and Conservation?

20 A. Glen McDonald was Mr. Smith's predecessor,  
21 yes.

22 Q. And we see the signatures for the tribe and  
23 Bureau of Indian Affairs. Is that the signature of  
24 Roger Muggli, to whom you referred to just now in your  
25 testimony?



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1           A.    Yes, it is.

2                   MR. DRAPER:   That exhibit has already been  
3 admitted.

4 BY MR. DRAPER:

5           Q.    Let me ask you to turn to another exhibit.  
6 This is Exhibit M137.

7                   SPECIAL MASTER:   Mr. Draper, has this been  
8 admitted?

9                   MR. DRAPER:   No, it hasn't, Your Honor.

10                   SPECIAL MASTER:   Okay.  Can we go off the  
11 record for a second?

12                                   (Discussion held off the  
13 record.)

14                   SPECIAL MASTER:   Go ahead.

15                   MR. DRAPER:   Thank you.

16 BY MR. DRAPER:

17           Q.    Mr. Hayes, what is this document that's  
18 labeled Exhibit M137?

19           A.    It's a water marketing contract between the  
20 State Conservation Board and the State of Montana and  
21 the Tongue River Water Users' Association.

22                   MR. DRAPER:   If I may approach the witness,  
23 Your Honor, I just want to be sure we're both looking  
24 at the same document.

25                   THE WITNESS:   I'm looking at Montana 129.  I

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1 don't think that's in my book.

2 BY MR. DRAPER:

3 Q. I've now provided you with a document labeled  
4 Exhibit M137, which says at the top, "June 3, 2002,  
5 memorandum to Tongue River Advisory Committee members,  
6 Craig Stiles." Do you have that document?

7 A. Yes, I do.

8 Q. This lists certain participants in a meeting  
9 and certain agenda items with certain descriptions in  
10 it; is that right?

11 A. Yes.

12 Q. Do you recognize what this document is?

13 A. This is the minutes from a Tongue River  
14 Advisory Committee meeting.

15 MR. DRAPER: Very good. I would move the  
16 admission of this Exhibit M137, Your Honor.

17 SPECIAL MASTER: Any objection?

18 MR. KASTE: I'd like to see some foundation  
19 with regard to the handwritten comments on that. But  
20 the typewritten part I don't object to.

21 SPECIAL MASTER: Can I ask, Mr. Draper, are  
22 you planning on referring at all to the handwritten  
23 comments?

24 MR. DRAPER: No, Your Honor.

25 SPECIAL MASTER: Would you have any

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1 objection, then, if we admit the document except for  
2 the handwritten comments?

3 MR. DRAPER: I think that would be  
4 appropriate.

5 SPECIAL MASTER: Is that okay, Mr. Kaste?

6 MR. KASTE: Yes.

7 SPECIAL MASTER: Okay. Then Exhibit M137 is  
8 admitted. But there will be no reference to the  
9 handwritten comments.

10 MR. DRAPER: Thank you, Your Honor.

11 (Exhibit M137 admitted.)

12 BY MR. DRAPER:

13 Q. Do I understand this correctly, Mr. Hayes,  
14 that these are minutes from the May 15, 2002, Tongue  
15 River Advisory Committee meeting?

16 A. Yes, they are.

17 Q. Were you at that meeting?

18 A. Yes, I was.

19 Q. Are you shown among the participants there in  
20 the top half of the front page?

21 A. My name is the second one down, Tongue River  
22 Water Users' committee member.

23 Q. Now, this is for a meeting that occurred  
24 May 15, 2002. Was this a time when water supplies were  
25 particularly low?

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1 A. Very low.

2 Q. Do you see the agenda item 3, review water  
3 supply outlook, at the bottom of the page?

4 A. Yes, I do.

5 Q. What's the first sentence under that  
6 description?

7 A. "Glen indicated that this water year may turn  
8 out to be drier than last year."

9 Q. Thank you. Is that consistent with your  
10 understanding of the conditions at that time?

11 A. Yes, it is.

12 Q. Turning to the second page in the first full  
13 paragraph, is there a reference to Roger Muggli there,  
14 where it says, "Roger expressed concern about the  
15 Yellowstone Compact and the pre-'50s use versus the  
16 post-'50s use"?

17 A. Yes, I do.

18 Q. Was that kind of a concern among the concerns  
19 that were frequently mentioned at these meetings?

20 A. Yes, it was.

21 Q. Did you have relatively frequent meetings in  
22 2002?

23 A. I imagine we did. I can't remember for sure.

24 Q. Let me see if I can refresh your memory. If  
25 you would look at Exhibit M343.

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1 A. Okay.

2 Q. What is this document?

3 A. This is another minutes from a Tongue River  
4 Advisory Committee meeting.

5 Q. And it is for a meeting on what date?

6 A. July 31st, 2002.

7 Q. And does it show there in the upper half of  
8 the front page the members of the committee who  
9 attended the meeting?

10 A. Yes, it does.

11 Q. And do those attendees include, in addition  
12 to yourself, representatives of the tribe and the BIA?

13 A. Yes, it does.

14 MR. KASTE: Perhaps this might be part of the  
15 repetitive stuff you asked us to avoid. There's been  
16 quite an awful lot of reading. It's pretty obvious the  
17 stuff in these exhibits. If we could hit the  
18 substantive questions, perhaps, we could move a little  
19 faster.

20 SPECIAL MASTER: So let me particularly  
21 suggest, particularly on just some of the --  
22 particularly the ground laying, if Mr. Kaste isn't  
23 going to object, then, to the exhibit, we might be able  
24 to save some time there. And, again, I don't want to  
25 interfere with laying out the general case; but at the

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1 same time, I'll allow the documents. I'll have an  
2 opportunity to review them.

3 MR. DRAPER: Very good, Your Honor.

4 In order to speed things along, I would ask  
5 the witness to look at a similar exhibit, which is  
6 M344.

7 SPECIAL MASTER: Can I just ask, are you  
8 going to ask to have M343 introduced?

9 MR. DRAPER: Yes, I thought I might ask  
10 together with 343.

11 SPECIAL MASTER: That would be fine.

12 BY MR. DRAPER:

13 Q. Do you have that exhibit?

14 A. Yes.

15 Q. Is Exhibit M344 the minutes for a meeting of  
16 the same advisory committee on September 10th, 2002,  
17 with attachments there?

18 A. Yes, it is.

19 Q. And did you attend that meeting?

20 A. Yes, I did.

21 MR. DRAPER: Your Honor, I would move the  
22 admission of these two exhibits, M343 and M344.

23 SPECIAL MASTER: Mr. Kaste.

24 MR. KASTE: I have no objection to M343.

25 With regard to M344, as long as Mr. Hayes would confirm

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1 that all the documents appended to the minutes were  
2 appended originally, and I'd have no objection to that  
3 at all.

4 SPECIAL MASTER: Exhibit M343 is admitted  
5 into evidence. And, Mr. Draper, do you want to ask  
6 Mr. Hayes -- well, why don't I just ask.

7 Mr. Hayes, do you know whether or not the  
8 various documents that are found all the way in the  
9 first four pages of Exhibit M344 are documents that are  
10 attached to the minutes?

11 THE WITNESS: The only thing I'm not sure is  
12 the agenda has some handwritten notes on it. I do not  
13 know who those handwritten notes on that agenda.

14 SPECIAL MASTER: But otherwise the entire --

15 THE WITNESS: Otherwise the other things are  
16 minutes to that meeting.

17 SPECIAL MASTER: Okay. Thank you. So,  
18 Mr. Kaste, do you want me to admit, again, excluding  
19 the handwritten notes?

20 MR. KASTE: Yes, Your Honor.

21 SPECIAL MASTER: So, then, Exhibit M344 is  
22 also admitted into evidence excluding the handwritten  
23 notes.

24 MR. DRAPER: And is Exhibit M343 also  
25 admitted, Your Honor?

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1           SPECIAL MASTER: Yes, I believe I admitted  
2 it. If not, it is. So both M343 and M344 are now  
3 admitted into evidence.

4           MR. DRAPER: Thank you.  
5                           (Exhibits M343 and M344  
6                           admitted.)

7 BY MR. DRAPER:

8           Q. Looking at Exhibit M344, Mr. Hayes, on the  
9 third page of the -- on the second and third pages  
10 under item 2, river water supply outlook, are these  
11 matters that were discussed at the meeting?

12          A. Yes, they were.

13          Q. If I'm reading this correctly, on the third  
14 page of the exhibit, page 2 at the bottom, there's a  
15 reference in the middle of the page to tribal water  
16 that was sold to the T & Y Canal there?

17          A. Yes, there is.

18          Q. So are these typical examples of the  
19 activities of this advisory committee of which you're a  
20 member?

21          A. Yes, it was.

22          Q. And, generally, how would you describe the  
23 interaction with the advisory committee with you and  
24 Mr. Smith in terms of the operation of the reservoir?

25          A. They are very close. It's -- we get input



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1 from the other members, and we try to use that  
2 information to do what we feel is best for the  
3 reservoir operations.

4 Q. Let me ask you about your participation in  
5 Yellowstone River Compact Commission meetings. Do you  
6 attend meetings of the Yellowstone River Compact  
7 Commission?

8 A. Yes, I do, when I can.

9 Q. Do you interact with State of Montana water  
10 officials in the context of those meetings and  
11 otherwise?

12 A. Yes, I do.

13 Q. And what do those interactions consist of  
14 during the periods of low water supply?

15 A. Those interactions with Montana state  
16 officials were during low water supplies, I was  
17 requesting they make a call on Wyoming's water,  
18 post-1950 water that was in Wyoming.

19 Q. Which Montana water officials do you contact  
20 with those kinds of requests?

21 A. I usually contact the administrator of the  
22 Water Division of the DNRC.

23 Q. And in the years where the reservoir failed  
24 to fill, 2001, 2002, 2004, and 2006, who was the  
25 official, if you recall?

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1           A.    I was calling Jack Stults and Gary Fritz, I  
2 believe.  And I also talked with Rich Moy.

3           Q.    And did you interact with Mr. Kerbel?

4           A.    Yes, I did, quite often.

5           Q.    And did you make requests of these officials  
6 during those years of low water supply that they insist  
7 on water from Wyoming?

8           A.    Yes, I did.

9           Q.    Let me ask you to turn in the last exhibit we  
10 were talking about, Exhibit M344.  If you turn to that,  
11 I'm asking you to turn about five pages from the back.  
12 There's a letter, has the Montana Bates number at the  
13 bottom right of 09164.  And it has, as I see, the  
14 Tongue River Water Users' Association and a date of  
15 May 3, 2002.  Do you recognize this document?

16          A.    Yes, this is a letter I wrote to Jack Stults.

17          Q.    And what was the purpose of your letter?

18          A.    My purpose was -- this letter was mainly to  
19 inform him that we -- some of my observations.  And my  
20 asking him to -- I believe, some funding had been  
21 dropped.  And I expressed my opinions on what I thought  
22 was going on in Wyoming at the time and told him that  
23 we had had several public meetings to express the water  
24 shortage of this year.  And the main interest of those  
25 meetings was the enforcement of the Yellowstone River

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1 Compact.

2 Q. So this is one aspect of the interaction you  
3 had had with the state water officials?

4 A. Yes, it is.

5 Q. Let me turn your attention to another  
6 exhibit. This one is designated M311.

7 A. Yes, I have it.

8 Q. What is this document?

9 A. This is a letter from me to the water users  
10 on the river, members of the Tongue River Water Users'  
11 Association.

12 Q. What's the date?

13 A. May 22nd, 2002.

14 MR. DRAPER: Your Honor, I would move the  
15 admission of this Exhibit M311.

16 SPECIAL MASTER: Any objection?

17 MR. KASTE: No objection.

18 SPECIAL MASTER: Exhibit M311 is admitted  
19 into evidence.

20 MR. DRAPER: Thank you.

21 (Exhibit M311 admitted.)

22 BY MR. DRAPER:

23 Q. What is the gist of this letter?

24 A. This letter is a letter I sent out in May.  
25 It tells the people that we are -- are estimating the

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1 amount of water that we would receive in the -- I was  
2 hoping to receive in the reservoir. And it also -- the  
3 board had decided that when you ordered water, there  
4 was a lag time from delivery of the dam down to the  
5 T & Y irrigation.

6           And we used our knowledge of the river to try  
7 to guess the best lag time there would be to get there,  
8 how long it would take from release of the dam to get  
9 to those water users water was being diverted from to  
10 their diversion point.

11           Q.    So the indented part of the letter in the  
12 upper half specifies the length of time to each of the  
13 designated places downstream?

14           A.    Yes, it does.

15           Q.    And it takes a full week to get the water  
16 down to the T & Y diversion?

17           A.    Yes, it does.

18           Q.    How do you deal with the long travel times to  
19 your water users who need the stored water?

20           A.    It makes it very difficult for the people on  
21 the bottom end of the river, T & Y, and actually from  
22 Brandenburg down, because in a week time there can be a  
23 lot of weather events: rain, you know, hot days or  
24 something that may delay that.

25                    This is just our best estimate of what time,

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1 when they call for their contract water, it will reach  
2 them. But there's many other variables in that stream.  
3 It's not a pipeline. It's a dramatic system that  
4 requires -- it's very hard to manage. You get hot  
5 days. You got a lot of trees and stuff that use a lot  
6 of water on that system. It eats a lot of water. It  
7 takes a lot of water to move water down that system.

8           So these are just estimates. And it worked  
9 fairly well. But, you know, there's so many variables  
10 in it that it's very hard to manage this system.

11           Q. What are some of the variables that you have  
12 to deal with?

13           A. Some of the variables that we have to deal  
14 with are we may have a rainstorm. And a person may  
15 order their water, say, I'm going to be cutting in  
16 seven days. They order their water. And on day five  
17 they get a rainstorm. They can't put their hay up.  
18 Their water is in the system. They either have to  
19 exchange it, use the commissioner and make an exchange  
20 with another water user, or let their water go by.  
21 That's absolutely lose their water if they cannot get  
22 it out of the river and put it on the field.

23           It makes it very difficult to manage that  
24 system. It's very long, and there's not -- you know,  
25 once you order that water, we turn it loose and it's

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1 delivered at the dam and you can't call it back.

2 Our commissioners have been very good about  
3 using -- somebody else may be ready to irrigate and  
4 just waiting. They may allow that person to irrigate  
5 and then the other guy put up his hay. And when the  
6 other person's water gets there, they will let the  
7 other -- just an exchange of water.

8 Q. Do I understand you correctly that there can  
9 be some trading, even after water is released, between  
10 your contract users?

11 A. We have done that in the past to maximize the  
12 use of our water. We don't want, in those dry years,  
13 to waste any water whatsoever. So we have allowed  
14 that, and the commissioners have done that.

15 THE WITNESS: Excuse me, Your Honor. I have  
16 to stand up. I got a cramp.

17 SPECIAL MASTER: In fact, is it a bad cramp?

18 THE WITNESS: No, it's good.

19 SPECIAL MASTER: Okay.

20 MR. DRAPER: Your Honor, this might be a good  
21 moment -- it's just noon -- to take our lunch break.

22 SPECIAL MASTER: That would be fine. So  
23 let's, then, break until 1:00 p.m. this afternoon.

24 MR. DRAPER: Very good.

25 (Recess taken 11:59 to 1:05

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1 p.m., October 25, 2013)

2 SPECIAL MASTER: Okay. Good afternoon. You  
3 remember you're still under oath?

4 THE WITNESS: Yes.

5 SPECIAL MASTER: Okay. Thank you.

6 MR. DRAPER: Good afternoon, Your Honor.

7 SPECIAL MASTER: Good afternoon, Mr. Draper.

8 BY MR. DRAPER:

9 Q. Good afternoon, Mr. Hayes.

10 A. Good afternoon to you, Mr. Draper.

11 Q. Exhibit M311 was admitted earlier. And I'd  
12 like to pursue that a little bit further. We looked at  
13 the travel times there. Do you also give an  
14 estimate -- do you have that there?

15 A. Yes, I do.

16 Q. Do you also give an estimate in the beginning  
17 of that letter to the water users of the Tongue River  
18 Water Users' Association of what part of their right  
19 they are going to be able to use in 2002?

20 A. I gave an estimate between 45 and 54 percent  
21 of their contract water would be deliverable.

22 Q. And is that shown in the first couple of  
23 lines of that letter?

24 A. Could you repeat that, please?

25 Q. Are you referring to the first couple of

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1 lines of that letter?

2 A. Yes, I am.

3 Q. Do you know what the percentage was,  
4 ultimately, in 2002? Do you recall?

5 A. I believe it was 49 percent.

6 Q. So at the end of the fill season, it was an  
7 amount of fill?

8 A. Yes.

9 Q. And that translated into the percentage that  
10 they would receive under their contract rights?

11 A. Yes.

12 Q. Now, you give in that same letter, the travel  
13 times which extend to seven days for the T & Y. And  
14 the T & Y isn't the last downstream user; is that  
15 understanding correct?

16 A. That's correct. There are several users down  
17 below the T & Y.

18 Q. And so how many river miles are we talking  
19 about, more or less, to these locations downstream?

20 A. It's about 190 river miles to the T & Y,  
21 little over 200 to the confluence of the Yellowstone  
22 from the dam.

23 Q. And it takes seven days, approximately, to  
24 the T & Y, and then take a little bit more to get down  
25 to the lower rights?



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1           A.    Yeah.  Probably takes another day, half day.  
2 Not quite.  Half a day, I suppose.

3           Q.    What are the factors that you take into  
4 account as you attempt to deliver the water to the  
5 T & Y and those users in the same area?

6           A.    I have to -- one of the factors is it takes  
7 water to move water.  You have to look at the amount of  
8 water you have in the river at that time.  And also you  
9 have to take -- one of the factors that really affects  
10 delivery is in the summertime it's very hot.  You have  
11 a lot of trees that are going to be soaking up that  
12 water and grass.  The hotter it gets, a lot of  
13 evaporation.

14                    That river is about 150 to 200 feet wide.  I  
15 haven't calculated it out, but you take 190 miles,  
16 that's a lot of surface water for that water to  
17 evaporate.  Also, you just can't kick up water and  
18 expect it to get there.  Once you raise that level,  
19 that's going to go into the alluvium.  So that's going  
20 to take some of your water too.

21                    It's not an exact science to get water there.  
22 And, you know, there is a small amount of water that  
23 comes in from return flows and -- but most of that  
24 water is eaten up by the vegetation and stuff that  
25 it's -- as it goes downstream.

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1 Q. Are return flows from deliveries, that  
2 storage water upstream, can they contribute to the  
3 supply downstream?

4 A. They can contribute some, but not a great  
5 amount on those really dry years. I mean, you get that  
6 soil moisture in those fields that's dry, they're going  
7 to soak up a lot. And if you get alfalfa or corn  
8 growing, it's going to take a lot of water. You're not  
9 going to have tremendously big return flows.

10 Q. And to the extent there are any return flows,  
11 those would contribute to your estimation of how much  
12 you needed to release for rights downstream of those  
13 return flows?

14 A. Yes.

15 Q. And are the antecedent conditions a factor as  
16 you -- I said, are the antecedent -- in other words,  
17 the preexisting conditions -- are they a factor in  
18 determining how much needs to be released in order to  
19 make it available downstream?

20 A. Yes, it is.

21 Q. And would that include the prior flows, say,  
22 as you come into the irrigation season, as to whether  
23 you've been keeping it a sufficient flow in the river  
24 prior to that?

25 A. Yes. I think one of the exhibits before of

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1 one of the managers' meetings, I think it said we had  
2 the gate set at 80 cubic feet, which is quite low.  
3 It's going to take a little time and some water to  
4 recharge that system to make it flow consistently.  
5 'Cause a lot of that water is going to go back into the  
6 alluvium. And it's going to be lost. And a lot of it  
7 will be used up by the plants as it reaches the root  
8 zones.

9 Q. So do I understand you correctly that the  
10 lower you reduce your release prior to the irrigation  
11 season, the more it has to be released in order to  
12 establish favorable channel conditions?

13 A. Yes.

14 Q. Can you describe the operations necessary to  
15 adjust the amount of the release, how you go about that  
16 and with what accuracy you can set the release?

17 A. Those gates on that -- the way we'll do it is  
18 we'll get a call for an adjustment on that dam. I will  
19 call my dam keeper. And the rule of thumb is every  
20 percent releases about 15 CFS of water. Our gate  
21 opening is measured in percents. I believe everybody  
22 on the tour saw that little gauge. But if I try to  
23 open that 1 percent, you can do -- you know, it's  
24 accurate within about 10 CFS. It's very hard to adjust  
25 those gates. They weigh several, 10 or 16 tons. And

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1 it's not a precise thing to open and shut those gates.

2 Later in the season, you got a different head  
3 pressure on that. And it's -- you may have to over  
4 adjust a little bit to get that flow out, and that  
5 flow -- you may set your gate, but as the head pressure  
6 goes down or the weight goes down and the head pressure  
7 drops on that gate, you'll get less flow.

8 Q. In that regard, I'll ask you to look again at  
9 Exhibit M316. That's the operating plan for Tongue  
10 River Reservoir.

11 A. I have it.

12 Q. Would you turn to page A6? For reference  
13 it's Montana Bates No. 15109.

14 A. I have that.

15 Q. On that page we see paragraph 11. That  
16 begins by specifying that "The minimum outflow of the  
17 reservoir during the winter low flow period, from  
18 October 1 to March 1, will generally be the inflow or  
19 175 CFS, whichever is less."

20 Do you generally observe that rule of thumb  
21 for your operations?

22 A. I generally would like to have the outflows  
23 at 175. But in drier years, yes, I will go lower if I  
24 have to. But there's a number of factors that go into  
25 that. I have to look at how much storage I have and

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1 stuff like that. But 175 is what I consider the ideal  
2 flow for that river in the wintertime. Any less, we  
3 are running risk with stock water.

4 And I will try to explain that. If we drop  
5 it down to under 75 or so, that water is going down a  
6 narrow channel in the wintertime. And it can get quite  
7 dangerous for stock because it will be a very narrow  
8 channel. And a lot of times it will be deep spots that  
9 will stay open, and a cow will walk out there and slip  
10 on that ice and go through and be gone. And I've had  
11 that happen on my place.

12 Ideally it is to have that water out in the  
13 shallows, and it also protects the aquatic life and  
14 other fisheries when you're not freezing those gravel  
15 bars for the aquatic life. But it's critical for stock  
16 water because you want a place where the water is  
17 flowing, yet if a cow slips and goes in, she has  
18 footing underneath her where she can get back out.

19 And, you know, it's not set in stone in this  
20 operating plan. But in emergencies, yes, we can go  
21 below that. And there's a lot of factors that go into  
22 that.

23 Q. In regard to the icing, I'd like to ask you  
24 to look at Montana Demonstrative Exhibit 4, which is a  
25 series of three photographs.

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1           A.    I have it.

2           Q.    Each one of these is labeled with a different  
3 letter.  The top photograph is labeled Montana  
4 Demonstrative Exhibit 4-A.  What does this picture  
5 show?

6           A.    John, I'd like to explain the circumstances  
7 leading up to this.

8           Q.    Please.

9           A.    If I may.  And this is kind of atypical, but  
10 it does happen.  And it's happened several times in my  
11 lifetime.  What happened is we went into the winter in  
12 November; we had 10 or 12 inches of snow on the ground.  
13 In January we got an inch of rain, turned all of that  
14 snow to just ice.  Our cows were having trouble walking  
15 around.  It just settled.  Everything down was coated  
16 with ice.  End of February or March -- I can't remember  
17 the exact date -- we got 2 inches of precipitation in  
18 one night in the form of rain.

19                   Hanging Woman Creek, where I live on,  
20 normally in the winter is one-half CFS and in 24 hours  
21 went to 1500 CFS.  Tongue River at Birney Day went as  
22 high as 4000 CFS.  And this caused that ice -- there  
23 was so much water, it just took the ice out.

24                   And as you can see, most of us that were on  
25 the tour, we crossed that bridge.  And it pushed ice

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1 out on both sides of the bank. And that water is  
2 normally 8 or 10 feet down from that bridge. And it  
3 just pushed it out. And like my son said, good thing  
4 it happened at night because we'd have been really  
5 worried if we'd been there in the daytime and saw that  
6 ice jam.

7 But it's one of those events that do happen  
8 in that drainage. It's a very large drainage. And  
9 these kind of events do happen and something that's  
10 hard to plan for.

11 The second picture --

12 Q. By the way, is this picture taken on your  
13 property?

14 A. Yes, it is.

15 Q. And is that the bridge that we crossed on the  
16 tour?

17 A. Yes, it is.

18 Q. And when was this picture taken on your  
19 property?

20 A. This happened in March or February of 2012.

21 Q. All right. And do conditions like this that  
22 we can see in that first picture, do they make it  
23 difficult for stock watering to take place?

24 A. It makes it very difficult. Stock watering  
25 just virtually ends for a while because you can see the

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1 whole banks were just covered with ice.

2 Q. And you have stock that do water from the  
3 river in the winter?

4 A. Yes, I do.

5 Q. You were about to turn to the second picture,  
6 which is labeled 4-B?

7 A. Yes. It just shows the ice is piled up on my  
8 bridge. It's quite thick. You know, it put a lot of  
9 stress on it, but the bridge did stay in. And in past  
10 years I've had ice take the bridges out which my  
11 predecessors, my relatives had put in.

12 Q. And then if you would turn -- well, let me  
13 just make sure. When you're taking this picture, it's  
14 taken from the bridge we were looking at in the first  
15 picture?

16 A. Yes, it was.

17 Q. And that's the bridge we crossed on the tour?

18 A. Yes.

19 Q. At your property?

20 A. Yes.

21 Q. And the third picture, 4-C?

22 A. The third picture is 3 or 4 miles downstream.  
23 It's the lower end of my property just before it gets  
24 to the reservation, about a mile up from the  
25 reservation line. And the dam is jamming up there.



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1 There's a 90-degree turn in that river. And if you  
2 look over in this area here, you can see the river is  
3 flooding out into those trees and that low-lying area.

4 SPECIAL MASTER: Can we go off the record for  
5 just one second?

6 (Discussion held off the  
7 record.)

8 SPECIAL MASTER: Go ahead, Mr. Draper.

9 MR. DRAPER: Thank you.

10 THE WITNESS: I can see, it causes a large  
11 amount of property damage in -- or can cause a lot of  
12 ice jams are -- can cause a lot of local flooding and  
13 stuff and damage to the river banks and property along  
14 the river.

15 BY MR. DRAPER:

16 Q. And what kind of conditions can develop if  
17 you don't maintain a sufficient winter release from the  
18 reservoir?

19 A. The other big condition that can develop, if  
20 we have a very low flow going down that river, we  
21 can -- it gets very cold down there. 40 below is not  
22 uncommon. We can get where the river will freeze from  
23 the bottom up, called anchor ice.

24 If that happens, then you have flooding  
25 conditions that you cannot control. You cannot divert

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1 that water anywhere. It's going to keep flooding and  
2 flooding out over the top of that ice and spreading  
3 out, and it just creates a big ice floe when that  
4 happens.

5           It's not very common, but it can happen. And  
6 anytime we drop those flows below that 75 CFS, we are  
7 going to really risk that type of condition with the  
8 river, especially in Miles City. I mean, you could  
9 conceivably have the river freeze up at Miles City and  
10 eventually back up and flood the city.

11           Q. Has that happened, to your knowledge?

12           A. It has not happened, to my knowledge, because  
13 we've always had higher flows going down that river.

14           Q. Looking back at the operating plan,  
15 Exhibit M316, on the page we were looking at which is  
16 A-6, and the paragraph we were looking at, No. 11. We  
17 had looked at the first sentence there.

18           And then it finished the paragraph by saying,  
19 "Cutting outflows to below the minimum will be allowed  
20 only as needed to accommodate necessary dam safety  
21 inspections, maintenance, dam safety, or other  
22 emergency purposes."

23           How do you apply that standard to your role  
24 in managing the dam?

25           A. You know, that standard is very large.

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1 Emergency purposes covers a lot of things. And if a  
2 farmer doesn't have water to irrigate, that creates an  
3 emergency. It's a drought or something. And you can  
4 cut that flow down, I believe, under this operating  
5 plan to accommodate the emergency of a drought or  
6 something like that.

7 Q. So is my understanding correct, you consider  
8 drought and extremely low flow conditions to be one of  
9 the emergency conditions referenced in this paragraph?

10 A. Yes, I do.

11 Q. Is another part of your winter operation  
12 maintaining a maximum level on the reservoir to  
13 present -- prevent damage to the reservoir during the  
14 winter months?

15 A. During the winter months the ideal is 45,000  
16 acre-feet. That keeps the water off of the concrete.  
17 During these drought years, the water users' board has  
18 recommended risking damage to that dam that we will  
19 have to repair if it's damaged, to go to 55,000. And  
20 just to give us a little hedging thing, we don't like  
21 to do it. We like -- if the snowpack and everything  
22 looks good, we would like to keep it at 45,000 during  
23 the winter.

24 Q. And for most -- for the most part, that's  
25 what you do, at least during the months that are liable

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1 to include ice in the reservoir?

2 A. Yes, it is.

3 Q. Now, in the late '90s, the late 1990s, the  
4 dam was enlarged; correct?

5 A. Yes, it was.

6 Q. What role did the Water Users' Association  
7 play in the dam enlargement?

8 A. I tried to attend most of the dam engineering  
9 meetings I could. I would get up and drive to Bozeman  
10 and attend the planning meetings and with all the  
11 engineers and the tribe, and we played that role.

12 We worked closely with the engineers to set  
13 water levels so that the work could be done on the dam,  
14 you know, adjust the flows to accommodate them. And we  
15 would make occasional trips to the dam if they found  
16 something that they were concerned about. Or several  
17 times I was up there because they found parts off of  
18 the old gate and wanted me to identify them.

19 But it was a very active role we played with  
20 everybody building that dam. It was fascinating to go  
21 up there and watch it being built.

22 Q. And did that involvement start back with the  
23 Northern Cheyenne Compact?

24 A. Yes, it did.

25 Q. Did you or the association play a role in the

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1 negotiation of that compact?

2 A. We did. We played a very active role. We  
3 had just came out -- let me back up. In the -- right  
4 after Montana came out with their readjudication, the  
5 Northern Cheyenne sued everybody in the watershed to  
6 establish their reserved water right. Many of the  
7 irrigators and some of the other people, we formed a  
8 group call the Tongue/Rosebud Protection Association.  
9 And I was president of that group. And we hired an  
10 attorney here in Billings, Maurice Colberg of Hibbs,  
11 Sweeney, and Colberg. We must have intervened -- I  
12 can't remember. But we took that suit. It was called  
13 U.S. v. Adsit, et al. We went to the United States  
14 Supreme Court with that lawsuit.

15 Q. And what followed that litigation?

16 A. That litigation, the only decision we really  
17 got out of that litigation was that tribal rights would  
18 be established in state court. So Montana formed a  
19 compact commission to negotiate these. We took a very  
20 active role in negotiating the Northern Cheyenne water  
21 compact with the state. We tended -- quite often one  
22 of my predecessor, Herb Muggli, and I would attend  
23 those meetings. Sometimes -- most of the time both of  
24 us did. And we were satisfied with the outcome of that  
25 compact.

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1 Q. And did the outcome of the compact involve  
2 increasing the size of the reservoir?

3 A. Yes, it did.

4 Q. And was there a federal legislation for that?

5 A. Yes, there was. And we both went to  
6 Washington to speak with our congressman and lobby the  
7 people there for that -- those fundings for that.

8 Q. And did the Water Users' Association itself  
9 contribute to the cost of that construction?

10 A. Yes, we did. We have a long-term contract  
11 with the state for \$5 million we put into that new dam,  
12 even though we did not get any new storage. We knew we  
13 needed a new structure, so we were willing to cough up  
14 \$5 million and help pay for that new dam.

15 Q. Did you or the state file an application for  
16 additional storage rights as a result of the  
17 enlargement?

18 A. No, we did not get any additional storage or  
19 file application for any additional storage.

20 Q. So you achieved no new storage rights as a  
21 result of the enlargement of the dam?

22 A. That's correct.

23 Q. Just generally, the dam was in need of  
24 rehabilitation because of an earlier flood?

25 A. The 1978 flood really put that dam in a very

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1 high-hazard dam. We made some repairs, but they were  
2 just kind of temporary repairs. We had to operate it  
3 at reduced levels for those years, from 1978 until  
4 1999.

5 Q. During the early years of the dam's operation  
6 prior to -- prior to the compact and prior to the  
7 enlargement, based on your knowledge of the records of  
8 the association and your long history as president, do  
9 you know whether the operations of the dam have changed  
10 in some substantial way since the pre-Compact period,  
11 based on your knowledge from those sources?

12 A. We have not changed that much. I think we  
13 are -- now that we have a new structure, we're a little  
14 more aggressive. But our outflows in the wintertime  
15 are pretty much the same or less than what we had  
16 before. But it did not change the operation that  
17 terribly much. But once we got a new structure, we  
18 could be a little more aggressive in the spring  
19 filling.

20 Q. In the early days, did the dam tender keep a  
21 record of the outflows?

22 A. Yes, he did.

23 Q. I'd like to identify four exhibits from your  
24 records that contain examples of that. These are  
25 marked as Exhibits M27 -- I'm sorry. Let me say that

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1 again.

2 M327, M328, M329, and M330. Do you have a  
3 copy of those?

4 A. Yes, I do.

5 Q. Do these records come from the Tongue River  
6 Water Users' Association files?

7 A. Yes, they did.

8 Q. Are you the custodian of those files?

9 A. Yes, I am.

10 Q. And is it your understanding that these were  
11 kept in the normal -- as part of the normal business  
12 operations of the association?

13 A. Yes, it was. At that time, we had a  
14 full-time dam keeper that lived there and measured the  
15 water every day.

16 Q. And to your knowledge, are these documents  
17 accurate with respect to their contents?

18 A. Yes, they are.

19 MR. DRAPER: Your Honor, I would move the  
20 admission of those four exhibits, M327 through 330.

21 MR. KASTE: I don't think I have any  
22 objection to these exhibits. I think it would be  
23 helpful to note the period of time the dam tender was  
24 keeping these records.

25 SPECIAL MASTER: So why don't we do this. I



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1 will admit these four exhibits, M327, M328, M329, and  
2 M330. But following up on Mr. Kaste's observation,  
3 could you ask a little bit more about the period of  
4 time during which these type of records were actually  
5 being kept, including not only these specific records.

6 MR. DRAPER: Yes, Your Honor. Thank you.

7 (Exhibit Nos. M327, M328,  
8 M329, M330 admitted.)

9 BY MR. DRAPER:

10 Q. Mr. Hayes, approximately over what period was  
11 there a dam tender at the dam?

12 A. We had a full-time dam tender at the dam  
13 pretty much through 1938 or '39 to about 1980 or '82,  
14 somewhere in that area.

15 Q. Do you know over what period the types of  
16 records shown in Exhibits M327 through 330, over what  
17 period of time those kinds of records were kept?

18 A. They were pretty much kept all of those years  
19 by the dam keeper. And in the advent of the Internet,  
20 we now have realtime data for inflows and outflow and  
21 lake levels.

22 Q. So these exhibits are merely examples of  
23 other records that exist in the files of the  
24 association?

25 A. Yes, they are.

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1 Q. And do they show the cubic feet per seconds  
2 of the flows, for instance, looking at the first one  
3 during the month of March 1947, being released from the  
4 dam?

5 A. Yes.

6 Q. And for that example, the flows vary over  
7 what range?

8 A. They vary from 260 CFS to 1364 CFS.

9 Q. Okay. Thank you. Now, there's been special  
10 emphasis in this case on the years 2001, 2002, 2004,  
11 and 2006. How would you characterize those years?

12 A. Those are very, very dry years in the basin.

13 Q. And did you actively pursue monitoring and  
14 addressing that low flow condition in those years?

15 A. Yes, I did.

16 Q. And how did you do that?

17 A. I worked very closely with DNRC on that, and  
18 we tried to maximize our storage by reducing our  
19 outflows as much as we could.

20 Q. And were the efforts you made in the years  
21 I'd named, typical of the measures that you would take  
22 in low-supply years, 2000 other low-supply years?

23 A. Yes, they were.

24 Q. Did you diligently monitor the amount of the  
25 water supply available on a daily or weekly basis?

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1           A.    I try to monitor it every day.

2           Q.    And what actions did you take when you  
3 observed that the flows were becoming extremely low?

4           A.    I had to look at -- you know, make a  
5 prediction using all the tools available to me on how  
6 much I figured would come into that reservoir. I  
7 looked at snowpack. I looked at soil moisture. I  
8 looked at sites on the Internet. The weather service  
9 has a long-range weather forecast. I looked at NRCS  
10 predictions and tried to outguess what is going to  
11 happen six weeks or six months down the road or four or  
12 five months down the road. And then I would try to  
13 adjust my gate accordingly.

14          Q.    And did you stay in close contact with state  
15 water officials on that subject?

16          A.    I did.

17          Q.    And have we seen examples of that in the  
18 advisory committee meeting notes and your letters to  
19 the officials?

20          A.    Yes, I did.

21          Q.    Did that include interaction with Mr. Kerbel?

22          A.    Yes, it did.

23          Q.    Did you have any contact from Wyoming water  
24 users in charge of dams up there or otherwise?

25          A.    We had one meeting a year. Yellowstone

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1 Compact Technical Committee, we would meet and discuss  
2 water supplies.

3 Q. Did they ever call you up and tell you that  
4 those supplies were low and you needed to take measures  
5 accordingly?

6 A. No, they did not.

7 Q. Did they ever call you up and say that any  
8 releases that you might make would be counted against  
9 you?

10 A. No, they did not.

11 Q. In those years, particularly I'm thinking of  
12 the four years in which the reservoir did not fill, did  
13 that affect your ranching operation?

14 A. It did.

15 Q. How so?

16 A. One year I bought water from the Northern  
17 Cheyenne. That was an added expense for me. Those  
18 other years, I chose not to buy water but just to  
19 irrigate my more productive fields and let the other  
20 ones set idle or take one cutting off and not irrigate  
21 it back up again.

22 It cost me economically to do that. I lost  
23 part of my hay production. I think one of those years  
24 I actually had to -- that with a combination of a  
25 fire -- sell my replacement heifers. So, yes, it

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1 caused some economic stress to me and my family.

2 Q. So it impacted both your irrigation operation  
3 directly and your cattle operation?

4 A. Yes, it did.

5 Q. And did you suffer economic loss as a result?

6 A. Yes, I did.

7 Q. During those times -- and I'm speaking of  
8 those four years -- did you have personal knowledge as  
9 to whether your neighbors were suffering in the same  
10 way as you were?

11 A. Yes, I did. And personal contact with them  
12 and personal observation, driving up and down the  
13 river, you know, their crops were suffering too.

14 Q. Was it your personal observation that they  
15 were suffering economic loss?

16 A. Yes.

17 Q. Are you aware that in 2004, a formal letter  
18 was written from Mr. Stults, the administrator of the  
19 Water Resources Division of the Department of Natural  
20 Resources Conservation of Montana to Mr. Tyrrell?

21 A. Yes, I was.

22 Q. And Mr. Tyrrell is who?

23 A. Mr. Tyrrell is the state engineer of Wyoming.

24 Q. Let me ask you, I believe you may have there  
25 at the stand with you a copy of that letter, which is

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1 Joint Exhibit 64. Exhibit J64.

2 A. I have that.

3 Q. Attached to that letter as the first  
4 attachment, starting on the page that has the Wyoming  
5 Bates No. 031304, is an affidavit of one Art Hayes, Jr.

6 Is that you?

7 A. Yes, it is.

8 Q. And have you had occasion to review this  
9 affidavit recently?

10 A. Yes, I have.

11 Q. Are the statements that you made in this  
12 affidavit, do you still consider them true as of the  
13 time you made them?

14 A. Yes, I do.

15 Q. What was the major purpose, as you saw it,  
16 for preparing this affidavit?

17 A. We needed to make a call on Wyoming to get  
18 them our post-'50 water into the system for the  
19 ranchers and farmers in Montana.

20 Q. Did you describe your personal situation?

21 A. Yes, I did.

22 Q. I notice that on the third page of the  
23 affidavit at the end of paragraph 12, you state at the  
24 end, "The need for irrigation water is serious and  
25 immediate." Was that your belief at the time?

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1 A. Yes, it was.

2 Q. Is that still true today?

3 A. Yes.

4 Q. And by that, I mean, this -- these were dire  
5 circumstances, and you believe that even in retrospect,  
6 that that statement was accurate?

7 A. Yes, it was.

8 Q. Did you also address the water supply  
9 conditions for the reservoir as part of your affidavit?

10 A. I have to reread it right quick here.

11 Q. I might direct your attention to paragraph 8  
12 on the same page as paragraph 12 there.

13 A. Yeah, I see it now. Yes, I did. I addressed  
14 that, our storage and inflows.

15 Q. There also attached behind your affidavit is  
16 the listing of the water rights from the 1914 Miles  
17 City Decree?

18 A. Yes.

19 Q. And what was your hope in preparing this  
20 affidavit?

21 A. That Wyoming would send some water down out  
22 of the reservoirs and shut off their post-'50 rights so  
23 that we could get that water down to us.

24 Q. And did that happen?

25 A. Not to my knowledge.

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1 Q. Let me turn your attention to the 2006 call  
2 letter, which is in evidence as Exhibit J68.

3 A. I have it in front of me.

4 Q. Was 2006 as dire a water supply year as 2004?

5 A. Anytime you're short of water, it's a dire  
6 need for water. Yes, it was a dire need for water.

7 Q. And did you prepare an affidavit that is part  
8 of that --

9 A. Yes, I did.

10 Q. Okay. Does that start on the page that has  
11 the Bates number of Wyoming 027309?

12 A. Yes.

13 Q. Have you had occasion to review this  
14 affidavit recently?

15 A. Yes, I have.

16 Q. Do you believe that your statements here  
17 continue to be true as of the time you made them?

18 A. Yes.

19 Q. And in these years, 2004 and 2006, if I  
20 understand you correctly, you were suffering economic  
21 loss as a result of the lack of water supply?

22 A. Yes, we were.

23 Q. And that applied to the other two years  
24 before 2004, when the reservoir did not fill?

25 A. Yes, it did.



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1 Q. And in other low-flow years, such as 2000,  
2 when the reservoir did fill, was there any economic  
3 impact of the low-flow conditions at that time?

4 A. Would you repeat that year, please, John?

5 Q. 2000.

6 A. Yes, it was a slight impact flow economically  
7 that year.

8 Q. You did suffer some impact but less?

9 A. Less.

10 MR. DRAPER: Your Honor, if I may have a  
11 moment?

12 SPECIAL MASTER: Yes, you may.

13 MR. DRAPER: Thank you.

14 SPECIAL MASTER: Why don't we go off the  
15 record and let the court reporter relax for a minute  
16 while you're doing that.

17 (Discussion held off the  
18 record.)

19 MR. DRAPER: Thank you, Your Honor.

20 SPECIAL MASTER: You're welcome, Mr. Draper.

21 BY MR. DRAPER:

22 Q. Mr. Hayes, I'd like to ask you about one of  
23 the exhibits we identified earlier, M137.

24 A. I have it.

25 Q. These are the minutes from the May 15, 2002,

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1 Tongue River Advisory Committee meeting; is that right?

2 A. 137? Oh, I got the wrong thing here. Yes.  
3 The minutes from the May 15th, 2002?

4 Q. Yes.

5 A. Okay.

6 Q. If you could look at the second page of  
7 Exhibit M137. The -- I guess it's the fourth partial  
8 paragraph there. It starts out, "Roger." Do you see  
9 that?

10 A. Yes, I do.

11 Q. Who is Roger?

12 A. Roger Muggli is the manager of the T & Y.  
13 He's the secretary/treasurer of T & Y and also the  
14 manager of the T & Y Irrigation District and also a  
15 member at-large of the Advisory Committee.

16 Q. And that's Roger Muggli shown on the  
17 participants at the beginning of the minutes; correct?

18 A. That's correct.

19 Q. Would you read that sentence, please?

20 A. "Roger makes a motion to have Glen follow up  
21 with Jack Stults regarding where Montana is with the  
22 issue of future water development in Wyoming, the  
23 pre-'50 and post-'50 issues, and how the state might  
24 protect the water users on the Montana side."

25 Q. Thank you. Who is Glen that's referred to in

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1 that sentence?

2 A. It would be Glen McDonald from State Water  
3 Projects administrator.

4 Q. Mr. Kevin Smith's predecessor?

5 A. Yes.

6 Q. And so the motion was to have him follow up  
7 with Mr. Stults, who testified earlier in this case, on  
8 the subject specified there?

9 A. Yes.

10 Q. Was this typical of the kind of communication  
11 that you would have with the state water officials  
12 regarding low-flow conditions and the need for water  
13 from Wyoming?

14 A. Yes, it was.

15 Q. Is the Tongue River Basin, in your  
16 experience, one in which a small amount of water can go  
17 a long ways?

18 A. A small amount of water can go on a very long  
19 ways in the Tongue River Basin. You know, 15, 20 CFS  
20 can irrigate a lot of ground. So, yeah, a small amount  
21 of water is not an insignificant amount of water. It  
22 can make the difference to a farmer whether he has a  
23 crop or he doesn't have a crop.

24 Q. Thank you.

25 MR. DRAPER: No further questions at this

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1 time, Your Honor.

2 SPECIAL MASTER: Okay. Thank you,  
3 Mr. Draper.

4 Mr. Kaste, cross-examination?

5 CROSS-EXAMINATION

6 BY MR. KASTE:

7 Q. Good afternoon, Mr. Hayes.

8 A. Good afternoon.

9 Q. I probably did this on the tour, but I'm  
10 going to do it again. Thank you for taking us around  
11 Montana. We all appreciated that.

12 A. Well, thank you for taking me around Wyoming  
13 and showing me some of your reservoirs and stuff. I  
14 enjoyed the trip.

15 Q. I'm going to ask you about a couple of  
16 documents off the bat, and then we're just going to  
17 talk. All right?

18 A. That is fine.

19 Q. The first one I wanted to talk with you about  
20 is some of the pages you talked about from Mr. Book's  
21 report that shows your water rights.

22 A. Yes.

23 Q. Do you remember that big sucker?

24 A. Yes, I do.

25 Q. And I think that the abstract for one of your

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1 water rights can be found on page 367 of Exhibit M6.

2 A. Yes.

3 Q. Okay. And that abstract sets a priority date  
4 for your water right of 1902; is that correct?

5 A. Yes, it does.

6 Q. All right. And that's for a maximum acreage  
7 of 355?

8 A. Yes.

9 Q. If you turn to the next page, inside the  
10 little box under remarks, there's a sentence in there  
11 that says, "The Rosebud County water resources survey  
12 (1948) appears to indicate 120.49 acres irrigated. A  
13 description of these acres is in the claim file." Do  
14 you see that?

15 A. Yes.

16 Q. And is that what you were talking about  
17 earlier when you showed us on the map, some pre-1950  
18 acres that had been irrigated and some post-1950 areas?

19 A. Yes.

20 Q. But your water right as it stands today has a  
21 1902 priority date for all 355?

22 A. No, it does not.

23 Q. It doesn't?

24 A. No. As it's going through adjudication, I  
25 will not have -- I'll have a 19 -- dated April 1st,

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1 1902, water right on the acreage shown on page 366 by  
2 the hash marks. I will have a June 1st, 1950, water  
3 right on the lands that are in white. They are not  
4 shown below the ditch. In other words, if you look at  
5 the blue lines, you'll see that there -- the ditches  
6 are quite a ways away from those hash marks. That is  
7 additional acreage, and I will not have the 1902 water  
8 right on that. It will be a 1950 water right.

9 Q. Is there another abstract like this that  
10 separates the two out?

11 A. It's still in the water courts.

12 Q. Can I ask you, then, to look at Exhibit M336.  
13 And it's the list of the contract holders of the Water  
14 Users' Association.

15 A. The list is dated 2/10/12?

16 Q. Yes, sir.

17 A. Yes.

18 Q. And you had talked about there are some folks  
19 below the T & Y Canal that are members of the Tongue  
20 River Water Users' Association. And I was hoping you  
21 could tell me which of the folks on this list are below  
22 the T & Y Canal.

23 A. It may take me a second to make sure I get  
24 them all right here. I don't know if I'm -- there is  
25 an Ochsner, Vern A. Ochsner, listed on page -- well, it

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1 would be MT07347. Montana Department of Fish,  
2 Wildlife, and Parks on that same page is one. On page  
3 MT0734, Town & Country Club, Incorporated, is one.

4 SPECIAL MASTER: Can I just go back for the  
5 record. I assume that's actually page 07348?

6 THE WITNESS: Yes.

7 SPECIAL MASTER: Okay.

8 THE WITNESS: It's Town & Country Club,  
9 Incorporated, is one. I am not sure, but I think that  
10 on the first page MT07345, Carroll Companies may be  
11 one. I am not sure of that one, though.

12 Those are some of the ones that I can recall  
13 off the top of my head.

14 BY MR. KASTE:

15 Q. One of the things you talked about with  
16 Mr. Draper is the methods of irrigation in Montana and  
17 how most folks irrigate. You remember that?

18 A. Yes, I do.

19 Q. Okay. I think you said a lot of folks use  
20 the laser-leveled fields now?

21 A. Most all flood irrigation, except for a few,  
22 are laser-leveled on the flood irrigation.

23 Q. Has that made a difference in the flows on  
24 the Tongue River in Montana?

25 A. It means you're using water more efficiently.

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1 Q. Does that mean there's less available if  
2 you're upstream to your neighbor downstream?

3 A. Not necessarily.

4 Q. What do you mean by that?

5 A. You're still putting on water. You're just  
6 putting it on a little more efficient. You're cutting  
7 your time down, but you're still trying to get the same  
8 amount of water as you did by -- before it was leveled.

9 It does make it a little efficient. You're  
10 not cutting your flows down. You may be cutting your  
11 return flows down, but you're using your water more  
12 efficient, like you do with a sprinkler.

13 Q. And do I understand right, with regard to the  
14 operation of the reservoir, that you and in  
15 consultation with probably Mr. Smith make the decisions  
16 about when to store?

17 A. Yes.

18 Q. And you have some discretion about when to  
19 store and when not to store; correct?

20 A. I do.

21 Q. And in some of the bad years, early 2000s,  
22 you made the decision to reduce your winter flows and  
23 store more water; right?

24 A. I did.

25 Q. In 2004 and 2006, can we agree that there was



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1 still room to reduce those flows a little more and  
2 store more water?

3 A. Would you repeat that again louder? I'm hard  
4 of hearing.

5 Q. I want to know, would you agree, in 2004 and  
6 2006, that there was still room for you to reduce those  
7 flows more and store more water?

8 A. I would have to look at the charts.

9 Q. I'll read you a couple of numbers from an  
10 exhibit that we talked about yesterday. Is that all  
11 right?

12 A. That's fine.

13 Q. I'm looking at Montana Demonstrative  
14 Exhibit 3, the very last page. You don't have it in  
15 front of you. I don't have a copy for you right  
16 offhand. I'll just read you the numbers, and we can  
17 talk about them.

18 MR. DRAPER: We can provide the witness a  
19 copy, if you'd like.

20 SPECIAL MASTER: I think that would probably  
21 be easier.

22 MR. KASTE: And for the record, this is a  
23 chart from Mr. Dalby's report that he prepared in this  
24 case. And I'll represent it shows the mean monthly  
25 discharge from the Tongue River at the dam. Okay?

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1 MR. DRAPER: Can we inquire where in the  
2 exhibit you're referring to, Mr. Kaste?

3 MR. KASTE: Very last page.

4 THE WITNESS: I have that page up.

5 BY MR. KASTE:

6 Q. Sure. And this shows the years beginning  
7 1994 through 2007; right?

8 A. Yes, it does.

9 Q. And I'm just interested in '04 and '06. And  
10 if we look at some of the winter flows for 2004, we can  
11 just look January through May, if that's easy. I have  
12 the number at 118.7 in January.

13 A. Yes.

14 Q. And 115.7 in February.

15 A. Yes.

16 Q. And 139.2 in March.

17 A. Yes.

18 Q. And 162.9 in April.

19 A. Yes.

20 Q. Let's just stop there. And we can see by  
21 looking at the flows below in 2005, that you had  
22 restricted outflows in 2005 down to 73 in January and  
23 71 in February; right?

24 A. Yes.

25 Q. So there was -- can we agree in 2004 that

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1 there was still water that could have been stored in  
2 the reservoir during the winter months?

3 A. There may have been other factors in those  
4 releases. We were still having trouble with Decker  
5 Coal being flooded out. They were changing their mine  
6 plan, I believe, to -- and I may have had those flows  
7 to accommodate the reservoir elevation to accommodate  
8 Decker Coal so we were not flooding out until they got  
9 their box cut in and backfill in.

10 Q. Okay. And I would have the same question  
11 with regard to 2006. And I assume you'd have the same  
12 answer, that there was still some water available that  
13 could have been stored in the winter of 2006?

14 A. In 2006, I did have -- you know, it shows  
15 that I did cut -- we went into, you know, looking like  
16 a pretty good snowpack year, I believe. And we did cut  
17 our flows down in the month of March to store more  
18 water.

19 Q. And, in fact, in 2006, you were able to store  
20 more water than 2004; right?

21 A. I'd have to look at the charts.

22 Q. It was -- I think it was a better year, by  
23 all accounts.

24 A. Probably was, yes.

25 Q. Okay. Now during 2001, 2002, and '4 and '6,

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1 you talked to us about the impacts that the water  
2 shortage had on you and your ranch; right?

3 A. Yes.

4 Q. And at one point in time, you actually  
5 purchased water from the tribe; correct?

6 A. I did.

7 Q. What year was that?

8 A. I believe it was 2001.

9 Q. In 2004, did you purchase any water from the  
10 tribe?

11 A. I didn't have enough money.

12 Q. I hear you. Was the tribe marketing water in  
13 2004 and 2006?

14 A. Yes, they were.

15 Q. Okay. With regard to how you operate the  
16 reservoir during the irrigation season, you submitted a  
17 couple affidavits with the call letters in 2004 and  
18 2006. And as part of that affidavit, there's a  
19 sentence in there that says, "I try to run the  
20 reservoir so that there's 50 CFS at Miles City." Do  
21 you recall that?

22 A. Yes.

23 Q. What do you mean by that?

24 A. Fifty CFS at the Miles City gauge, that takes  
25 care of our users below the gauge and also provide some

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1 water for the fishery.

2 Q. Is that part of the equation when you're  
3 determining where you set your gates, is look at the  
4 flow at Miles City and say, I need to make an  
5 adjustment at my gate because the flow is below or  
6 above that 50 that I'm trying to get to?

7 A. It's a very long system and very, very hard  
8 to make that fine adjustment within 50 CFS, zero over  
9 190 to 200 miles.

10 Q. But is that something you take into  
11 consideration?

12 A. I do take that into consideration.

13 Q. Do you operate the gate to try and ensure  
14 that there's adequate habitat for the fish on the  
15 Tongue River?

16 A. It's part of our management plan.

17 Q. Okay. Now, with regard to the calls that  
18 people make to get their storage water, I think you  
19 talked about them calling into the answering machine.  
20 And years before the commissioners, would you be the  
21 person taking those messages?

22 A. No. There would be no phone conversations or  
23 anything. I would just try to regulate the dam the  
24 best I could by myself.

25 Q. If I understand right, and tell me if I

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1 don't, prior to 2001 when the first commissioner was  
2 appointed, did you guys keep very good records of what  
3 was being delivered to the water users?

4 A. No, we did not.

5 Q. And the first commissioner, if I understand  
6 right, was appointed in 2001; correct?

7 A. That's correct.

8 Q. Before that, when, say, the dam was not able  
9 to operate at its capacity because of the safety issue  
10 after the 1978 flood, were you able -- and I know you  
11 weren't the president during that whole period of  
12 time -- but were you able to make the deliveries to the  
13 Tongue River Water Users' Association and the dam in  
14 its sort of -- weakened is the only word that comes to  
15 mind -- weakened state?

16 A. We did make our deliveries. And most  
17 years -- one year it looked like we were going to run  
18 out of water. I can't remember the exact year. But I  
19 was vice president of the association. Mr. Muggli gave  
20 me a call and said the dam will be dry in August 15th.  
21 But, luckily, it did rain in Wyoming, and we were able  
22 to get enough water into the dam to carry us through  
23 until September.

24 Q. Okay. So really it got bad beginning 2001;  
25 correct?

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1           A.    There was one year, yes.  But we had adequate  
2 water, I believe, to get us through that year.  But  
3 barely.

4           Q.    And nobody is going to deny that 2001, 2002,  
5 2004, and 2006 were rough years, weren't they?

6           A.    They were very rough years.

7           Q.    All right.  Let me just ask you straight out:  
8 Since the enlargement of the reservoir with the now  
9 specific inclusion of the tribal right, has that made  
10 it harder for you to deliver the contract water to your  
11 users?

12          A.    We still deliver the 40,000 acre-feet.  But  
13 we do store the tribal rights.  They have those rights.

14          Q.    Has the tribe used any of its Northern  
15 Cheyenne Tribe Compact right since 1999?

16          A.    No, they have not.

17          Q.    So any -- the water marketing that has gone  
18 on from the tribe has involved their contract right  
19 with the Water Users' Association?

20          A.    Yes, it has.

21          Q.    All right.  After 2001, commissioners started  
22 being appointed in most years; correct?

23          A.    Yes.

24          Q.    Do you maintain records as part of the Tongue  
25 River Water Users' Association's records of the

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1 specific calls that are made for reservoir water, say,  
2 day to day?

3 A. That is kept at the -- the commissioner keeps  
4 that. And they are employees of the court, so those  
5 records are kept at the district court.

6 Q. All right. Now, I have a question about the  
7 contract as it has sort of evolved over the years. You  
8 agree that when the contract between the Water Users'  
9 Association and the board was first entered, it was to  
10 sell 32,000 acre-feet of water; right?

11 A. Yes.

12 Q. And then subsequently in 1969, you got a new  
13 contract that allowed you to sell 40,000 acres;  
14 correct?

15 A. That's correct.

16 Q. Do you make any differentiation among the  
17 water users who had the original 32,000 and the users  
18 that bought the 8,000?

19 A. There is -- when they raised that contract  
20 level up in 1969, I believe, in the new agreement to  
21 40,000, there was a different price on that water.

22 Q. Do you prioritize those contracts, say, if  
23 there's only a certain amount of water, the 8000 is  
24 sort of a B share or something like that?

25 A. No, they're all treated the same.



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1 Q. So whether you have the original or the  
2 additional 8000, when you call for your stored water,  
3 if it's available, you're entitled to it?

4 A. Yes.

5 Q. Okay. Has the Tongue River Reservoir ever  
6 called any of the rights upstream of the Tongue River  
7 Reservoir and the Montana line?

8 A. We've always gone through the state employees  
9 to do that.

10 Q. I'm not sure I understand your answer.

11 A. Call up the rights from Montana -- the  
12 reservoir to the Montana border?

13 Q. Right. If I understand right, there's a  
14 couple of rights between the reservoir and Montana  
15 border before you get to Wyoming, and the Tongue River  
16 Reservoir is senior to some of those.

17 A. We have never made that call that I know of.

18 Q. Okay. Have the water users in -- along the  
19 Tongue River downstream of the reservoir all the way  
20 down to T & Y, to your knowledge, have they made calls  
21 on each other? And what I mean is to satisfy their  
22 direct flow rights.

23 A. I am not sure.

24 Q. Okay. Do people just use their storage water  
25 in lieu of making calls?

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1           A.    Yes, they will just switch over to stored  
2 water usually.

3           Q.    All right.  And if I understand right, the  
4 rule of thumb is when the state line flow gets down to  
5 about 200 CFS, you consider that the first and second  
6 rights on the river are the only two that could  
7 possibly be satisfied so everybody else must be on  
8 storage; is that right?

9           A.    Yes.

10          Q.    So does anything happen when the river hits  
11 200 CFS?  Do you take any particular action?

12          A.    If there's commissioners on, they will inform  
13 people that they're on stored water.  And they will  
14 inform people, you know, as the 1914 decree drops, they  
15 are on stored water.

16                   Most people realize they go on stored water,  
17 and it will be taken out of their storage.

18          Q.    And if I understand right, the commissioners  
19 measure the diversion at the irrigators, either their  
20 pump or their headgate; right?

21          A.    Yes.

22          Q.    Do you know if they do anything else?

23          A.    If they do what, sir?

24          Q.    Anything else?

25          A.    They measure that, and they try to

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1 communicate with the water users.

2 Q. All right. Now, if I understand right, the  
3 commissioner is -- the water users go to the district  
4 court and say, we would like to have a commissioner  
5 appointed for us; right?

6 A. That is true.

7 Q. Does anybody from the state of Montana or  
8 DNRC take -- do they regulate that river at all?

9 A. Usually we have conversations with DNRC that  
10 we're going to put commissioners on. But physically  
11 coming out and doing that, they may come out and help  
12 the commissioners, but usually our commissioners do  
13 most regulation.

14 Q. And you pay for them; right?

15 A. Yes, we do.

16 Q. Mr. Book testified about an appendix to one  
17 of his reports, and it shows pre-'50 and post-'50 lands  
18 along the Tongue River and Montana are irrigated --  
19 what to I mean to say is irrigated lands in Montana.  
20 Do you keep track of whether lands are being irrigated  
21 with pre- or post-'50 -- or pre- or post-'50 rights?

22 A. No.

23 Q. Do you know if anybody does?

24 A. The commissioners do.

25 Q. Commissioners. All right. How much is --

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1 the Tongue River water users, each individual user has  
2 to pay for their contract every year. Isn't that  
3 right?

4 A. Yes, sir.

5 Q. And the amount you pay, is that based on your  
6 shares?

7 A. Yes.

8 Q. And does it vary every year, or is it the  
9 same?

10 A. It can vary. If contracts are -- those are  
11 30-year contracts. Once those contracts are done, you  
12 just pay the operation and maintenance and the \$3.97  
13 for the new dam project.

14 Q. So for yourself, your contracts with the  
15 Water Users' Association, how much do you have to pay  
16 for an acre-foot of water?

17 A. I couldn't tell you right off the top of my  
18 head. But some of my contracts were \$2.50. They are  
19 not expired. I pay that. This year, the assessment  
20 for operation and maintenance was a dollar. And then I  
21 pay the additional \$3.97 for my share of the new  
22 enlargement dam.

23 Q. And it can be different among the different  
24 water users depending on whether or not they have paid  
25 off the additional?

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1 A. Yes.

2 Q. And you pay at the beginning of the year --  
3 first of all, do you pay at the beginning of each water  
4 year for your shares?

5 A. Could you repeat that?

6 Q. Do you pay at the beginning of the water year  
7 for --

8 A. We are billed in September. We pay for next  
9 year's water in September at the beginning of the water  
10 year.

11 Q. So you pay the same whether you use a lot or  
12 a little of the water that you have shares for?

13 A. Yes.

14 Q. Okay. Let me ask this: If I understand the  
15 sequence of events, beginning about 2001 drought  
16 started to set in; fair?

17 A. Yes.

18 Q. Montana started to get -- well, not Montana.  
19 But the folks in Montana, like yourself, started to get  
20 very concerned about their water supply. Isn't that  
21 right?

22 A. That is true.

23 Q. And you started fishing around for why is  
24 this happening? What can we do about it; fair?

25 A. I don't know what the definition of "fishing

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1 around" is.

2 Q. You started investigating. Does that sound  
3 fancier?

4 A. I would -- something along that line, yes.

5 Q. And one of the things that you looked at  
6 doing was installing measuring devices on your own  
7 diversions in Montana; right?

8 A. Correct.

9 Q. And there were still some diversions along  
10 the Tongue River even in 2005 that didn't have  
11 measuring devices; correct?

12 A. That is correct.

13 Q. All right. And in order to deal with that,  
14 the commissioners got an ultrasound machine; right?

15 A. That's correct.

16 Q. And they read the meters on the pumps as a  
17 substitute for a weir; right?

18 A. Yes, they did. And the reason for that is  
19 because a lot of our ditches are so flat we cannot put  
20 a weir in them to make them work, a partial plume. So  
21 we -- the water users did buy this ultrasound device.

22 Q. Fair enough. So you're trying to figure out:  
23 What are we using here in Montana? What's the problem?  
24 Right?

25 A. Yes.

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1 Q. And then my understanding is in about 2002,  
2 you started approaching people at the state and saying,  
3 hey, something needs to be done about this. This  
4 drought is hurting us; right?

5 A. Right.

6 Q. Do you know personally if anybody from the  
7 state of Montana actually demanded water from Wyoming  
8 prior to 2004?

9 A. I believe there was -- listening to the  
10 testimony, I believe there was some contact with Jack  
11 Stults and Gary Fritz to ask for water from Wyoming.

12 Q. All right. I think that's all I have for  
13 you, sir. Thank you.

14 SPECIAL MASTER: Why don't we take the  
15 afternoon break now. And we can come back at ten to  
16 3:00.

17 (Recess taken 2:34 to 2:53  
18 p.m., October 25, 2013)

19 SPECIAL MASTER: Everyone can be seated.

20 So, Mr. Hayes, I have a couple questions for  
21 you. And Mr. Kaste might have a couple, too, after me.

22 EXAMINATION

23 BY SPECIAL MASTER:

24 Q. So I'm going to jump around between various  
25 issues. What I'm trying to do is actually get a better

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1 sense of some of the things that you've talked about  
2 where it's still not totally clear to me.

3 So one question I have is how you actually  
4 determine what percentage of a storage right you were  
5 able to deliver in a particular year. So, for example,  
6 in 2002, I believe you said that the ultimate  
7 percentage you were able to deliver was 49 percent; is  
8 that correct?

9 A. Yes.

10 Q. So how did you determine -- how do you  
11 determine the 49 percent?

12 A. The 49 percent is the amount the reservoir  
13 fills to 49 percent. And, you know, it's the amount of  
14 water -- the percentage of the contract water that's in  
15 the reservoir that we -- determines the amount of water  
16 that they do. Like 49 percent that year, we only had  
17 49 percent of the 40,000 acre-feet of water in that  
18 reservoir to deliver. So they got 49 percent.

19 Q. And I believe you said earlier that you  
20 actually measure the water from the top down?

21 A. Yes, we do.

22 Q. So are you saying, then, that what you do is  
23 you take the reservoir when it's filled, and then look  
24 at the degree to which you haven't reached the amount  
25 that it's filled, and then that fraction of the 40,000



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1 acre-feet is the fraction you cannot deliver?

2 A. That is correct.

3 Q. Okay. So as I understand your testimony  
4 earlier, is it the association that actually locates  
5 and recommends particular commissioners to the Water  
6 Court?

7 A. That's correct.

8 Q. And how do you go about finding a water  
9 commissioner?

10 A. We will ask around. Different people --  
11 Roger Muggli will put in an idea or something. It's  
12 usually somebody that is retired or has some time. And  
13 then the association, the board of the association will  
14 interview them. Or most of the time the people on the  
15 board that will find one will say, I recommend this,  
16 and we'll take that recommendation of that person. And  
17 then we go to the district judge and say we submit  
18 these names. And he will usually approve those names.

19 Q. And what type of qualities do you look for in  
20 your water commissioners?

21 A. We look for somebody that's able to get along  
22 with people, somebody that has mathematical background,  
23 who can do the addition and subtraction of that. But  
24 mainly we want somebody that's out there that can, when  
25 they go to these people, they can say, okay, this is

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1 what you want, and get out of difficult situations.

2 Q. And in the years during the 2000s when you  
3 located and hired water commissioners, were they  
4 full-time positions in all those years?

5 A. Yes, they were, pretty much, you know, a  
6 full-time job.

7 Q. And did you -- how often did you hire a water  
8 commissioner who you had hired in a previous year?

9 A. We hired Mr. Kepper for two or three years.  
10 Mr. Mongo was fired by the judge. And the board  
11 decided that, you know, there was some conflicts  
12 between some of the water users and Mr. Gephart.

13 Q. And it was Mr. Mongo that was fired by the  
14 water court?

15 A. Yes.

16 Q. Do you know why?

17 A. He told the judge he didn't have the balls  
18 enough to back him up.

19 Q. Okay. And do you know why he made that  
20 comment?

21 A. He was having difficulty with a water user.

22 Q. And he felt that the Water Court was not  
23 giving him sufficient backing --

24 A. Yes.

25 Q. -- in his work with that water user?

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1 A. Yes.

2 Q. So I want to talk just a moment about the  
3 various shares in the association and how that  
4 operates. And so do you get a share for every  
5 acre-foot?

6 A. Yes, that's correct.

7 Q. And so then at the moment you have 40,000  
8 shares?

9 A. That's correct.

10 Q. And can you sell your shares to somebody  
11 else?

12 A. I suppose I could. Most shares are usually  
13 transferred with the land when a ranch sells. Estates,  
14 you know, it will be in somebody's name; and when the  
15 estate comes up, those shares will have to be  
16 transferred to an heir or somebody else.

17 Q. But generally the shares will transfer with  
18 the land?

19 A. Right.

20 Q. But if somebody wanted to transfer it to --  
21 well, let me just ask: Are there any transfers of  
22 association shares that are not in connection with the  
23 land?

24 A. Yes.

25 Q. And when you transfer your shares, is there a

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1 limit to who you can transfer to?

2 A. The shares have to be used in the service  
3 area, which is the basin of the Tongue River and  
4 150 miles downstream.

5 Q. Okay. And I'm curious. On Exhibit M336,  
6 which is a list of the contract holders and the  
7 acre-feet to which they are entitled as of February 10,  
8 2012, on the left-hand column, there is the column that  
9 says contract number. And the contract numbers, they  
10 started out ranging all the way from two digit, like  
11 98, all the way up to three-digit numbers. And  
12 sometimes they have an A or B after it and another  
13 number and another letter.

14 Does that mean anything? Can you tell  
15 anything about the water rights based on that?

16 A. It has nothing to do with water rights.  
17 Those other numbers are -- those contracts may have  
18 been broken up or they have been transferred to another  
19 person. Most of the time they are broken up. The  
20 original contract may have been for something. When  
21 the land sold, it may have -- part of the water may  
22 have gone, so that contract was broken so the A, B  
23 numbers are that type of thing.

24 Q. Okay. So to your knowledge, the numbers do  
25 not tell you anything about, for example, when somebody

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1 actually became entitled to their shares?

2 A. No, it doesn't.

3 Q. Okay. And so assume I have 200 shares and  
4 I'm entitled to 200 acre-feet. And in a given year,  
5 that there's -- for my 200 shares, there's no shortage.  
6 Therefore, I'm entitled to the full 200 acre-feet of  
7 storage. If I don't actually use all 200 acre-feet of  
8 my rights, do I get any extra carryover?

9 A. No. Those shares are not cumulative. We  
10 start over every year.

11 Q. Okay. So from the standpoint of the water  
12 users, if they don't use the amount of water to which  
13 they have a contract right, then they lose that water?

14 A. That's correct.

15 Q. Okay. And do you know in the 2001, 2003,  
16 2004, 2006 years, whether most of the contract users  
17 used whatever their entitlement was for that year?

18 A. Most all of them did, yes.

19 Q. Okay. If you look at Exhibit M311, which was  
20 your letter of May 22nd, 2002, to members of the Tongue  
21 River Water Users' Association.

22 A. Yes, I have it.

23 Q. Just have a couple of questions in  
24 understanding the final paragraph of the letter. In  
25 here you say, "To get through this summer's water

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1 shortage, users are going to have to be patient and  
2 understanding since this is the first time that this  
3 has ever been done."

4           When you say this is the first time -- the  
5 second "this" is what I'm interested in. Where it says  
6 "the first time that this has ever been done," do you  
7 remember what you were referring to by the word "this"?

8           A. I think in 2002 we were extremely short of  
9 water. And we did have two trained commissioners on  
10 the river. And we were just basically asking those  
11 people to be patient with the commissioners and  
12 understanding of the water shortage, is basically what  
13 I meant by that.

14           Q. Okay. Was this the first time that you had  
15 had water commissioners?

16           A. We had had water commissioners in 2000, 2001.  
17 But these guys were really intense that year. I  
18 believe, you know, we were -- intense is not the word.  
19 But we weren't taking any slack from anybody. It was  
20 going to be extremely short.

21           So we were basically asking -- it was  
22 probably poor wording by my count. Because I was  
23 asking people to be patient with these people, you  
24 know, with these two water commissioners.

25           Q. And then it goes on to say -- again, what I'm

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1 trying to do is I'm trying to get a better sense of how  
2 this actually operates. You say in the second sentence  
3 "To keep the use of water right water." So that's  
4 direct water rights. Is that what you're referring to  
5 there?

6 A. Which paragraph is that in?

7 Q. Well, let me restate the question. You have  
8 here, "To keep the use of water right water and  
9 contract water separated is going to be difficult and  
10 confusing because of the differences in flow rates of  
11 the river."

12 Could you explain what you meant by that?

13 A. The difference of flow rates, what I meant by  
14 that was, you know, as you went off your water right,  
15 your direct flow right, it was going to be a little  
16 confusing to get on to contract water. You know, we  
17 looked at the state line gauge, and we were -- it  
18 varies so much that it was -- you know, it could be up  
19 or down either way. A rain event could make it go up,  
20 and you may have a water right. Or it may turn hot and  
21 one day you have a water right and you don't have a  
22 water right the next day.

23 Q. Okay. That's helpful. And then the final  
24 sentence, it says "Water users that are leasing or  
25 letting others use their contract right." A moment ago

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1 I was talking about whether or not you could sell your  
2 shares. But this suggests that people in a particular  
3 year could lease some of their water?

4 A. There is some people on that river that had  
5 some water that they may not be using. I can think of  
6 two examples of -- Bill Musgrave at that time had sold  
7 most of his ranch. He had retired. He was no longer  
8 irrigating. Yet he kept his shares in the Tongue River  
9 Water Users' Association. He would let another water  
10 user use those things.

11 And there's another lady in Birney, Christine  
12 Valentine has a few shares. And she would also let  
13 somebody else use that water.

14 Q. And to the degree somebody leases or lets  
15 somebody use their water, it has to be somebody within  
16 the service area?

17 A. Yes, it does.

18 Q. Thanks. So in talking to Mr. Kaste, I  
19 believe you said that you try to deliver 50 CFS to  
20 Miles City?

21 A. Yes, that is in our operating plan. It's not  
22 set in stone. But in the operation plan, we try to  
23 have 50 CFS. And that services our water users and  
24 below it -- there, below the Miles City gauge.

25 Q. And I was trying to actually find the



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1 provision in the operating plan. Do you know whether  
2 it's explicitly in the operating plan?

3 A. What number is that exhibit?

4 Q. I have a copy of it here that I'd be happy to  
5 hand to the witness. I don't know whether you actually  
6 have it there. But I was hoping that if it is  
7 explicitly in there, you could help me find it.

8 And, in fact, if anyone else knows of a  
9 specific place, you could probably save a lot of time.  
10 I'm glad no one else is any faster than me finding it  
11 if it's explicitly there.

12 A. Your Honor, it may have been something that  
13 was discussed by the managers of the management  
14 committee. And 50 CFS would deliver water to the users  
15 below there and also provide some water for the  
16 fishery.

17 Q. And you tried to do that -- during what  
18 periods of time did you try to deliver the 50 CFS?

19 A. That is extreme drought. It's very difficult  
20 when you get that long a system, you know, 170 or  
21 90 miles to T & Y and some more. But it makes it very  
22 difficult -- it's a difficult river to manage. There  
23 are so many variables. But we did not like the flow to  
24 drop to 50 CFS at the Miles City gauge because that  
25 would let our water users below the gauge to have some

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1 access to water. I mean, it's very hard to pump when  
2 you got a flow of 5 CFS.

3 And you get dead fish rolling down river, you  
4 get a lot of -- lots of static from the public.

5 Q. So I think I just have one other question.  
6 Well, actually, let me ask you. I just have one other  
7 question in follow-up to that. First of all, do you  
8 know what agency in Montana is responsible for fish and  
9 wildlife?

10 A. Fish, Wildlife & Parks, Montana Fish,  
11 Wildlife & Parks.

12 Q. Okay. And other than dealing with that  
13 agency as an actual storage contract right holder, do  
14 you have to deal with them in connection with the  
15 operation of the dam?

16 A. Our operation plan developed by the  
17 committee, if we have excess water in the spring, we  
18 will try to release that water to aid the spawning of  
19 the sauger and sturgeon up the river.

20 Q. Other than that, is there any particular time  
21 when you have to consult with Fish and Game?

22 A. We consult with them on flows and water  
23 quality.

24 Q. Do you do that on a regular basis?

25 A. They usually are always invited to our

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1 manager's meetings.

2 Q. And they then suggest particular flow levels  
3 that they would like to see?

4 A. They will make that suggestion. You know,  
5 they will say that this flow will aid the spawning run  
6 or this flow will kill the fish in the river if it gets  
7 too hot or something.

8 Q. How often do you find in setting flows that  
9 the determinant of the flow is ultimately what's  
10 necessary to protect the fish?

11 A. Very seldom. I set the flows through to  
12 satisfy the irrigators.

13 Q. Okay. So just two other questions: In the  
14 years when water commissioners were appointed in the  
15 2000s, did you receive any complaints from anyone on  
16 the Montana side of the Tongue River border that the  
17 commissioners were not doing their job?

18 A. You know, a commissioner is not a good job.  
19 You always have complaints of somebody saying, yeah,  
20 he's letting somebody do something else. But in those  
21 years -- some of those years were worse than others.  
22 But most all the time now -- the first years were very  
23 tough. In the later years, people realize that the  
24 commissioner was the law, and they followed what he  
25 said.

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1 Q. So occasionally people would say to you,  
2 well, that commissioner needs to be tougher?

3 A. Needs to be tougher, or that commissioner is  
4 not doing his job correctly or something like that.  
5 But you find that with any kind of job. You know,  
6 there's never the perfect relationship with everybody.  
7 You know, the commissioner. And there's always going  
8 to be somebody that's mad. Let's put it that way.

9 Q. Based on your role as head of the  
10 association, did you believe that the commissioners  
11 were doing a good job during those years?

12 A. I think they were doing most all the time a  
13 very good job. I really -- I felt they were. They  
14 were trying to make sure that we used our water  
15 efficiently. And they were being able to deal with  
16 day-to-day problems that -- like if a rainstorm came  
17 through and somebody had made a call on their water at  
18 the lower end of the river and for some reason he could  
19 not get that -- was not prepared to irrigate because  
20 the rainstorm delayed him or something, they could work  
21 it out with the commissioners to exchange water with  
22 somebody else that could use that water.

23 Q. And if you received a complaint from somebody  
24 who thought one of the commissioners was not tough  
25 enough, did you have a formal process at that point for

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1 addressing that complaint?

2 A. You know, I never really received any of  
3 those complaints. I mean, there was a lot of them. I  
4 would just tell them, "The commissioner is the law; you  
5 have to do what he said," if I got one of those  
6 complaints. He was an employee of the court, not an  
7 employee of mine.

8 Q. Okay.

9 SPECIAL MASTER: Those are my questions.

10 Mr. Kaste.

11 RE CROSS-EXAMINATION

12 BY MR. KASTE:

13 Q. I just have a question about the water under  
14 contract for the Department of Fish, Wildlife & Parks.  
15 Do you know where they use that water?

16 A. That water was used at the fish hatchery in  
17 Miles City.

18 Q. So that's different than the instream flow;  
19 right? That -- I assume Fish, Wildlife & Parks holds  
20 that instream flow right too?

21 A. Yes, they do. But that is different. That  
22 is contract water for that fish hatchery.

23 Q. Okay. Thank you.

24 SPECIAL MASTER: Thank you.

25 So, Mr. Draper, redirect.

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1 MR. DRAPER: Thank you, Your Honor.

2 REDIRECT EXAMINATION

3 BY MR. DRAPER:

4 Q. Mr. Hayes.

5 A. Yes, Mr. Draper.

6 Q. You were directed by Mr. Kaste to Montana  
7 Demonstrative Exhibit No. 3, the set of two tables?

8 A. Yes, I was.

9 Q. He directed our attention to 2004 and 2005 on  
10 the last page showing flow rates out of the dam in  
11 those years of 2004 and 2005. Do you recall that?

12 A. Yes.

13 Q. And he pointed us to the figures in January  
14 and the following months, January through March or  
15 April, and questioned you about those flow values.

16 For the most part, those flow values are  
17 significantly below your, as you called it, I think,  
18 your ideal of 175 CFS rate; is that right?

19 A. Yes, sir, it is.

20 Q. Now, if we look at the second page of that  
21 same exhibit, which is the second page of Mr. Book's  
22 Table 4-A, and we look at those same months. This is  
23 end-of-month contents for the reservoir in 2004.

24 Look at 2004 to begin with. Do you see the  
25 values in that table, say, starting with January 2004

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1 of 45,780 acre-feet?

2 A. In 2004 in January? Yes. 45,780?

3 Q. Yes.

4 A. Yes.

5 Q. At that point, you were at your -- at or near  
6 your winter storage limit of 45,000 acre-feet; isn't  
7 that right?

8 A. Yes, that's true.

9 Q. So in addition to any other considerations  
10 you might have had, that was a very significant  
11 consideration; is that right?

12 A. It was in 2004. Yes, we were.

13 Q. And in 2005, in the same months, we're  
14 looking at figures that range January, 39,540 for  
15 end-of-month storage up to in March, 44,000 some odd;  
16 is that right?

17 A. 2005, yes, we were at 44,210.

18 Q. Which is essentially at your winter maximum;  
19 isn't that right?

20 A. That's correct, yes.

21 Q. And that would be a reason to not store any  
22 more water but to release so that you don't go above  
23 and get the water on the concrete; is that right?

24 A. Yes.

25 Q. And do you have an incentive to store just as

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1 much water as you can?

2 A. Yes, I do.

3 Q. Is that a strong incentive?

4 A. Very strong. We have to meet our contract  
5 obligations and the obligation of the tribe.

6 Q. Were you doing your best to manage the water  
7 supply and the storage at these times?

8 A. Could you repeat that, please?

9 Q. Were you doing your best --

10 A. Yes, I was. I made that decision on the  
11 information I had available to me at that time. And  
12 it's very easy to run a dam by hindsight, not  
13 foresight. I mean, you always make the decision on  
14 what data you have on that day. And I never -- I  
15 believe I've never made a bad decision on that.

16 Q. So there is something to the term "Monday  
17 morning quarterbacking" in this case?

18 A. If -- that is a very good way to put it.

19 Q. You were also asked by Mr. Kaste about  
20 whether there had been a call upstream of the dam. If  
21 users take water upstream of the dam, isn't that simply  
22 counted against their storage contract?

23 A. Yes, it is.

24 Q. You were also asked about whether you track  
25 whether water is being put on pre-'50 lands or post-'50



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1 lands. Do you recall that question?

2 A. Yes, I do.

3 Q. Do you have to distinguish between those with  
4 regard to where the storage water is placed?

5 A. No, I don't. The storage water can be used  
6 on any land in the service area.

7 Q. And what is the service area?

8 A. The service area is the entire basin from the  
9 Tongue River and 150 miles downstream.

10 Q. Downstream of --

11 A. Of the mouth of the Tongue River.

12 Q. Along the Yellowstone?

13 A. Yes.

14 Q. Also you were asked by the Special Master  
15 about whether you released water solely for fishery  
16 purposes. And I believe your answer was no; is that  
17 right?

18 A. Yes, it was.

19 Q. Let me direct your attention to the operating  
20 plan, Exhibit M316.

21 A. What was that number?

22 Q. 316, the operating plan for the reservoir.

23 If you turn to page A6, paragraph 12 on that page, this  
24 is page A6 in the center at the bottom. Paragraph 12  
25 is the last paragraph on that page. And does that

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1 address the considerations for fish purposes?

2 A. Yes, it does. The last sentence says, "The  
3 Advisory Committee may also consider additional  
4 reservoir releases for fish spawning or fish and  
5 wildlife enhancement when there is a surplus of water  
6 available above the requirements established in the  
7 compact."

8 Q. Does this paragraph also contain the  
9 statement a couple lines above what you just read  
10 saying, "This provision shall not create an operational  
11 preference for fish and wildlife purposes relative to  
12 other project purposes"?

13 A. Yes.

14 MR. DRAPER: I think that will do it, Your  
15 Honor.

16 SPECIAL MASTER: Thank you very much,  
17 Mr. Draper.

18 Mr. Hayes, you are excused.

19 THE WITNESS: Thank you, Your Honor.

20 SPECIAL MASTER: So are you finished haying  
21 for this year?

22 THE WITNESS: No. My third cutting is  
23 standing in the field, and I can't get in to get it.  
24 And it's been a very unusual wet September and October.  
25 And I think I will just have to turn my cows in on it

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1 and hope it doesn't kill them.

2 SPECIAL MASTER: Well, I hope next year is an  
3 even better year.

4 THE WITNESS: I do too.

5 MR. DRAPER: Your Honor, with your  
6 permission, we will call our next witness.

7 SPECIAL MASTER: You should feel free to do  
8 that.

9 MR. DRAPER: We call to the stand Mr. Gordon  
10 Aycock.

11 (Gordon Aycock sworn.)

12 THE CLERK: Please have a seat. State your  
13 name and spell it for the court reporter.

14 THE WITNESS: My name is Gordon Aycock.  
15 That's G-o-r-d-o-n A-y-c-o-c-k.

16 MR. DRAPER: Your Honor, in keeping with  
17 informing you of the purpose of the upcoming testimony,  
18 I wanted to mention that Mr. Aycock is an expert who  
19 submitted an expert report in this case. He's an  
20 expert in dam and reservoir operations and accounting  
21 and is responding in his testimony to Mr. Hinckley's  
22 expert report and addressing related issues with  
23 respect to the operation of Tongue River Reservoir.

24 SPECIAL MASTER: Okay. Thank you.

25

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1 GORDON AYCOCK,  
2 having been first duly sworn, testified as follows:

3 DIRECT EXAMINATION

4 BY MR. DRAPER:

5 Q. Mr. Aycock, for the record, please state your  
6 address.

7 A. 2227 East Echo, Billings, Montana 59105.

8 Q. Briefly, what is your educational background?

9 A. I graduated from Utah State University in  
10 1971 with a BS degree in mechanical engineering. Just  
11 before I graduated, I had worked for about six months  
12 for the Bureau of Reclamation on a study that they were  
13 conducting in my hometown.

14 I enjoyed the work, and so I returned to  
15 school, graduated, and then enrolled in graduate school  
16 in water resource engineering, completed two quarters  
17 of the graduate studies at Utah State University. Then  
18 I was offered a job with the Bureau of Reclamation in  
19 Great Falls, Montana.

20 So I was out of money and accepted the job.  
21 I was able to continue some graduate studies through an  
22 extension program with Colorado State. And all  
23 together, I completed about 60 hours of graduate  
24 studies. But because of the distance involved, it  
25 wasn't practical to complete my master's degree.

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1 Q. What was your professional experience after  
2 completing your undergraduate degree?

3 A. I started in the hydrology branch in Great  
4 Falls, which was under the division of Planning. At  
5 that time we were still involved in researching or  
6 investigating a lot of new projects, both dams and  
7 reservoirs and irrigation projects. So I participated  
8 a lot in that, reviewing sites for reservoirs and the  
9 water supply hydrology for that basin that would supply  
10 that reservoir.

11 Got to do quite a bit of field work 'cause it  
12 was a small project office. So spent about half my  
13 time out in the field and half the time in the office.

14 In 1973, we had a rather severe drought on  
15 the Sun River and a lot of the surrounding basins. And  
16 so I got my first exposure to water rights. I was  
17 asked to go out there, as a senior water right holder.  
18 On the Sun River we have about a hundred-thousand-acre  
19 project. It's one of the larger irrigation projects.  
20 Three reservoirs that serve that project.

21 This was a private irrigator that was in  
22 between a couple of our reservoirs. And he didn't  
23 believe he was receiving adequate water. So I went out  
24 and measured his canal and measured the river. And the  
25 river was -- and he was diverting essentially the

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1 entire river. And I remember there was a little pool  
2 of water puddle there, about half a dozen nice size  
3 trout. So, you know, it made me aware of the type of  
4 water problems that irrigators were faced with and the  
5 cooperation that has to go on between irrigators.

6 Two years later, we had an extreme flood on  
7 the Sun River. And I was in a plane flying over that  
8 basin investigating the damages. All of the west side  
9 of Great Falls was flooded at Sun River where it enters  
10 the Missouri right there at Great Falls. And so we  
11 lost all our canals -- not canals, but the diversion  
12 dam and good portion of the canals as that flood  
13 occurred. So they weren't able to irrigate until  
14 almost halfway through the summer until they get those  
15 repairs made.

16 And then two years after that, in '77, we had  
17 another extreme drought that affected the whole western  
18 United States.

19 So a few years I worked starting out, I  
20 really got an eye opener to the type of variation you  
21 have in water supply and a very good experience. At  
22 the end of '75, I transferred down to the Billings  
23 office. We closed that Great Falls office to save  
24 funds.

25 Q. And what position did you take with the

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1 Bureau of Reclamation when you moved?

2 A. I transferred down -- I was still in the  
3 planning group, but I had gained an interest in  
4 reservoir operation after that '75 flood. So I applied  
5 for a position in what was called the Reservoir  
6 Regulation Branch. And I got that job.

7 Q. And what were your duties in that position?

8 A. In that position, we had 25 reservoirs that  
9 we were responsible for operations, either directly or  
10 oversight responsibilities. Our region at the time was  
11 called the Upper Missouri region. And it included  
12 Montana -- most of Montana. It was everything from the  
13 east side of the Divide that was in the Upper Missouri  
14 River. So it was a portion of Montana and about half  
15 of Wyoming and North and South Dakota.

16 Q. And what kind of responsibilities, with  
17 respect to the operation of these 25 reservoirs, did  
18 you have?

19 A. We were responsible for essentially  
20 everything related to the operation. We prepared the  
21 runoff forecast for those reservoirs. We prepared  
22 operating plans, which we did on at least a monthly  
23 basis, where we'd project operations for the future  
24 year. And we would then schedule releases, work with  
25 each of the dams and establish release patterns, either

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1 to meet water use needs or provide flows through the  
2 winter season.

3 We had a number of power plants that we  
4 operated at those dams that we scheduled the power  
5 generation and coordinated that with the power users.

6 Q. And did you have to make determinations in  
7 that process with respect to how much to retain in  
8 reservoirs, how much to release at various points  
9 during the irrigation season and nonirrigation season?

10 A. Yes, we did that, you know, sometimes on a  
11 daily basis, sometimes on a monthly basis, just  
12 depending on how often a change was needed. We worked  
13 very closely with our irrigation districts. And we  
14 coordinated operations with other reservoirs that were  
15 within that river system.

16 Q. Now, that set of responsibilities related to  
17 areas of the states of Montana, Wyoming, and North and  
18 South Dakota. Did you change from that position to  
19 other positions at the bureau?

20 A. In 1981, I became the branch chief of that  
21 branch. And then in the mid-'80s we consolidated  
22 regions, so we combined the Upper Missouri region with  
23 the Lower Missouri region. And that included the rest  
24 of Wyoming, a good portion of Colorado and Nebraska and  
25 Kansas. So I continued in that work.



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1           We still operated those reservoirs in the  
2 Upper Missouri region, but I took over the oversight  
3 and responsibility for the rest of that new part of the  
4 region.

5           Q.     So your responsibilities were expanded from  
6 25 reservoirs to more than that?

7           A.     Yeah, at least double that. Right about  
8 double that many reservoirs. But it wasn't the direct  
9 daily responsibility I had in the Upper Missouri  
10 portion of the region.

11          Q.     What kind of decisions -- what kind of  
12 analysis was required with that wider responsibility?

13          A.     We did a number of studies. We did flood  
14 routing studies. We conducted what we called depletion  
15 studies, and that's kind of our broad use of that term  
16 where we would -- any time you're operating a system,  
17 you're reviewing the history of the flows that occur.  
18 It's based on statistics. You're looking back on  
19 what's happened in the past, and you're projecting the  
20 future will look something like the past.

21                 But as time goes on, the basin changes.  
22 You've got new development occurring that is  
23 depleting -- further depleting the water supply.  
24 Sometimes you have natural events, like a fire, that  
25 will change the runoff pattern. And so on an annual

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1 basis we'd update what we called a depletion study,  
2 where we look at how new projects were going to come  
3 online. And this is back when we had a lot of projects  
4 planned and we were aggressively looking at  
5 constructing those.

6 But we'd look at our projects and then state  
7 projects and other private projects that might come  
8 online. And we'd factor that into the flows. So come  
9 up with a new set of hydrology in the sense for flow  
10 patterns that would occur in the future and use those  
11 in planning our operations. And then we'd look at the  
12 reservoir impacts upstream, how those would impact our  
13 operations, what we call the reservoir holdouts.

14 And we did that study and provided that  
15 information to the Corps of Engineers to assist them in  
16 their management of the main stem system, which is six  
17 large reservoirs, starting with Fort Peck and goes on  
18 down to Gavins Point, where the Missouri drops into the  
19 Mississippi.

20 So it was a major undertaking to look at that  
21 entire basin and come up with those records.

22 Q. And those are some pretty big reservoirs in  
23 that system; isn't that right?

24 A. Very large. In the 18 to 20 million  
25 acre-feet capacity. Fort Peck, Garrison, Owyhee, those

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1 three are all fairly equal size.

2 Q. And by depletion studies, are you referring  
3 to planning studies where the Bureau would determine  
4 whether a project would be viable by predicting those  
5 depletions upstream, a particular site might be  
6 expected upstream of a possible project?

7 A. No. These depletions studies were to examine  
8 the basin and adjust the flows to a future level of  
9 flow. You take the historical flow and you adjust it  
10 to a present day level flow. So you got a history of,  
11 say, 50 years or whatever that history would be. And  
12 as time has gone on, you can't look back 50 years and  
13 say, well, the flow that occurred that year with a  
14 certain amount of precip is going to occur the same  
15 today, because there's new development in the basin.

16 So what you do is you adjust that record of  
17 flow to -- if you were looking today, it would be a  
18 2013 level of flow. And this is what you would  
19 expect -- anticipate to be the flows under different  
20 climate conditions into the future.

21 And then as you move into the future, if you  
22 want to go down the road another ten years, then you  
23 look at what is going to be developed over the next ten  
24 years and what will the level of flow be in 2023 and  
25 what will the level of flow be in 2033. So, I mean,

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1 you have to do that to see how are these projects going  
2 to operate today? How are they going to operate in the  
3 future? What changes do we need to anticipate in how  
4 we operate under those different conditions?

5 Q. So those kinds of studies would affect how  
6 you adjusted actual operations of existing --

7 A. That would affect how we adjusted operations.  
8 It would affect what we anticipated for benefits under  
9 our power generation. And that was a big part of the  
10 income revenue that we'd expect to provide repayment of  
11 the project. So we would factor that all in and  
12 provide that data to our finance people, our economist,  
13 and they would look at what kind of power -- actually  
14 determine what kind of power rate to set for the sale  
15 of that energy so you could recover the cost.

16 Q. And how long did you exercise those  
17 particular functions?

18 A. Well, I never really quit doing that. But in  
19 the -- around 1990, the mid-1990s, we reorganized our  
20 offices, and we established what we called state area  
21 offices. And at that time, we made a decision that we  
22 should move the reservoir regulation, the daily  
23 reservoir regulation out to those state offices.

24 So at that time, I became -- or about that  
25 time I became a technical specialist in reservoir

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1 operation and water rights and oversaw the operations  
2 for the full region, provided there.

3 Q. What were your responsibilities as a  
4 technical specialist for reservoir operations and water  
5 rights?

6 A. For both?

7 Q. Well, for reservoir operations to begin with.

8 A. Well, it was similar to what I had been  
9 doing. But it was more on a -- when there was a  
10 significant problem someplace, I would work with the  
11 area offices and assist them in any studies that they  
12 needed help with that they, you know, took a bigger  
13 amount of time. We would do that in the regional  
14 office. If there was a drought or a flood, then we'd  
15 assist them with that operation.

16 An example, in 2010, 2011, there was a major  
17 flooding in North and South Dakota. So I worked with  
18 the National Weather Service, who provided a lot of the  
19 river forecasting and monitoring for those floods, and  
20 with the Corps of Engineers and our area office. And  
21 we did flood routings. We determined when flows were  
22 going to hit a certain point, how full a reservoir  
23 would get, or how much water would be discharged from a  
24 reservoir. So those flood routings would determine  
25 whether the -- especially there's a dam over in

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1 Jamestown, North Dakota, that's right at the edge of  
2 the city.

3           As that dam filled and spilled, it can cause  
4 a lot of damage through the city. So we regulated that  
5 to mitigate the damage and to also keep the city  
6 advised of when flows were going to hit a certain point  
7 and actually gave them time to build additional dikes  
8 and sandbag areas to protect their structures.

9           Q. Now, did you have separate functions as a  
10 specialist for water rights for the regions?

11           A. Well, the water rights kind of went  
12 hand-in-hand with the reservoir regulation. When we're  
13 releasing water to serve users downstream, you're  
14 looking at both natural flow -- you have to pass the  
15 natural flow for their water right, and then you're  
16 supplementing their natural flows with stored water.  
17 And on some of our systems, we had exchange agreements  
18 where we'd allow people upstream to take natural flow  
19 that they would normally have to allow to bypass their  
20 diversion point.

21           So that flow would go down to a senior right.  
22 It would be short if they took the water. But if a  
23 reservoir was in between a junior user and a senior  
24 user, we could work out an exchange contract where they  
25 could take a natural flow. And then we would release

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1 stored water to make up for the shortage to the senior  
2 user.

3           So the senior user would be receiving the  
4 stored water, but the junior user would pay for that,  
5 which would allow him to use a natural flow. So there  
6 was quite a few of those that at sometimes would get a  
7 little complicated in carrying out. But you had to do  
8 quite a bit of accounting and understand the water  
9 rights on the river.

10           But the full responsibility for water rights  
11 was to file for the rights that reclamation needed to  
12 work with the states to get those water rights  
13 adjudicated, you know, to show that the water had been  
14 put to beneficial use and was being used as it had been  
15 permitted, and then also to protect the rights against  
16 other users, junior users that might come along.

17           Q. Do the reclamation reservoir projects  
18 typically obtain state water rights to support their  
19 storage and use of water?

20           A. Yeah, under what we call reclamation Law. I  
21 think Section 8 of the reclamation law, reclamation is  
22 required to obtain its rights as a state-based right.  
23 So we're on the same priority and same system as any  
24 other water user within the state.

25           Q. But like other storage facilities that are

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1 nonbureau facilities, such as private reservoirs, you  
2 had to deal with state engineers and state water rights  
3 officials also?

4 A. We had to deal, just like anybody else, with  
5 the administrations of those rights, obtaining the  
6 rights, objecting to other users to protect our rights.

7 Q. Did your work require a coordinated effort  
8 with the operation of other reservoirs or reservoir  
9 systems?

10 A. Yes. We monitored other reservoirs that were  
11 above us because that was an important part of  
12 determining what kind of inflows we were going to have  
13 in the future if we were going to store some of that  
14 water. So we'd build that into our forecasting  
15 procedures.

16 On the Missouri River and down around Helena  
17 and Great Falls, there was some very early dams that  
18 were built back in the 1800s. Some of them started  
19 back in the 1800s for hydroelectric generation. These  
20 dams later became property of Montana Power Company,  
21 and now they are owned by Pennsylvania Power and Light.

22 But this was a system of reservoirs. Some of  
23 the reservoirs are actually located higher up in the  
24 river basin on the Madison. So Canyon Ferry Reservoir,  
25 which is our largest reservoir, is about a 2 million



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1 acre-feet capacity reservoir. That reservoir was  
2 constructed for power generation, flood control, and  
3 irrigation. Multipurpose reservoir. Industrial water,  
4 municipal water. Some of the water from Canyon Ferry  
5 services the city of Helena for municipal supply.

6 But we worked out a coordination agreement  
7 with the power company, Montana Power Company where we  
8 would operate the reservoirs more as a system to try to  
9 maximize the benefits of power generation. We also --  
10 there was an old reservoir there that Canyon Ferry  
11 inundated. It was the Montana Power Company's  
12 reservoir. So they actually had a water right within  
13 our reservoir.

14 But that was -- required daily discussions  
15 with the power company and determining how we moved  
16 water from one reservoir to the next and, you know, see  
17 what they were planning to do and work that into our  
18 plans.

19 And the other thing was there was -- all this  
20 gets maybe more than you want to hear. But there's  
21 headwater benefit that's provided by Canyon Ferry. So  
22 there was a headwater benefit accounting. And what  
23 that is is Canyon Ferry provides a benefit to the  
24 Montana Power, power plants, increases their  
25 generations. So we would calculate that each year.

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1 And they would bill the power company, and they'd pay  
2 us for that benefit.

3 Q. Speaking of involvement with Montana  
4 facilities, did you have any involvement with the  
5 operation of Tongue River Reservoir?

6 A. I didn't have anything, any direct  
7 involvement, but that was a tributary reservoir to the  
8 Yellowstone River. And our Big Horn Lake, Yellowtail  
9 Dam facility is located on the Big Horn River at the  
10 Montana/Wyoming state line. So when we made releases  
11 from Big Horn Lake, those releases would move on down  
12 into the Yellowstone and past Miles City.

13 And if there was -- we frequently dealt with  
14 the emergency management people down around Miles City  
15 and Forsyth, on ice problems in the winter, ice jams.  
16 And to help with that, we would monitor what was  
17 occurring on the Tongue and water release from the  
18 Tongue River Reservoir so we could see how much water  
19 was in the system. And if we could make changes that  
20 might assist in flooding due to ice jams, we would  
21 schedule that in conjunction with what was happening on  
22 the other tributaries.

23 In the spring that was especially important  
24 because you would have the tributary peak flows  
25 entering the Yellowstone and you'd want to time the

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1 releases out of Yellowtail so our peak release did not  
2 hit at the same time these peaks were coming down the  
3 tributaries and the upstream on the Yellowstone.

4           So that requires a daily flow routing model.  
5 That would take that all into account.

6           Q.    What type of studies or investigations did  
7 you conduct related to reservoir operations during your  
8 time at the Bureau?

9           A.    Can you repeat that?

10          Q.    What type of studies or investigations did  
11 you conduct related to reservoir operations during your  
12 time at the Bureau?

13          A.    I think I talked about that some already.  
14 But the depletion studies I mentioned. There was the  
15 flood routing studies.

16          Q.    Okay.

17          A.    The forecasting, water use studies.

18          Q.    Did those studies require an analysis of  
19 irrigation return flows?

20          A.    The depletion studies did. They took into  
21 account the diversions and the returns from irrigation  
22 projects and other type of use. Basically the  
23 difference between those two, between the diversion and  
24 the return is your depletion to the river.

25                So we looked at -- diversions were fairly

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1 easy to estimate. Returns were more difficult. Some  
2 of that return occurs directly down waste-aways, but a  
3 lot of it returns through the groundwater. And if it  
4 comes in the groundwaters, it can be delayed by several  
5 months.

6 Q. And those are secretions from the groundwater  
7 system that come back in from irrigation?

8 A. Right. Your canals will recharge groundwater  
9 to a considerable degree, depending on how well they  
10 are lined or not lined. Irrigation of the crop itself  
11 will provide some groundwater recharge if it's --  
12 especially if it's a flood system.

13 Q. In discharging your duties at the Bureau of  
14 Reclamation, were you ever involved with interstate  
15 compacts or decrees or --

16 A. Yeah, we had a number of -- or we have a  
17 number of compacts in the area. I guess I should  
18 mention that after we combined with the lower Missouri  
19 region, we combined again. Reclamation was going  
20 through a lot of consolidation and reducing its  
21 workforce. So we combined again with what we call the  
22 southwest region. And that brought in Texas and  
23 Oklahoma into our region. So we had nine states that  
24 went from the Canadian border all the way to the Gulf  
25 Coast.

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1           So there's a lot of compacts and decrees and  
2 even a couple of international treaties that we dealt  
3 with. On the Milk River we have a 1909 boundary water  
4 treaty that divides the water between Canada and the  
5 United States.

6           And our Milk River project, we divert water  
7 from the St. Mary's into the Milk. And St. Mary's is a  
8 river that starts at Glacier Park and flows into  
9 Canada.

10           So we did daily accounting on the water that  
11 we stored in our Sherburne Reservoir: How much we  
12 stored, how much we stock into our canal to transport  
13 into the Milk. And that was a pretty strict  
14 accounting. If you got behind over a two-week period,  
15 then you had two weeks to make up the deficit.

16           And then we had the North Platte decree, the  
17 Belle Fourche decree, Yellowstone -- or the Belle  
18 Fourche Compact and Yellowstone Compact, Arkansas,  
19 Republican.

20           Q.    So you were also involved in the Arkansas  
21 River Compact issues and the Republican River Compact  
22 issues?

23           A.    Yes, I was involved -- also involved in the  
24 litigation on those two compacts, worked with our  
25 Solicitor's Office and Department of Justice.

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1 Q. Were you involved with any Native American  
2 reserved water rights?

3 A. Yes. There's a lot of Indian reservations  
4 within the region. In Montana, Montana in early '80s  
5 began -- actually, I think it was started in the '70s,  
6 but they started a statewide adjudication. And one of  
7 the goals of that adjudication was to adjudicate the  
8 Indian reserve water rights. So they did that through  
9 negotiations.

10 And teams were set up by -- worked on the  
11 Crow Compact to a great degree. Fort Belknap,  
12 Flathead, which was really outside of our region, but I  
13 was on that team.

14 In Wyoming, Wyoming started the Big Horn  
15 adjudication through a lawsuit which involved the  
16 tribe, the Wind River Tribe, the Shoshone Arapaho  
17 Tribes. So I was involved working with our legal  
18 people on that case. We both -- we had projects that  
19 we were adjudicating the water rights, but we also had  
20 some trust responsibility for the Shoshone Arapaho  
21 Tribes.

22 MR. DRAPER: Your Honor, I would offer  
23 Mr. Aycock as an expert in the areas of dam and river  
24 operations and related management and accounting.

25 SPECIAL MASTER: Mr. Kaste?

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1 MR. KASTE: No objection.

2 SPECIAL MASTER: So Mr. Aycock, then, can  
3 testify to the areas of his expertise.

4 MR. DRAPER: Thank you, Your Honor.

5 BY MR. DRAPER:

6 Q. Mr. Aycock, have you prepared an expert  
7 report in this case designated as Exhibit M7?

8 A. Yes, I did.

9 Q. And does that contain your opinions and the  
10 grounds therefor in response to Mr. Hinckley's expert  
11 analysis and related subjects?

12 A. Yes, it does.

13 Q. What were you asked to do specifically in  
14 your expert analysis?

15 A. I was asked to review the operation of the  
16 Tongue River Reservoir and then to review  
17 Mr. Hinckley's rebuttal report and provide comments on  
18 both of those issues.

19 Q. I'd like to turn our attention, first, to  
20 page 5 of your report. Do you consider, on page 5 of  
21 your report, the question of the capacity of Tongue  
22 River Reservoir and how that has been quantified over  
23 the years since the construction of the reservoir?

24 A. Yes. The documents I reviewed initially  
25 indicated the capacity was 69,400 acre-feet. I had

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1 asked a couple of times if the reservoir had been  
2 resurveyed. And no one seemed to have an answer to  
3 that. So I thought it had gone a long period of time  
4 from 1939 to 1995, when it was modified, without a  
5 resurvey.

6 And in researching the documents towards the  
7 time that I was about to finish my report, I found a  
8 reference to a different capacity in a 1968 report -- I  
9 think it was titled "Allocation of Water for the Tongue  
10 River," prepared for the State of Montana. And in that  
11 report, it shows the capacity to be 72,500.

12 Q. And did you indicate that discovery on page 5  
13 of your expert report?

14 A. Can you repeat that?

15 Q. Did you indicate -- did you include a  
16 reference in the footnote on page 5 to the new value  
17 that you had determined for -- or tentatively  
18 determined for Tongue River Reservoir, its original  
19 capacity?

20 A. Yes. Footnote 2. At the bottom, there is a  
21 footnote.

22 Q. And did you have an opportunity to further  
23 investigate that issue prior to the time of your  
24 deposition in this case?

25 A. Yeah. As I stated in my deposition, I wanted



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1 to get over to our office here in Billings because we  
2 have a fairly large library, a lot of old documents on  
3 different projects that we've investigated. I wanted  
4 to do that before this report was issued. But our  
5 office had been located in the old federal building  
6 that's just across the street from the new courthouse.

7 And they were in the process of moving at  
8 that time. So everything was boxed up. There was no  
9 way to review those records until they had settled into  
10 their new quarters.

11 So in July, around the middle of July, I went  
12 over to our office and went through the documents they  
13 had on the shelves for Tongue River, and I found a  
14 number of recognizance studies that were done in the  
15 early '40s and then, in 1949, a report that was dated  
16 1949 that was titled the sedimentation survey report  
17 for Tongue River Reservoir.

18 Q. Are the documents you're referring to  
19 excerpted in what's been marked as Exhibit M557 in this  
20 case?

21 A. 557? Yes, I believe they are.

22 Q. Do you have a copy of that at the stand?

23 A. I do.

24 Q. Beginning at the first page of that -- well,  
25 just generally, first, can you describe what is

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1 contained in this exhibit?

2 A. This is Reconnaissance Report Tongue River  
3 Basin, Montana.

4 Q. And I'd like to ask you to describe the  
5 entire exhibit right now. Before we get into the first  
6 excerpt of the exhibit, let me be a little more  
7 specific.

8 Are these excerpts of Bureau of Reclamation  
9 studies or other studies that are kept in the records  
10 of the Bureau of Reclamation as part of their standard  
11 record keeping?

12 A. Yes, they are.

13 Q. And did you find these records in that  
14 collection at the U.S. Bureau of Reclamation?

15 A. I did. They were all on the same bookcase,  
16 bookshelf. As they had them all organized together.

17 Q. Are the documents found in that section of  
18 the records of the Bureau of Reclamation, are they, in  
19 your opinion, accurate records of the documents that  
20 are kept by the Bureau of Reclamation?

21 A. These documents that I found appear to be  
22 original copies of the reports that were probably --  
23 you know, they made several copies. Like the first  
24 one, 1941, so that would have been the report that was  
25 actually issued that year.

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1 Q. So the actual original, it's not just copies  
2 of the reports, are in that collection?

3 A. Yes, they are.

4 Q. And does this exhibit consist of copies taken  
5 from those varied originals?

6 A. This consisted of -- I copied what I thought  
7 was important to this issue, on that day.

8 Q. Thank you.

9 MR. DRAPER: Your Honor, we would offer  
10 Exhibit M557.

11 MR. KASTE: I'm going to object that they're  
12 incomplete. What he thought was relevant and we might  
13 think are relevant are probably two different things.  
14 And as far as I know, the complete works have not been  
15 provided to the State of Wyoming.

16 SPECIAL MASTER: So let me ask a couple of  
17 questions: So where are these documents now? The  
18 originals.

19 THE WITNESS: They are about four or five  
20 blocks from here down in the -- what's called the DOI  
21 building on 4th Avenue.

22 SPECIAL MASTER: And how many separate  
23 documents are found in here?

24 THE WITNESS: I believe there's four.

25 SPECIAL MASTER: And do you have any idea how

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1 long each of those documents is? Not exactly, but I'm  
2 just wondering is each like 500 pages long?

3 THE WITNESS: No, they're fairly -- oh, maybe  
4 30, 40 pages a piece. They cover -- you know, they're  
5 looking at -- a lot of these early ones are looking at  
6 the entire Tongue River Basin. So there was only a  
7 limited amount of material in there related to the  
8 Tongue River Reservoir.

9 SPECIAL MASTER: Can these items be checked  
10 out?

11 THE WITNESS: Well, I tried that. I don't --  
12 I tried checking one out, and they suggested I do it  
13 for you. So I did do it for you for the main survey  
14 document. And we have an original copy. They were  
15 going to surplus -- they had two copies and they were  
16 going to surplus one. So I have the full copy of that  
17 document.

18 The other ones would probably have to -- I  
19 mean, I can ask and say that you're looking for them.  
20 Maybe that would allow me to check it out.

21 MR. DRAPER: Your Honor, if you'd like, I'd  
22 be happy to work with Mr. Aycock to see if we couldn't  
23 check those documents out and have them available for  
24 Mr. Kaste and anyone else to review.

25 SPECIAL MASTER: So what I'd like to do --

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1 I'm going to permit Mr. Draper to ask questions with  
2 respect to the documents that are right now part of  
3 M557, but I would request that we gain access to the  
4 full, original copies of these documents or a copy of  
5 the original for Mr. Kaste and the State of Wyoming.

6 My hope would be that we could get those by  
7 sometime on Friday morning. But I realize -- I mean  
8 Monday morning.

9 THE WITNESS: No, sir.

10 SPECIAL MASTER: But I realize that that  
11 might very well be difficult. So I would suggest that  
12 you can go ahead, question the witness with respect to  
13 what's in Exhibit M557; that once we get the originals  
14 or copies of the originals, that Mr. Kaste can  
15 supplement those to whatever degree is necessary. And  
16 we will even take this out of the exhibits and  
17 substitute in the full versions or whatever pages you  
18 want from those.

19 Furthermore, realizing that this might not  
20 happen until Monday morning, furthermore, if they are  
21 really a lot of pages, it's a lot to ask Mr. Kaste to  
22 be able to review all of those before Mr. Aycock might  
23 step down from the stand, that we will permit Mr. Kaste  
24 at any point to recall Mr. Aycock in order to ask any  
25 questions that he has with respect to the longer

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1 documents.

2           Would that be fine with you, Mr. Kaste?

3           MR. KASTE: That would be great. I may not  
4 have any questions.

5           SPECIAL MASTER: I realize that. But I want  
6 to make sure that you have an opportunity to actually  
7 look at those full documents, determine whether you  
8 have any questions, whether you want the Exhibit M557  
9 to be supplemented with those particular pages. And I  
10 don't want to force you to do that in half an hour on  
11 Monday morning when you're also trying to figure out  
12 what questions you want to ask Mr. Aycock on  
13 cross-examination based on the direct examination.

14           So is that okay with you, Mr. Draper?

15           MR. DRAPER: Yes, this is fine, Your Honor.  
16 I would mention that I -- with Mr. Aycock's help, I  
17 have obtained a complete copy of the final document in  
18 this collection, which is, as he will testify, the  
19 important document. Some of these are just for  
20 historical, to see how that process of estimating the  
21 size of the reservoir developed.

22           But the definitive study is this one. And I  
23 did request that we have one available for inspection.  
24 So we do have that one.

25           SPECIAL MASTER: So did you obtain that from

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1 a library other than the Bureau of Reclamation's  
2 library?

3 MR. DRAPER: No, the one that's four or five  
4 blocks from here.

5 SPECIAL MASTER: So given that you had to  
6 FOIA the initial documents, how did you get your hands  
7 on that.

8 MR. DRAPER: This was the result of the FOIA  
9 request.

10 SPECIAL MASTER: So they actually let you  
11 take it out. So what I would suggest is if you can  
12 give that to Mr. Kaste so that when we finish up today,  
13 if you don't need it this weekend, it would be great to  
14 let Mr. Kaste have the weekend to take a look at that.  
15 It will still be the various other documents, but I  
16 want to make sure by the time you have your  
17 cross-examination, you can have as much access as  
18 possible to the full documents.

19 MR. DRAPER: That will be fine. We'd just  
20 ask that Mr. Kaste be very careful since this is one of  
21 the originals.

22 MR. KASTE: I'm tempted to say I don't want  
23 it. Bring me a copy.

24 SPECIAL MASTER: I'll let the two of you work  
25 that out. But the bottom line is, the sooner you can

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1 provide Mr. Kaste access to any of these documents, the  
2 better from my perspective.

3           So at the moment, I'm going to admit, on a  
4 tentative basis, Exhibit M557 into evidence,  
5 recognizing that before we actually admit the document  
6 in formally, we will actually supplement it with  
7 whatever pages Mr. Kaste and the State of Wyoming want  
8 to include in this particular exhibit.

9           But at the moment, since we can actually  
10 reference specific page numbers, then I don't see any  
11 reason not to at least tentatively permit you to ask  
12 Mr. Aycock questions about this.

13           I wonder whether or not it would also be  
14 useful since this, again, contains four different  
15 documents, if on Monday morning we can  
16 actually separately label those 557A through 557D so  
17 that we would actually have, again, those four separate  
18 documents.

19           And, again, at the moment, if you want to  
20 continue asking Mr. Aycock questions about this  
21 document this afternoon, you can just refer to the ones  
22 individually. And I think we'll be able to actually  
23 have the record fairly clear on that.

24           MR. DRAPER: Very good, Your Honor.

25           SPECIAL MASTER: Okay.



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1 MR. DRAPER: Thank you.

2 SPECIAL MASTER: And, Susan, is that clear to  
3 you?

4 THE CLERK: I think I've got it. I didn't  
5 put reserved. I put admitted for the purpose of this  
6 witness with the entire exhibit to be provided.

7 SPECIAL MASTER: I think that's fine. But  
8 the other thing I'd ask, just so we have a clear  
9 record, is that at some point, Mr. Draper, once you've  
10 determined from Mr. Kaste what additional pages need to  
11 be included in order to have this a complete exhibit  
12 satisfactory to the State of Wyoming, if at that point  
13 you could move to actually have it formally introduced  
14 in whatever, at that point in time, is its entirety.

15 MR. DRAPER: Very good, Your Honor. I'll do  
16 that.

17 SPECIAL MASTER: I'll try to remind you. But  
18 if not, I want to make sure someone actually does make  
19 that motion at some point.

20 MR. DRAPER: Very good. Thank you. So with  
21 that, I will resume my questioning of Mr. Aycock.

22 SPECIAL MASTER: That's fine.

23 MR. DRAPER: Thank you.

24 BY MR. DRAPER:

25 Q. Mr. Aycock, the first document, which we will

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1 be labeling 557A, has a cover title of "Reconnaissance  
2 Report on Tongue River Gravity Project Montana Region  
3 6" and a date of May 1944; is that right?

4 A. Well, I've got mine in chronological order.  
5 So I have to look and see which one that is. Yes.  
6 That's a 1944 report?

7 SPECIAL MASTER: It looks, Mr. Draper, as if  
8 you've assembled these already in chronological order?

9 MR. DRAPER: I don't believe that they are in  
10 chronological order here.

11 SPECIAL MASTER: The first three look to me  
12 as if they were. So there's a May 1941. Maybe it's  
13 worthwhile to make clear we know which document. I  
14 see, there is one out of order. Okay. But just to be  
15 clear, there's the three documents that are the  
16 May 1944, February 1942, July 1941, and then  
17 August 1949?

18 MR. DRAPER: I believe that's correct. And I  
19 will ask the witness to confirm that.

20 THE WITNESS: Yes, that's correct.

21 SPECIAL MASTER: Okay. So sorry for the  
22 interruption.

23 MR. DRAPER: No problem at all.

24 And I think it's probably best for simplicity  
25 to keep them in the same order that they are in the

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1 exhibit as we see them now, even though it's not strict  
2 chronological order. And if I may, Your Honor, I'd  
3 like to give the witness a copy of the exhibit so that  
4 he's looking at exactly the same set.

5 BY MR. DRAPER:

6 Q. Mr. Aycock, looking at the document whose  
7 title page has the exhibit sticker on it, the one dated  
8 May 1944, what is that?

9 A. This is what we call a reconnaissance report  
10 on Tongue River Reservoir gravity project. What that  
11 is is a planning document. It's kind of a first level  
12 investigation of potential new irrigation projects in  
13 the Tongue River. That's dated May of 1944.

14 Q. And what does it contain that is relevant to  
15 your determination of the capacity of Tongue River  
16 Reservoir?

17 A. On page 3 under the heading "Water supply,"  
18 second sentence reads: "The reservoir impounds 74,000  
19 acre-feet of water." So it describes the capacity of  
20 the reservoir as they knew it in 1944. And I think  
21 there's another reference to that on page 4, the first  
22 full sentence there, "The total capacity of the  
23 reservoir is 74,000 acre-feet." It goes on to explain  
24 how the cost per acre-feet was calculated for that.

25 Q. And --

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1 A. That would be borne by the project.

2 Q. What does this show with respect to the  
3 ultimate determination of the capacity?

4 A. Well, to me it showed that as of 1944, they  
5 believed the storage capacity would be approximately  
6 74,000 acre-feet.

7 Q. And did that turn out to be correct?

8 A. Well, I think in '49, when they did an  
9 extensive resurvey, they found it was a little less  
10 than that.

11 Q. Turning to the next document in the exhibit,  
12 we'll be applying the letter B to this one, is a report  
13 dated March 1943. And, again, I believe you have  
14 excerpts of that report; is that right?

15 A. Yes, I do.

16 Q. And what did this report contain that was of  
17 interest with respect to the determination of the  
18 correct size of the reservoir?

19 A. On page A it states, "Tongue River Reservoir  
20 is located on the Tongue River just below the  
21 Montana/Wyoming state line. It has a capacity of  
22 73,944 acre-feet."

23 Q. And which paragraph are you reading from?

24 A. Oh, sorry. That's the end of the second  
25 paragraph.

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1 Q. Do you know how that number was determined?

2 A. Well, from looking at other reports and the  
3 1949 report, that was based on a survey that the state  
4 did in -- sometime in the late '30s.

5 Q. And were there any problems with that early  
6 survey?

7 A. Well, if we go to the next two documents,  
8 they indicate a -- an error that existed in that early  
9 survey.

10 Q. All right. Let's go to the third excerpt,  
11 which has a title page dated February 1942, please.

12 A. 40 -- what was that?

13 Q. February 1942. Has a Montana Bates  
14 No. 016927.

15 A. Okay.

16 Q. And what does the February 1942 report  
17 provide in terms of information about problems with the  
18 early reservoir survey?

19 A. Okay. This report is prior to the other two  
20 that we discussed, the '43 and '44. So it -- you know,  
21 it was an earlier time before they could make  
22 corrections. But in the first paragraph on page 5, I  
23 think it's the second sentence, it reads: "The  
24 reservoir has" -- and somebody has written in --  
25 "present active" -- "the reservoir has a" -- and then

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1 somebody has written in "present active capacity of  
2 about 81,420 acre-feet." And then there's a footnote  
3 on that sentence.

4 Do you want me to read the footnote?

5 Q. Yes.

6 A. Footnote at the bottom says, "There's a  
7 5-foot unadjusted error in the reservoir topography."

8 Q. What does that mean?

9 A. Well, it means that they apparently had a  
10 bust or a problem with the survey that they had not yet  
11 corrected.

12 Q. So they realized there was a problem, but it  
13 hadn't been corrected yet?

14 A. Right.

15 Q. And regarding the interlineation where the  
16 two words "present active" are interlineated in the  
17 sentence you read, what's the difference between active  
18 capacity and other kinds of capacity?

19 A. Well, all reservoirs or most reservoirs have  
20 their outlet set off the floor of the reservoir by a  
21 number of feet. And they do that on purpose so that if  
22 silt comes in the reservoir, it will settle below the  
23 outlet works and won't result in interfering or  
24 plugging that outlet.

25 So that pool of water from the level of the

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1 outlet works and for that elevation of the outlet works  
2 down to the floor is considered to be the dead pool.  
3 The only way you can get water out of there is you have  
4 to put a pump in and pump water up to the outlet. So  
5 it's not usable capacity.

6 And so they would define the capacities  
7 between active and usable. The active would be the  
8 usable water that you could draw from the reservoir,  
9 and the dead would be the water that's trapped in the  
10 reservoir that you can't release.

11 Q. And does the term "total capacity" include  
12 both the active and --

13 A. Total capacity includes both.

14 Q. Any other significant parts of this excerpt  
15 for your purposes?

16 A. No.

17 Q. Okay. Let's turn to the next document in  
18 this exhibit. It is dated July 1941, has the Montana  
19 Bates No. 016936. What does that document contain that  
20 is relevant to your analysis of the capacity of the  
21 reservoir?

22 A. On page 5 under the title "Developed  
23 storage," down, I think it's the second sentence in  
24 that paragraph, it states, "The reservoir has a  
25 reported capacity of 60,070 acre-feet at the spillway

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1 crest. And that page includes a footnote at the bottom  
2 that reads: "The capacity is actually somewhere  
3 between 60,070 and 77,000 acre-feet. There is a 5-foot  
4 error in the respective -- or in the reservoir  
5 topography not yet adjusted."

6 And then again, somebody has written in,  
7 "There are, therefore, no records for storage  
8 operations."

9 Q. And did this also -- am I correct in my  
10 understanding that this shows the confusion about the  
11 actual size of the reservoir at this time, 1941?

12 A. Yes. In '41 up to '43, they were unsure of  
13 what the capacity was. And then in '43, based on my  
14 review, they corrected the error and determined the  
15 capacity was the amount shown in the '43 report.

16 Q. And the next and final document in this  
17 exhibit is dated August 1949. It begins at Montana  
18 Bates No. 016945. What have you excerpted from the  
19 August 1949 report that starts on that page?

20 A. Which page is it?

21 Q. Lower right-hand corner, Montana Bates  
22 No. 016945.

23 SPECIAL MASTER: So can I just interrupt? It  
24 might be late in the day for me. But I count five  
25 documents rather than four?



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1 MR. DRAPER: I wasn't counting as we went  
2 through. It is very possible, Your Honor. If there  
3 is, there will be an E.

4 SPECIAL MASTER: So we need to get five  
5 documents for Mr. Kaste. He'll have lots of reading.

6 BY MR. DRAPER:

7 Q. And this, just to identify this page, it --

8 A. This is a cover page; right.

9 Q. This is the cover page, Montana Bates  
10 No. 016945. It shows a date of the report at the  
11 bottom of the title block of August 1949. And it's  
12 entitled "Sedimentation Survey of Tongue River  
13 Reservoir, Sheridan, Wyoming-Decker, Montana."

14 Are you at that page, Mr. Aycock?

15 A. Yes, I am.

16 Q. Okay. And is this the excerpt of the  
17 document that I was indicating to the Court had been  
18 obtained in its entirety and that we do have here  
19 today?

20 A. Yes. This is nearly the full report. The  
21 only thing is missing is the large -- some of the large  
22 graphs or pages that were folded. It was not possible  
23 the day I was in there to get full copies of those  
24 pages. But all the other pages are in this portion of  
25 the report.

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1 Q. What sedimentation survey is described in  
2 this report?

3 A. This is a sedimentation survey of the Tongue  
4 River Reservoir. And the terminology the Bureau of  
5 Reclamation uses to -- when we survey or resurvey a  
6 reservoir to determine the capacity and the amount of  
7 capacity that has been lost to sedimentation over a  
8 period of time. So it's a fairly routine practice that  
9 we have conducted on all of our reservoirs, and we've  
10 also provided the service to a number of private or  
11 state reservoirs.

12 Q. Now, I was just going to ask you, this is --  
13 the Tongue River Reservoir is not a Bureau of  
14 Reclamation reservoir. So why would the Bureau of  
15 Reclamation have been doing a sedimentation survey on  
16 it?

17 A. Well, on page -- page 1 of the report, down  
18 at the bottom, it has purpose and scope. And it  
19 explains that. You want me to read that?

20 Q. No, thank you. But if that gives a  
21 sufficient explanation, I don't think we need to dwell  
22 on it further.

23 What was the importance of this -- or can you  
24 describe the study, first of all, and then what the  
25 impact of that study was on knowledge of the true

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1 capacity of the reservoir?

2 A. Well, from my experience, this is a rather  
3 extensive study they did. The Bureau of Reclamation  
4 was looking at this as kind of a model of what would  
5 occur at other reservoirs, reclamation reservoirs that  
6 would be built in the future, how much sediment they  
7 could expect to enter the reservoir that would use up  
8 space over time. And so they spent about three -- over  
9 three months conducting the survey and completing the  
10 work.

11 Q. Is three months a long time to spend on a  
12 sedimentation survey, in your experience?

13 A. Yeah. In my position with reclamation, I was  
14 responsible for recommending reservoirs that needed to  
15 be resurveyed. And I worked with our Denver technical  
16 center, Denver office, to schedule those resurveys.  
17 And, you know, as time has gone on, they got better  
18 tools and equipment. And some of the smaller  
19 reservoirs, they can literally do that now in a couple  
20 of days.

21 I assisted with one back in 1977, Fresno  
22 Reservoir up in northern Montana. And we spent the  
23 good part of two weeks doing that survey, and that  
24 required establishing the range points and using a boat  
25 with sonar to measure the depth of water at different

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1 cross-sections across the lake. So three months is a  
2 considerable amount of time.

3 Q. How did they go about doing that  
4 sedimentation survey?

5 A. Well, from reviewing storage records and the  
6 report, the reservoir was drafted down to a rather low  
7 level. You're talking about Tongue River Reservoir?

8 Q. Yes. And it was drafted down in order to  
9 facilitate the survey?

10 A. Yes, they drew it down to under 5000  
11 acre-feet. If you look at the records for November --  
12 October, November, it's down at that level. That  
13 allowed them to do a land survey from most of the  
14 reservoir and then use the boat for the remaining  
15 portion that still had water in it. And they used what  
16 they call a fathometer.

17 Q. Is that a fathometer?

18 A. It's kind of like, you know, Captain  
19 Nemo-type device. But it's really just a sonar  
20 that's -- equipment that's attached to the boat. I'm  
21 going to see if I can find it here and spell it for  
22 you.

23 Q. Would it be f-a-t-h-o-m-e-t-e-r?

24 A. Yeah, f-a-t-h-o-m-e-t-e-r. It was 808J  
25 fathometer.

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1 Q. And what information is gathered specifically  
2 for the survey?

3 A. Well, one of the problems they discovered  
4 when they began the survey is they had the original  
5 survey data and results that the Montana Water State  
6 Conservation Board had conducted. And so the first  
7 thing they want to do is to tie in their datum to  
8 initiate the survey. And what that is is they relay  
9 and everything to mean sea level elevations. And they  
10 found that the State's datum was off considerably from  
11 the mean sea level.

12 Q. How far off was it?

13 A. Little over 294 feet. So a considerable  
14 distance. You know, that wouldn't affect the survey  
15 results. It just makes it very difficult to tie  
16 reservoir elevations or dam elevations in with any  
17 other survey point.

18 So they spent a fair amount of time  
19 correcting that to the correct datum. What they call  
20 the U.S. Coast and Geodetic Survey benchmarks were used  
21 for that. And there are some old Navy ships that are  
22 used, starting clear back in the 1800s, where they  
23 surveyed the coast to determine the mean sea level that  
24 everything would be related to, or land surveys.

25 So that was done. And they compare -- on

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1 page 8 they compare the elevations of the spillway and  
2 outlet works on the bottom of the lake between the two  
3 datums. And then I think -- I don't know if it's on  
4 that page. But there's a couple of places here where  
5 it references the air.

6 Q. And the numbers that we're seeing on page 8  
7 under the heading "1948 survey datum," those look more  
8 like the elevations that were cited by Mr. Smith in his  
9 testimony; correct?

10 A. Yes, those 1948, that survey datum, that is  
11 the datum that's being used today.

12 Q. Okay. What else did they do in making their  
13 survey?

14 A. They -- of course, one of their objectives  
15 was determine the sediment in the reservoir. So they  
16 used soil augers to sample the depth across the  
17 cross-sections of the sediment and actually analyze the  
18 material that they collected in that -- each of those  
19 augers.

20 Q. Were they able to take core samples?

21 A. Yeah, they collected core samples.

22 Q. And were they able to differentiate between  
23 the sediment that had come in since the reservoir was  
24 constructed and the original ground as it existed  
25 before construction?

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1 A. Yes.

2 Q. So they were able to determine both its  
3 current capacity and original capacity?

4 A. Yes. In fact, they prepared capacity curves  
5 and tables for both of those results.

6 Q. Are there pictures, for instance, on page 27  
7 of the report, that show some of the equipment that was  
8 used to make the survey?

9 A. Yeah, this -- on page 27?

10 Q. Yes.

11 A. Yeah, the first picture shows the boat they  
12 used to -- equipped with the sonar fathom --

13 MR. KASTE: Do we really have to hear about  
14 the boat?

15 SPECIAL MASTER: One of the questions I was  
16 about to have is it's almost quarter to. So I wonder  
17 whether or not -- it would be great to finish up this  
18 particular document, and although I'm actually  
19 fascinated by the boat, which looks like it has a giant  
20 turtle floating in the back area. But I don't think  
21 that's what it is. But I wonder if we would get to the  
22 ultimate conclusions of this particular report.

23 MR. DRAPER: Yes.

24 BY MR. DRAPER:

25 Q. And are we at about the point in the report

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1 that shows their ultimate conclusions, Mr. Aycock?

2 A. Yes. The other picture just shows the  
3 sampling spuds they used in the water. But if you go  
4 to -- it doesn't have a page number. It's Figure 14.  
5 Bates No. MT016981. That page shows an area capacity  
6 tables. The first one is labeled original survey 1939,  
7 and the second one is labeled 1948 survey. And if you  
8 look --

9 MR. DRAPER: Your Honor -- if I may just  
10 interrupt you for a second, Mr. Aycock -- we have a  
11 copy that we've made of that final table which contains  
12 the ultimate conclusions. And I'd like to -- I  
13 provided one just now to counsel for Wyoming. And I  
14 wonder if I might provide you one to facilitate your  
15 review of that.

16 SPECIAL MASTER: That would be fine. Do you  
17 have any idea how much longer you're likely to take on  
18 this? Again, I'm just worried about the time.

19 MR. DRAPER: Yes, I think we can conclude now  
20 and finish up Monday. No problem with that.

21 SPECIAL MASTER: Okay.

22 MR. DRAPER: So I would -- in fact, I would  
23 encourage us to adjourn so that we might be able to  
24 make arrangements to get those extra reports before  
25 close of business.



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1           SPECIAL MASTER: Okay. Why don't we go ahead  
2 and do that. And, again, you know, I like some color  
3 because it's going to keep everybody, particularly  
4 behind the bar, slightly more awake than they might  
5 otherwise be. But particularly on some of these  
6 exhibits, we can go through them a little bit faster  
7 and get to the ultimate conclusion and the supporting  
8 information that will get us all out faster.

9           Let me just ask also -- and I don't know  
10 whether or not you've looked at the original estimates  
11 you made on the various times for the witnesses. It  
12 looks to me as if we're about half a day behind sort of  
13 the faster run.

14           MR. KASTE: That's probably about right.  
15 What I was going to ask at the end of the day today is  
16 to find out where you thought we were on your  
17 unofficial clock with regard to hours attributable to  
18 each party to give us a sense of where we fall.

19           SPECIAL MASTER: So, again, the way in which  
20 I was doing this was to see whether or not we're moving  
21 along smoothly. And if so, how we are on the -- you  
22 know, if so, then I'll go by the unofficial clock. And  
23 at the moment, I'm actually fairly comfortable with  
24 where we are.

25           I think we could probably be moving a little

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1 bit faster on some of the examination. But it doesn't  
2 look to me as if we're going to be finishing this up  
3 after Thanksgiving at the moment, which is what I'm  
4 trying most to conclude by. So I think at the moment  
5 we're fairly good.

6 I'll try and give some hour estimates next  
7 week. But at the moment, I'm not -- I don't think it's  
8 going to be necessary to go the actual hours for each  
9 of the presentations.

10 So with that, though, I would love for both  
11 sides to maybe first thing on Monday morning, just to  
12 give a sense of where you think we stand in terms of --  
13 Mr. Draper, you had sort of a low end and higher end.  
14 And it looks to me we're about half a day behind the  
15 lower end. And simply, the State of Wyoming had sort  
16 of an estimate they put together of the two. And,  
17 again, it looked like we were about half a day behind.  
18 But I also realize that there were two witnesses that  
19 we skipped. And so I have no idea how that would  
20 actually play into it.

21 MR. DRAPER: Well, for a while we were  
22 actually better than our minimum. And we've kind of  
23 slowed a little bit here. But that's certainly our  
24 goal, is stay as close to that minimum as we can.

25 SPECIAL MASTER: Okay. That would be great

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1 if we can. So we will be back in session at 9:00 a.m.  
2 on Monday morning. And we'll go next week until  
3 Friday. If I remember correctly, we've agreed to leave  
4 at 3:00 so that people, including me, who have that  
5 5:00 or so flight out of the Billings airport will be  
6 able to make it. So have a great weekend.

7 MR. DRAPER: Thank you.

8 (Trial Proceedings recessed at  
9 4:47 p.m., October 25, 2013.)

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## REPORTER'S CERTIFICATE

I, Vonni R. Bray, a Certified Realtime Reporter, certify that the foregoing transcript, consisting of 219, is a true and correct record of the 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.

I further certify that I am not attorney for, nor employed by, nor related to any of the parties or attorneys to this action, nor financially interested in this action.

IN WITNESS WHEREOF, I have set my hand at Laurel, Montana, this 11th day of February, 2014.



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Vonni R. Bray, RPR, CRR  
P. O. Box 125  
Laurel, MT 59044  
(406) 670-9533 - Cell  
(888) 277-9372 - Fax  
vonni.bray@gmail.com