

6-19-1981

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Case # 4993

File # 191

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IN THE DISTRICT COURT FOR THE FIFTH JUDICIAL DISTRICT
WASHAKIE COUNTY, STATE OF WYOMING

IN RE:

THE GENERAL ADJUDICATION OF
ALL RIGHTS TO USE WATER IN
THE BIG HORN RIVER SYSTEM
AND ALL OTHER SOURCES,
STATE OF WYOMING.

)
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) Civil No. 4993
)
FILED _____
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6/23 1981
Margaret V. Hampton CLERK
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VOLUME 84
Afternoon Session
Friday, June 19, 1981

ORIGINAL



1 THE SPECIAL MASTER: Mr. White.

2 MR. WHITE: Your Honor, Mr. Merrill, who is in the
3 bosom of his family this week, asked me if I would
4 deliver the complete volumes of several books that were
5 used during the deposition -- or excuse me, testimony or
6 cross-examination of Mr. Dornbusch, I believe, and they
7 have been marked with exhibit numbers which parallel the
8 excerpt exhibit numbers. They are the following exhibits:
9 22 with the suffix A, 25 --

10 THE SPECIAL MASTER: ED?

11 MR. WHITE: That's right, ED, I'm sorry, Your Honor.
12 Plaintiff's Exhibit WRIR ED, as in Echo Dog, 22-A;
13 ED-25-A, ED-26-A and ED-28-A.

14 At this time I would offer those to supplement the
15 excerpts which were used during Mr. Dornbusch's testimony.

16 THE SPECIAL MASTER: Mr. Echohawk?

17 MR. ECHOHAWK: No objection.

18 THE SPECIAL MASTER: All right, they are received
19 into evidence. Thank you, Mr. White.

20 Mr. Donnell on cross-examination.

21 (Whereupon Plaintiff's
22 (Exhibits WRIR ED-22-A,
23 (ED-25-A, ED-26-A and ED-28-A
(were hereby admitted into
24 (evidence.
25



CROSS-EXAMINATION

1
2 BY MR. DONNELL:

3 Q Mr. Billstein, let me make sure, first of all, that I
4 understand what your study does not do. As I understand
5 it, this study does not reflect actual use of water on
6 the ground as it exists now; is that right?

7 A The study was carried out to assess the ability to serve
8 the government claims, specifically those claims on trust
9 lands.

10 Q Okay. But -- But it isn't designed to reflect use of
11 water or availability or impact on lands other than the
12 government claims, for instance, in the Midvale Project;
13 is that right?

14 A That's correct.

15 Q Does that study look at all at the effects that your
16 operation would have at Boysen Reservoir?

17 A No.

18 Q Did it look at all at any of the effects below Boysen
19 Reservoir?

20 A No.

21 Q Concerning the appropriated lands on the minor tributaries,
22 where did you get the locations for these lands? I'm
23 referring to these in blue.

24 THE SPECIAL MASTER: What do you mean "appropriated

25
billstein-cross-donnell



1 lands", Mr. Donnell?

2 MR. DONNELL: Certificated, adjudicated lands.

3 THE SPECIAL MASTER: Light blues?

4 MR. DONNELL: Yes, light blues.

5 Q (By Mr. Donnell) Where did you come up with the locations
6 of those lands?

7 A Those locations were obtained from the legal descriptions
8 which were part of the Certificates of Record of the
9 State of Wyoming.

10 Q Okay. If you have a legal description on a Certificate
11 of Record that specifies, for example, ten acres in a
12 given 40, how do you figure out where that ten acres is at?

13 A A lot of cases on the map accompanying the permit, those,
14 the location of the ten acres within a specific 40 is
15 in fact delineated.

16 Q And you make reference to those maps then?

17 A The maps that accompany the permit were referenced.

18 Q Were there situations where lands within a 40 were not
19 referenced on a map, did that ever come up?

20 A There was an occasional time where there wasn't an
21 exact location specified. We tried to make a phone call
22 to the State Engineer's office in those cases, and ask
23 for clarification as to the exact location.

24 Q All right. Now, referring to your HEC-3 models, your

25 billstein-cross-donnell



1 HEC-3 models, would you explain again how that works?

2 I'm not sure I understand it.

3 A Conceptually?

4 Q Yeah.

5 A Certainly. It's an operational model, and it's built
6 along the lines of what you call a traditional bookkeeping
7 model. You have certain in-flows that enter the system,
8 you have certain demands as part of the system. These
9 are reflected in depletions. You have corresponding
10 return flows coming from the diversions to those depletion
11 areas. Those are accounted for, and it basically book-
12 keeps the flow in a system at a particular location that
13 you built in to the entire operation of an area.

14 It analyzes river flow, meeting the constraints
15 in the upstream to the downstream area.

16 Q Is this a standard program?

17 A Oh, certainly.

18 Q Does that program, as standardized, has the
19 ability to move upstream or down, either way?

20 A It moves down -- from upstream to downstream.

21 Q Can it go from downstream to upstream if you want it to?

22 A This is a sequential type of program and it goes upstream
23 to downstream.

24 Q Okay. So it would be designed to handle sequentially the
25 billstein-cross-donnell



1 geographic distribution of the water rather than, say if
2 you're in a priority system, it would not handle that;
3 is that right?

4 A It would be very difficult to use this particular program
5 to analyze water rights by priority.

6 Q Okay. Now, I understand you modified this program some-
7 what when you used it.

8 A That's correct.

9 Q How did you modify it?

10 A The original HEC program simply accounted for return flows
11 as a percentage of diversion and then distributed it along
12 the temporal distribution of the diversion.

13 The return flow information that I received from
14 Mr. Toedter showed that his recommended distribution of
15 return flows was different than that. So what we did was
16 develop what we call a dummy diversion, and this dummy
17 diversion is built in to having the distribution of
18 diversion which matches the distribution of the return
19 flow that we wanted to utilize in the program. And what
20 we did was build in a reference so that anytime we had
21 a diversion for a particular node, it would be referenced
22 back to that dummy diversion and the return flows would
23 be generated based on that dummy diversion.

24 Q Now, if you know, why did Mr. Toedter not feel it

25 billstein-cross-donnell



1 appropriate to use the program as standardized?

2 MR. ECHOHAWK: Objection, Your Honor, it's a
3 question for Mr. Toedter.

4 THE SPECIAL MASTER: He said "If you know".

5 MR. DONNELL: If he knows.

6 THE SPECIAL MASTER: Do you know?

7 THE WITNESS: The HEC standard method of approaching
8 return flows, he expressed to me, was not what he felt
9 was the best estimate of what was occurring in the field.

10 Q (By Mr. Donnell) So let me make sure I understand this.
11 What he wanted to do was account for return flows at a
12 given point, say at Point 29 rather than along the whole
13 system; is that right?

14 A Negative, Counsellor.

15 Q Okay. Well, I don't understand that so maybe you can
16 explain it to me again.

17 A Okay. It just deals with the ability to account for
18 return flows by month at a particular point. The original
19 program was set up to give you return flows at a certain
20 distribution. In other words, you divert water at a
21 certain distribution based on the water duty schedules,
22 for example, supplied by Mr. Stetson, and the return flows
23 then come back to the return flow nodes on a certain
24 temporal distribution.

25 billstein-cross-donnell



1 The distribution that was coming back to the return
2 flows using the basic HEC Program, Mr. Toedter did not
3 feel represented the true conditions. So what we did was
4 interjected an artificial dummy diversion which distributed
5 the flows back to the distribution he felt was actually
6 taking place in the system.

7 Q Okay. What sort of input data did you use for this
8 program?

9 A There's all kinds of control cards that are utilized and
10 those --

11 Q For instance, you utilized return flow data?

12 A That's right.

13 Q And where did you get that for this particular program?

14 A The return flow data was based on a percentage of return
15 flow which was generated by Mr. Toedter. In other words,
16 he gave us a particular percentage that we would apply
17 above and beyond the efficiency, the overall efficiency
18 of the system which relates back to the net irrigation
19 requirement of the crop, and this would result in a
20 total return flow volume.

21 Q Okay.

22 A Then we used the dummy diversion to distribute that total
23 return flow over the months properly.

24 Q And what exactly did you get from Mr. Toedter physically,

25 billstein-cross-donnell



- 1 computer printouts?
- 2 A No. He established a particular percentage of irrecoverable
3 loss and he also gave us the distribution that goes into
4 the dummy diversion.
- 5 Q And you used that material then in the preparation for
6 this program?
- 7 A Certainly.
- 8 Q Do you have that material with you today?
- 9 A It's part of the printout.
- 10 Q Of the red --
- 11 A That's right.
- 12 Q Okay.
- 13 A It was built into that.
- 14 Q All right. Now, as far as the stream flow data went,
15 you got that from Mr. Keene?
- 16 THE SPECIAL MASTER: As far as the stream flow data?
- 17 MR. DONNELL: Yeah.
- 18 Q (By Mr. Donnell) You received that from Mr. Keene; is
19 that right?
- 20 A Mr. Keene's sites were utilized for stream flow.
- 21 Q Okay. And is the information that you received from him
22 that is in evidence, is that the same material you used
23 for your program?
- 24 A It should be one in the same.
- 25 billstein-cross-donnell1



1 Q Is there any additional data that you used that isn't
2 in evidence?

3 A I can't think of any additional data that went into the
4 Big Wind and Little Wind operational studies.

5 Q All right. Now, what do you get in terms of output on
6 this program? Do you get a model so you can look at a
7 given node on a stream for any given month, any given
8 year and figure out what the flow is at that particular
9 point?

10 A That's correct. You get the flow into the node, the
11 disposition of the activity at that node, whether it be
12 a diversion or a return flow, and the resulting exiting
13 river flow.

14 Q I take it that means that after the diversion you can
15 tell how much is left in the river?

16 A Correct, Counsel.

17 Q If anything?

18 A That's right.

19 Q Okay. Would that be shown on the computer printouts that
20 we got this morning, how much is left in the river after
21 diversion at a given point?

22 A Those summary tables show exactly that.

23 Q Okay.

24 THE SPECIAL MASTER: Those summary tables that you
25 billstein-cross-donnell



1 just alluded to, being parts of 312 through 315?

2 THE WITNESS: Correct, Your Honor.

3 THE SPECIAL MASTER: Okay.

4 Q (By Mr. Donnell) Mr. Billstein, I'm going to hand you a
5 red folder with a computer printout dated June 15, '81,
6 Big Wind River, operation study final, copy 404. Now,
7 does that contain the information you got from Mr.
8 Toedter?

9 MR. ECHOHAWK: Could we mark that as an exhibit?

10 MR. DONNELL: I'll do that in just one second here.

11 MR. WHITE: Off the record.

12 (Off-the-record discussion.)

13 THE SPECIAL MASTER: On the record, please.

14 Read the question to the Witness, will you please.

15 (Thereupon the following
16 question was read back as
17 follows: "Q Mr. Billstein,
18 (I'm going to hand you a red
19 folder with a computer print-
20 out dated June 15, '81, Big
21 Wind River, operation study
22 final, copy 404. Now, does
23 that contain the information
24 (you got from Mr. Toedter?"

21 THE WITNESS: Yes, it contains the input information
22 in the computer language.

23 Q (By Mr. Donnell) Could you show me how that works, please.

24 A In 1946, Control Point No. 27 you see a required diversion

25 billstein-cross-white



1 through here. That reflects the temporal distribution
2 of the return flows that Mr. Toedter wished to input into
3 the program.

4 Q Would you mark that so we'll just know where you're
5 pointing at.

(Witness complied.)

6
7 Q Okay. Now, does it also reflect information you got from
8 Mr. Keene, is that in this printout?

9 A That's right.

10 Q Where is that?

11 A That would be in this area called "in-flows".

12 Q Okay. That reflects all the numbers you got from Mr.
13 Keene?

14 A That would reflect the in-flows that we obtained from
15 Mr. Keene.

16 Q Okay. Would you just draw a line under that so we know
17 where you're at.

18 THE SPECIAL MASTER: Are your lines on the second
19 and third page of that exhibit or is there a page number?

20 THE WITNESS: It would be Page 3.

21 THE SPECIAL MASTER: All right, thank you.

22 THE WITNESS: I should point out on Station 31, that
23 that utilizes a combination of three stations that Mr.
24 Keene supplied; the Wind River at Crowheart Station, the
25 billstein-cross-white



1 Little Dry Creek Station and the Crow Creek Station.

2 Q (By Mr. Donnell) All right.

3 A I should add those numbers that Mr. Keene supplied are
4 in c.f.s. -- I mean that Mr. Toedter supplied are in
5 c.f.s. in that printout.

6 Q Okay.

7 MR. WHITE: Off the record.

8 (Off-the-record discussion.)

9 MR. DONNELL: Your Honor, we'll mark this Defendant's
10 Hanover No. 1.

11 MR. ECHOHAWK: What is it called?

12 MR. DONNELL: Defendant Hanover No. 1.

13 Q (By Mr. Donnell) All right. Mr. Billstein, and I take it
14 you utilized also the printout dated June 16, '81,
15 entitled Fisheries Study?

16 A Yes.

17 Q And you utilized also a printout dated June 15, '81,
18 entitled Little Wind River Operational Study --

19 A That's right.

20 Q -- in completing your study?

21 MR. DONNELL: All right. We'll mark these too,
22 Your Honor.

23 Q (By Mr. Donnell) The Fisheries Study of June 16, '81,
24 we would mark Defendant's Hanover No. 2; the Wind River,

25 billstein-cross-donnell



1 Little Wind River Operation Study, June 15, '81, we
2 would mark Defendant Hanover No. 3.

3 Mr. Billstein, is this a complete set of all the
4 printouts you used in your study?

5 A Those printouts reflect the summary tables that were
6 presented during the course of my direct testimony.

7 Q Actually the summary tables reflect data in these, don't
8 they?

9 A Yes, they reflect those particular runs.

10 Q And this would be the complete set then; is that right?

11 A That would be the backup information that was summarized.

12 Q All right.

13 THE SPECIAL MASTER: Doesn't include the one behind
14 you?

15 THE WITNESS: That's a copy, Your Honor, of that.

16 THE SPECIAL MASTER: Very well.

17 MR. DONNELL: Your Honor, at this time we would
18 like to introduce these, Defendant's Hanover 1, 2 and 3.

19 MR. ECHOHAWK: Could I have one minute to --

20 THE SPECIAL MASTER: Surely. We would like to know
21 for what purposes, the truth of their contents?

22 MR. ECHOHAWK: What purposes?

23 MR. DONNELL: For the truth of their contents. They're
24 backup data used by Mr. Billstein in preparing his
25 billstein-cross-donnell



1 statement, so I assume it will be for the truth of its
2 contents.

3 THE SPECIAL MASTER: Do you want a minute to confer?

4 MR. ECHOHAWK: I just have some voir dire.

5 THE SPECIAL MASTER: Mr. Donnell, Mr. Echohawk has
6 a couple of minutes of voir dire.

7 VOIR DIRE EXAMINATION

8 BY MR. ECHOHAWK:

9 Q Mr. Billstein, is the information -- Strike that. Is there
10 any additional information contained within these printouts
11 that are not contained within the summary tables that you
12 identified earlier?

13 A Yes. There would be information showing the operation
14 of the reservoirs themselves. The summary tables which
15 show the river flows or the releases from those reservoirs,
16 but would not show the operation of the storage capacity
17 of the reservoir during the course of that month.

18 Q Is the document that's marked as Defendant Hanover No. 2,
19 which is entitled Fishery Study, is that essentially a
20 systems operation of the Popo Agie, Little Wind and Big
21 Horn, similar to the systems operations done on the Big
22 Wind and Little Wind?

23 A That's correct.

24 Q So essentially it's exactly the same operation, it's
25 billstein-voir dire-ecnohawk



1 not any special or reduced type study, is it?
2 A It was carried out basically at the same level. However,
3 I was not as meticulous in picking up some of the
4 incidental return flows in the reaches of the Little Wind
5 below its confluence with the Popo Agie and the Big Wind
6 as well as some of the smaller return flows being picked
7 up in the Big Horn River System. Those I felt were
8 insignificant, therefore, I dismissed them from that
9 study because it didn't make any difference to my
10 conclusions.

11 MR. ECHOHAWK: No objection if they're to be offered
12 for the truth of their contents.

13 MR. WHITE: May I voir dire, Your Honor?

14 VOIR DIRE EXAMINATION

15 BY MR. WHITE:

16 Q Mr. Billstein, with respect to Hanover No. 1, 2 and 3,
17 the exhibits, that is, those reflect the facts and data
18 upon which you relied in reaching your opinion?

19 A Yes.

20 MR. WHITE: Your Honor, we would have no objection
21 to their admission for the purposes of showing facts and
22 data upon which the Witness relied. We certainly do not
23 believe an adequate foundation has been established by
24 Mr. Echohawk's voir dire to support their admission for

25 billstein-voir dire-echohawk
billstein-voir dire-white



1 the truth of their contents, and would state that if Mr.
2 Donnell would agree to limit the offer for the purposes
3 of showing the facts and data upon which the Witness
4 relied, we will have no objection.

5 THE SPECIAL MASTER: I see --

6 MR. ECHOHAWK: It's Mr. Donnell's offer.

7 THE SPECIAL MASTER: I see only a fictitious,
8 ephemeral distinction, frankly; either you have a truth
9 of contents -- the truth of their contents is the fact
10 that the computer spits out some materials on which he
11 relied.

12 MR. DONNELL: I have no problems with Mr. White's
13 request.

14 THE SPECIAL MASTER: Yeah, I have no problem with
15 either one, it makes no difference to me.

16 MR. DONNELL: I'll withdraw the offer for the truth
17 of its contents and make it on the facts and data upon
18 which Mr. Billstein relied.

19 MR. PERRY: And the Tribes have no objection.

20 THE SPECIAL MASTER: All right, the three exhibits
21 offered by Mr. Donnell, Han -- Defendant's Hanover 1, 2
22 and 3 being the same are hereby admitted into evidence.

23 (Whereupon Defendant's
24 (Exhibits Hanover 1, 2 and 3
25 (were hereby admitted into
evidence.)



1 THE SPECIAL MASTER: Are these to be returned to
2 HKM when the case is over or do you have copies?

3 THE WITNESS: We have copies, Your Honor.

4 Q (By Mr. Donnell) Mr. Billstein, am I correct in saying
5 that on the adjudicated lands on the minor tributaries
6 you did not use the adjudicated date of priority in your
7 study?

8 A That's correct.

9 Q And you did not use the adjudicated duty of water in your
10 study; is that correct?

11 A The study was based on 1868 priority. The water duties
12 were furnished by the agricultural consultant who has
13 previously testified in this case.

14 Q Just as a matter of curiosity, and if you know, do you
15 know why the water duty on the Upper Wind, apparently
16 that's a project, Page 1 of C-306, is 12 acre-feet? It's
17 more water that falls in the Amazon Jungle, I'm wondering
18 why it's so much.

19 MR. ECHOHAWK: Objection. The evidence is already
20 in the record. Mr. Stetson testified why that's 12
21 acre-feet.

22 MR. DONNELL: I wasn't here for all that.

23 MR. ECHOHAWK: Your Honor, that's a problem we've
24 had all along.

25 billstein-cross-donnell



1 THE SPECIAL MASTER: Just a minute, gentlemen.

2 Read the question again, will you, Merissa. It began, do
3 you know.

4 (Thereupon the following
5 (question was read back as
6 (follows: "Q Just as a
7 (matter of curiosity, and if
8 (you know, do you know why
9 (the water duty on the Upper
10 (Wind, apparently that's a
11 (project, Page 1 of C-306,
12 (is 12 acre-feet? It's more
13 (water that falls in the
14 (Amazon" --

15 THE SPECIAL MASTER: Objection overruled; he may
16 answer.

17 THE WITNESS: That particular water duty reflects
18 an efficiency of 16.2 percent, which I believe Mr.
19 Stetson testified was representative of the historical
20 efficiency in the Upper Wind Unit.

21 THE SPECIAL MASTER: Were you in the courtroom when
22 that same question was asked of Mr. Stetson?

23 THE WITNESS: No, I wasn't, Your Honor.

24 THE SPECIAL MASTER: Do you recall -- Well, then
25 you don't know who asked it, do you?

Okay, all right.

THE WITNESS: I don't what the comment about the
Amazon River --

THE SPECIAL MASTER: No, that's all right; that's
billstein-cross-donnell



1 aside. But your reason is because --

2 MR. DONNELL: That wasn't aside.

3 THE SPECIAL MASTER: -- your efficiency is one of
4 the lowest efficiencies in the area?

5 THE WITNESS: He utilized what he felt the historical
6 efficiency of the area was, which was exceedingly low,
7 which was approximately 16 percent, which was super-
8 imposed on the net irrigation requirements that he felt
9 were adequate results in that type of a water duty.

10 Q (By Mr. Donnell) Mr. Billstein, what's the function of
11 your control sites again, what purpose do they serve?

12 MR. ECHOHAWK: Objection, Your Honor; asked and
13 answered.

14 THE SPECIAL MASTER: I didn't hear that. May I hear
15 that again?

16 MR. DONNELL: Well, I'll withdraw it.

17 THE SPECIAL MASTER: All right, thank you.

18 Q (By Mr. Donnell) Mr. Billstein, the control points would
19 need to be accurately located, or let's say the accuracy
20 of the location would affect the accuracy of your study;
21 is that right?

22 A That's right.

23 Q Can you tell me, Mr. Billstein, why you got a control
24 point for Return Flow No. 29 on C-294 in the middle of

25 billstein-cross-donnell



1 this area outlined in yellow instead of down on the end?
2 It looks like you're going to have return flow coming
3 back uphill.

4 THE SPECIAL MASTER: Did you say 29 or 39?

5 MR. DONNELL: 29. It's down at the bottom, Your
6 Honor.

7 A Certainly. The last major diversion in the Little Wind
8 Study Unit was to the Subagency Unit. It was only
9 important to me to understand whether I had sufficient
10 water available to meet the water requirements at that
11 diversion point.

12 Yes, you're correct in saying that only a portion
13 of the return flow returns to Node 29, which is just
14 above the confluence of the Popo Agie River. And that
15 level of distinction, of return flow is made in the
16 study. However, of major additional importance is under
17 1868 priority we had the Popo Agie River System which
18 was basically under-utilized or not being utilized at all
19 to serve the government claims. This was an abundant
20 water supply going into Node No. 29, therefore, there was
21 no reason to deal with the small amount of c.f.s. that
22 was coming off below this particular use point from the
23 standpoint of trying to establish water availability in
24 the Little Wind Unit.

25 billstein-cross-donnell



1 This water is not, in fact, being picked up and
2 reused in the Little Wind Unit study area. The diversion
3 that serves this area is, in fact, Point 27. Therefore,
4 the emphasis was on did Point 27 have the necessary in-
5 flow to serve the demands that were established at
6 Control Point No. 27.

7 Q (By Mr. Donnell) So return flow below Point 29 is just
8 left out?

9 A It was -- I believe in this particular case we collected
10 all of the return flow from the Subagency Unit at
11 Point 29 just as a matter of convenience.

12 As I said before, the dominating water resources of
13 the Popo Agie System makes that almost a nebulous issue.

14 Q Um-hum. On No. 39 down on C-294, I take it No. 39 picks
15 up all the return flow in the area outlined in orange;
16 is that right?

17 A That's right.

18 Q Now, No. 30, that picks up all the return flow in the
19 area outlined in green, correct?

20 A Well, the return flow, what it says is the return flow
21 is accounted for at those particular points for the study
22 area boundaries above it. In this particular case in
23 Control Point 39 it was established that a good deal of
24 the return flow from the Lefthand Unit did in fact come

25 billstein-cross-donnell



1 into the Little Wind Unit. We have groundwater iso-
2 pleths of that area and it confirmed that. In this
3 particular case we made a distribution based on acreage
4 as to how much would come in to the Big Wind and how
5 much would go in to the Little Wind. The amount that
6 would go in the Big Wind was accounted for in Control
7 Point No. 39; the amount that was going in to the Little
8 Wind I chose to neglect in my Popo Agie, Little Wind,
9 Big Horn System, again, because of the dominance of the
10 water resources of the Popo Agie which makes that an
11 inconsequential amount.

12 Q What I'm interested in, Mr. Billstein, is the area above
13 Point 36 in orange. Now, why isn't the return flow
14 picked up at Point 36 instead of going on clear down to
15 the end of 39? They're both on the same river and it
16 seems like it would make more sense to me to pick it up
17 more likely where it would hit the river.

18 A In that particular case, Counselor, we made distinctions
19 for control points as a matter of convenience for the
20 computer program.

21 THE SPECIAL MASTER: As a matter --

22 THE WITNESS: Of convenience to the computer
23 operator; in this particular case myself.

24 It wasn't important to me that I account for all

25 billstein-cross-donnell



1 this return flow in this small reach. This was the,
2 a major diversion here. I felt that I had sufficient
3 river flow to easily meet the needs of the Lefthand
4 Unit. For ease of convenience to me I collected all
5 that return flow at Point 39.

6 The particular study area boundaries show where I
7 collected that return flow. The point is, all the return
8 flow could be collected at that point. If I chose not
9 to collect it any earlier than that, that was just an
10 operational parameter that I superimposed. That's not
11 to say that it does not come in earlier than that. I
12 chose to say it was not important to me for the purposes
13 of my study.

14 Q (By Mr. Donnell) In that particular area, would that fact
15 that you picked up groundwater, operationally, at a much
16 later point, does that affect your determination for the
17 purposes of fisheries at all?

18 Maybe I'm not making myself clear.

19 A I understand the question.

20 Q Isn't the fact that you picked up 39 going to show less
21 water in the river above 36 than is in fact going to be
22 there?

23 MR. ECHOHAWK: Could I have the question read back,
24 please?

25 billstein-cross-donnell



1 THE SPECIAL MASTER: He said he understands the
2 question.

3 Go ahead and read it back, if you will, please,
4 Merissa.

5 (Thereupon the following
6 (question was read back as
7 (follows: "Q Isn't the fact
8 (that you picked up 39 going
9 (to show less water in the
10 (river above 36 than is in
11 (fact going to be there?"

12 (Brief pause.

13 Q (By Mr. Donnell) Well, Mr. Billstein, in order to save
14 time, I don't know that's it's necessary --

15 A My answer to that, Mr. Donnell, is I made a decision at
16 this particular case that this particular volume of water
17 was not important to me in terms of at this location and
18 for the purposes of the fishery study, that it still
19 didn't have any overriding considerations such that I
20 would want to move a series of new return flow collection
21 points upstream. Volumetrically it did not have that
22 much impact on the remaining river flowing, going through
23 this reach. Once Bull Lake Creek came into the system
24 we had a surplus of water supply all the way through that
25 reach.

Q But that would have some impact, would it not, maybe not
much, but some?

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1 A If you wanted to get site specific, in any segment of
2 the reach on a river mile basis and start cataloging
3 the differences between a particular river mile and
4 collection point, which is several miles downstream,
5 there undoubtedly -- or could be some differences.

6 Q Okay. Well, I'm not going to take the time to do that,
7 I'm sure the Master would be happy to hear.

8 MR. WHITE: Excuse me, before we go on, could I
9 ask that the Witness pull those pages out of his note-
10 book that he referred to, please?

11 THE SPECIAL MASTER: Well, he didn't do much
12 testifying, he didn't get a chance to. Mr. Donnell
13 said let it go, he looked at it with a computer and then
14 didn't bother to tell anything from it, so --

15 MR. WHITE: We'll get back to it on cross then,
16 Your Honor.

17 THE SPECIAL MASTER: All right. If the thing has
18 some merit or reason on cross.

19 Go ahead, Mr. Donnell.

20 Q (By Mr. Donnell) Mr. Billstein, what this study is is
21 it's, in effect, a house of cards, it's based on the
22 accuracy of your stream flow data, based on the accuracy
23 of your return flow data, based on the accuracy of your
24 various control points, and if any of those are wrong,

25 billstein-cross-donnell



1 the whole study tends to come apart, doesn't it?

2 MR. ECHOHAWK: Objection, Your Honor. The
3 question's argumentative.

4 THE SPECIAL MASTER: Are you objecting because it's
5 rather illustrative or don't you like the analogy?

6 MR. ECHOHAWK: It's argumentative, Your Honor.

7 MR. DONNELL: It's not argumentative. I want to
8 know whether or not these things are necessary to make
9 an accurate study.

10 THE SPECIAL MASTER: I think the Witness may and is
11 perfectly capable of answering the question and I think
12 he should.

13 THE WITNESS: That's an erroneous conclusion.

14 Q (By Mr. Donnell) Well, what would be correct then?
15 Assuming for purposes of the question, your return flow
16 data is wrong at some point. Isn't that going to affect
17 the accuracy of the overall study?

18 A Again, you've got to get into what you would call level
19 of significance relative to the overall study. We've
20 talked about the stream flows as input data. Its been
21 said that -- everyone agrees, the United States and the
22 State of Wyoming, as to the reasonableness and the
23 accuracy of the stream flow records.

24 MR. WHITE: Wait a minute. Your Honor --

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1 THE SPECIAL MASTER: Let the Witness finish, please,
2 Mr. White.

3 A That is one particular input. The return flow estimates
4 do have some impact in terms of the volume that you assign
5 to return to the stream as well as the temporal
6 distribution. But you have to be able to go into a study
7 such as this, take a look at the relative importance of
8 the parameters and see how they interplay with one another.

9 It certainly does not follow that if you were off
10 in a matter of a few percentage points in one of these
11 components that it detracts totally from the significance
12 of the output.

13 THE SPECIAL MASTER: Mr. Donnell, let me ask a
14 question along the lines of yours.

15 But if in the work of Mr. Toedter, which was on
16 depletion --

17 THE WITNESS: Right.

18 THE SPECIAL MASTER: When it was cranked into the work
19 of Mr. Keene, which was on natural flows and we found
20 that there was not factual data to support the B:2
21 deductions based upon other factors to conclude a river
22 flow and found some error between natural flow and
23 historic flow, wouldn't that, in fact, have a direct --
24 if it was substantial enough, not diminimus -- wouldn't

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1 it have a substantial bearing upon your conclusions
2 as to availability?

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1 THE WITNESS: The B.2 flow stations, Your Honor,
2 that you're talking about, I believe are on the minor
3 tributaries, and those particular inflows are not
4 built into this operational study. They are dismissed
5 from the operational study as being insignificant. So
6 that --

7 THE SPECIAL MASTER: Who dismissed them from the
8 operational studies as being insignificant?

9 THE WITNESS: I did.

10 THE SPECIAL MASTER: Okay. Go ahead, Mr. Donnell.

11 MR. WHITE: Your Honor, could I say one thing?

12 THE SPECIAL MASTER: Yeah.

13 MR. WHITE: The State of Wyoming has not yet hired
14 Mr. Billstein as an expert. We'd love to have him on
15 our team, but he's not in power to say that the State
16 agrees with the stream flow figures of Mr. Keene, and --
17 as he did state in his next to last answer. I will
18 represent to the Court, however, that --

19 THE SPECIAL MASTER: Mr. Keene's not your witness.

20 MR. WHITE: I understand, but Mr. Billstein said
21 he understood there was no significant difference
22 between the stream flow values, and the truth is that
23 what comes out of the end of the system, according to
24 Mr. Keene, is very close to what we think comes out

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1 of the end of the system. But there is significant
2 variations along very critical stretches of the Wind
3 River and out of some tributaries.

4 MR. ECHOHAWK: Your Honor, that is --

5 THE SPECIAL MASTER: That's for you to bring out.

6 MR. WHITE: I understand, I just wanted --

7 MR. ECHOHAWK: That's totally for the witness
8 to bring out.

9 THE SPECIAL MASTER: One at a time, please, Mr.
10 White.

11 MR. WHITE: And I would ask that two portions
12 of the transcript be stricken. First what I have just
13 said, and second what the witness said about the posi-
14 tion of the State of Wyoming since he wasn't authorized
15 to say it.

16 THE SPECIAL MASTER: I don't have to strike it.
17 What's in the record stays in the record on any of
18 these discussions.

19 Go ahead, Mr. Donnell.

20 Q (By Mr. Donnell) Mr. Billstein, if you took into
21 account actual use on this study, for instance in
22 Midvale and on fee land and that sort of thing, that
23 would significantly affect the outcome of that study,
24 wouldn't it?

25 billstein-cross-donnell



1 MR. ECHOHAWK: Objection, Your Honor; outside
2 the scope of direct, calls for speculation.

3 MR. DONNELL: It's a hypothetical.

4 THE SPECIAL MASTER: Let me think about that
5 for a minute, will you gentlemen?

6 MR. DONNELL: It's a simple hypothetical, and he's
7 got the expertise to answer it.

8 THE SPECIAL MASTER: If you would consider the
9 withdrawals and returns of Midvale and of what else?

10 MR. DONNELL: Various private uses within that
11 study area.

12 THE SPECIAL MASTER: Various private uses. This
13 would have affected the outcome of your study, would it
14 not.

15 MR. ECHOHAWK: I would add further my objection,
16 Your Honor, it's irrelevant. Mr. --

17 THE SPECIAL MASTER: It may be a little bit on the
18 irrelevant side considering what this man's duties were,
19 but I think he can answer the question. Maybe he can
20 throw some light on it.

21 MR. ECHOHAWK: Your Honor, may I point out, this
22 is Mr. Donnell's first entry into --

23 THE SPECIAL MASTER: Effects?

24 MR. ECHOHAWK: Yes, as to impact.

25 THE SPECIAL MASTER: That's what I mean; he wants



1 you to wait until November in Riverton, Mr. Donnell.

2 MR. ECHOHAWK: It's been the position of the
3 United States all along, and we feel the case law
4 supports us on impact and --

5 THE SPECIAL MASTER: I appreciate the objection,
6 and I'm going to overrule it nevertheless and let him
7 answer that much of this question: Is there some
8 way that, that having cranked into Midvale's storage
9 as well as Midvale's -- Midvale takes a whapping
10 depletion up at the dam, the taker of its irrigation.
11 I presume he didn't take in the flow, going into the
12 flow as well as the flow coming back, so I think he
13 should answer that. Let's have a professional overview
14 of your considerations vis-a-vis the existence of
15 non-Indian irrigation projects on this river. I'll
16 ask it and overrule the objection.

17 MR. ECHOHAWK: And I would strenuously object.
18 This is totally beyond the scope of what Mr. Billstein's
19 testimony was about, it's totally irrelevant to the case.

20 THE SPECIAL MASTER: Mr. Echohawk, it's not totally
21 irrelevant to the case, and it's not much removed from
22 what he was testifying about.

23 I would like to know, and I'll ask these kinds
24 of questions. Now, object if you hear them. One,
25 did you crank out of your totals, the diversion that



1 takes place at the dam for -- that goes into the
2 Wyoming Canal for the initial irrigation of the
3 first Riverton systems?

4 THE WITNESS: The Midvale Irrigation Project --

5 THE SPECIAL MASTER: Yes.

6 THE WITNESS: -- was not considered.

7 THE SPECIAL MASTER: All right. If you did not
8 consider the Midvale diversion, then you certainly
9 did not consider the Midvale return flow, did you or
10 didn't you?

11 THE WITNESS: I did not.

12 MR. ECHOHAWK: Again, as Mr. Billstein pointed
13 out, the analysis was done using 1868 priority, first
14 right on the river.

15 THE SPECIAL MASTER: We're talking a factual
16 matter here now, you see. You know, he did it with
17 an 1868 priority, but there was diversion taking place
18 halfway down the river, and it is not an illegal one.

19 MR. ECHOHAWK: With a junior priority right.

20 THE SPECIAL MASTER: Well, whether that's --

21 MR. DONNELL: That's an assumption.

22 THE SPECIAL MASTER: Whether it's junior or not
23 is irrelevant. We're talking volumes of water right
24 now.

25 MR. DONNELL: 1868.



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THE SPECIAL MASTER: And we wanted to know --

MR. ECHOHAWK: Mr. Billstein's testimony related to the availability of water to serve the United States' claim in an 1868 priority date.

THE SPECIAL MASTER: Well, Mr. Echohawk, you're presuming that this case has to end by giving an 1868 priority date, and that's what I'm hired for and not you; that's my decision.

MR. ECHOHAWK: But that is the position that the United States is asserting.

THE SPECIAL MASTER: Of course it is, but that doesn't mean you can throw out all the evidence that might come in based upon some other assumption. I'm not even basing my assumption upon some other priority date. I'd just like to know if, in this man's professional engineering studies, he took into account some of the diversions or return of any water for non-Indian projects, and he said no, he didn't. There's nothing wrong with that. So let's go on to the next point. Mr. Donnell.

MR. DONNELL: I want to know the second half of that question; is whether the failure to take those into account would affect the outcome of that study.

MR. ECHOHAWK: Certainly wouldn't, Your Honor.

THE SPECIAL MASTER: Just a minute. Let me think



1 about the question, let me see if the witness should
2 answer that question.

3 How do you mean affected the outcome of your
4 study?

5 MR. DONNELL: I just wanted to know --

6 THE SPECIAL MASTER: Pin it down a little bit.

7 MR. DONNELL: -- if -- and this is hypothetically,
8 but if he accounted for Midvale and the other private
9 uses of that area, if he would still be of the opinion
10 that there's enough water to serve what is actually
11 going on up there.

12 THE SPECIAL MASTER: All right. You may answer
13 that question or take a stab at it.

14 THE WITNESS: Okay, Your Honor. I'll look at it
15 a couple ways. The outcome of the study, based on an
16 1868 priority, would stay the same. You could still
17 serve the Indian lands and perhaps some upstream
18 development of storage could be brought on to serve
19 as makeup water to the junior water user, given that
20 the Court decides to go with a 1868 priority.

21 One would have to study the sites such as Blue Hose,
22 and operated through a priority system of water rights,
23 exchange waters with Boysen to make that kind of deter-
24 mination.

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1 With respect to the basic premise of an 1868
2 senior water right, that doesn't change.

3 If all lands were treated the same, with an
4 equal priority or if the Indians came in or the trust
5 lands, that is, with a much later priority, then a
6 withdrawal such as what occurs to the Midvale Irrigation
7 Project as well as the LeClair-Riverton Valley Project
8 would severely impact the ability to serve the trust
9 lands as defined by the Government's claim.

10 THE SPECIAL MASTER: Would they impair the trust
11 lands as defined by the claims or would they impair
12 the trust lands if all of the future land were developed
13 and had been drawing water?

14 MR. ECHOHAWK: Your Honor, I would also, for
15 point of clarification, indicate that the United States
16 is making a water rights claim for all of this acreage.
17 We broke it up into future and historic for ease and
18 convenience, for an accounting method so we could tell
19 what we're talking about. But generally, the claim
20 of the United States is one amount of water for one
21 amount of acreage.

22 THE SPECIAL MASTER: And in consideration of that,
23 I will withdraw my question before I start committing
24 my own errors. So my question is withdrawn.

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MR. WHITE: I'll ask the same question on cross.

THE SPECIAL MASTER: I'll overrule it. I think we've taken this about as far as a priority would permit us.

Okay, Mr. Donnell.

Q (By Mr. Donnell) Mr. Billstein, we talked a lot about shortages and increasing efficiencies and that sort of thing. What happens to efficiency in a water transmission system when you got a shortage, when the weather's hot, the water's down, what happens to efficiency under those conditions?

MR. ECHOHAWK: Objection, Your Honor; question's unclear. What does he mean by "transmission system"?

THE SPECIAL MASTER: He meant the questions -- The objection is overruled, he may answer.

MR. DONNELL: I can clarify it.

Q (By Mr. Donnell) Aren't you going to lose more water out of the ditch than you're carrying in?

MR. ECHOHAWK: Your Honor, this assumes also that all are unlined or unopened ditches.

THE SPECIAL MASTER: He may answer. If the witness is able to, he may answer.

THE WITNESS: Well, you're basically speaking about the loss of efficiencies early in the year, during
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1 the initial wetting, this type of thing. And basically
2 the flow, as we've specified in for purposes of the
3 study, is that we, for all practical purposes, have
4 high early season flows, so the conditions of high
5 flow generally occur late in the irrigation season.
6 So that would not be as critical of a problem.

7 Q (By Mr. Donnell) Would efficiency be affected at all
8 under those conditions?

9 A. There are a tremendous amount of additional factors
10 that go into an overall efficiency; be it conveyance
11 or on-farm, that have equal or as much impact as that.
12 One would have to take a look at all the management
13 decisions that are going on at that time so you can
14 come close to making a decision.

15 Q I don't mean management decisions, I mean just strictly
16 as a physical matter. If you've got less water in a
17 ditch than you might normally have and the weather is
18 hot, does that have an effect on how much water gets
19 down the ditch at all?

20 THE SPECIAL MASTER: I think he answered that
21 question pretty much. There's a world of factors in
22 there, whether it's conveyance facility or whether
23 they're on-farm, you know. It's almost too vague for
24 a specific answer, Mr. Donnell.

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1 Q (By Mr. Donnell) Okay. Mr. Billstein, referring
2 to a particular tract of land in the -- in the Hidden
3 Valley Area, Township 2 North, Range 6 East, tracts,
4 I believe are No. 87, 88 and 89. Those are served,
5 as I understand, by the Pilot Canal; is that right?

6 A. That would be right.

7 Q And do you know what the duty of water is on those
8 tracts? Would it be safe to say five feet, give or
9 take a foot? That's what most of them are.

10 A. Our research of the Midvale Irrigation Project
11 puts it somewhere in there.

12 Q Now, the Pilot Canal diverts approximately fifty miles
13 from those particular parcels, doesn't it? Doesn't
14 it divert at -- what is it, Control Point 32?

15 A. Pilot Canal?

16 THE SPECIAL MASTER: Pilot Butte.

17 Q (By Mr. Donnell) Pilot Butte.

18 A. No.

19 Q Where does the water for these lands divert from?

20 A. It diverts from a main Diversion Dam canal, the Wyoming
21 Canal, but not the Pilot Canal.

22 Q All right. Where's that at, the control point?

23 A. The diversion is taken in account from Control Point 32.

24 It -- The Pilot Canal itself goes through Pilot Butte

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1 and then gives water over.

2 Q It's a considerable distance at any rate, isn't it?

3 A That's right.

4 Q Now, how are you going to divert five acre-feet of
5 water, more or less, whatever the duty is up there,
6 and carry it forty to fifty miles, which is about the
7 distance, and get five acre-feet of water on that land?
8 Aren't you going to have to divert considerably more
9 than that to get it?

10 MR. ECHOHAWK: Objection, Your Honor, the question
11 is for Mr. Stetson or Dr. Meshinna.

12 MR. WHITE: It's not a question for --

13 THE SPECIAL MASTER: Just a minute. I'm going to
14 sustain the objection because this goes beyond the
15 scope of the direct testimony of this witness.

16 MR. DONNELL: Your Honor --

17 THE SPECIAL MASTER: That's the reason I'm going
18 to do that.

19 MR. DONNELL: The witness has testified to the
20 data he used, which is the duty of water which was
21 specified to him.

22 THE SPECIAL MASTER: Right.

23 MR. DONNELL: For any parcel of land, and I want
24 to know how that duty of water is going to make it

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1 fifty miles down the --

2 THE SPECIAL MASTER: All right. You may ask him
3 about the duty of water at any one of the twenty-six
4 projects on any of the exhibits or any of the hundreds
5 of places he's testified in the two study areas. That's
6 what his direct testimony was about. You're off of it
7 at least by ten or twelve miles, so I'm going to rule
8 that your cross-examination questions have gone beyond
9 the scope and are, therefore, improper of the material
10 covered in the direct examination.

11 Q (By Mr. Donnell) Did you in fact study those two parcels,
12 Mr. Billstein?

13 A. Study, in what way?

14 Q Are they, in part, one of your study areas?

15 A. That's right.

16 Q Which study area is that?

17 A. The Wind River -- Big Wind River Study Unit.

18 THE SPECIAL MASTER: Will you point to the acreage
19 again, please, that he's talking about.

20 (Witness complied.)

21 THE SPECIAL MASTER: And they are part of the big
22 study unit outlined in red?

23 THE WITNESS: That's right, Your Honor.

24 THE SPECIAL MASTER: What happened to your right
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1 boundary of that study area --

2 THE WITNESS: Well, there's --

3 THE SPECIAL MASTER: -- you have?

4 THE WITNESS: There is a small amount of acreage
5 that falls outside of those study unit boundaries
6 which return into the Big Horn River system. So for
7 ease of presentation, any of those lands that the
8 return flows didn't return to the Big Wind Study Unit,
9 we just showed those outside of the --

10 THE SPECIAL MASTER: Well, in that case, I have
11 no basis for ruling the way I did. It's cut out from
12 under me. So I guess the question must be answered.

13 THE WITNESS: I should add though, Your Honor,
14 the control point descriptions document that those
15 lands are in fact served as part of the Big Wind System.

16 THE SPECIAL MASTER: Very well. Then you can go
17 ahead and answer his question on those particular acres.

18 THE WITNESS: We've got to get back into the
19 analysis of what I was charged to do. I operated a
20 river system based on a series of diversion points with
21 water claims given to me. My job was to analyze whether
22 I could furnish five acre-feet or whatever the water
23 duty for those particular tracts were at that location
24 in the river system and nothing more.

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1 Q (By Mr. Donnell) I take it you relied entirely on
2 Mr. Stetson, is it?

3 A He assigned --

4 Q In determining the water duty?

5 A He assigned the water duties to that area. That is
6 a particular -- That demand component is a given
7 in this study.

8 Q You talked this morning about an industrial development,
9 I think it was the uranium development was going to be
10 fed from the LeClair Canal; is that right?

11 A That's right.

12 Q And that was 480 acre-feet a year?

13 A I'll consult my notes.

14 THE SPECIAL MASTER: My notes show that his
15 testimony said that the uranium plant was to be on
16 Crow Creek. Maybe there is a canal close to it, I
17 don't know.

18 MR. ECHOHAWK: I believe that is correct, Your
19 Honor. The uranium processing plant is on Crow Creek.

20 THE WITNESS: That's right.

21 Q (By Mr. Donnell) I'm wondering which development it
22 was that served in the LeClair Canal?

23 A Which development?

24 Q Isn't there one being served?

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1 A. There is a phosphate processing plant and wallboard
2 processing plant respectively programmed as well as
3 an ammonia plant programmed, counsellor.

4 Q. And how much water are those three using?

5 MR. ECHOHAWK: Objection, Your Honor; asked and
6 answered. We covered this this morning.

7 THE SPECIAL MASTER: Two were asked, one was
8 not. He may answer if he can.

9 THE WITNESS: That's already been read into the
10 testimony.

11 THE SPECIAL MASTER: How much was it for the
12 aluminum plant, that was not read in the testimony?
13 There's an ammonia plant.

14 THE WITNESS: I meant to say ammonia plant, Your
15 Honor.

16 THE SPECIAL MASTER: We're having a bad time
17 this afternoon.

18 All right. The ammonia plant is in the record,
19 and he asked you how much is that, and you may answer.
20 He has a right to ask questions on occasion to test --

21 THE WITNESS: 4,250 acre-feet distributed at
22 roughly 354 acre-feet per month.

23 THE SPECIAL MASTER: Twelve months a year?

24 THE WITNESS: Yes, sir.

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1 THE SPECIAL MASTER: Thank you.

2 Q (By Mr. Donnell) Roughly, Mr. Billstein, how many
3 cfs is that 354 acre-feet a month?

4 A. It's between, it's over five cfs.

5 Q. Now, how are you going to get five cfs of water down
6 in the LeClair Canal in the wintertime when it's
7 twenty below, and there's not otherwise water in it?

8 A. The -- I should clarify one point. The point of
9 diversions that were given to me --

10 THE SPECIAL MASTER: You don't have to answer
11 that question. I'm surprised it's been permitted.

12 MR. WHITE: Your Honor, I'd like to ask that you
13 direct him to answer.

14 THE SPECIAL MASTER: The question -- answer will
15 be that he leaves that up to the people that are
16 running the plat period. That's their responsibility
17 not his.

18 MR. DONNELL: The point I'm trying --

19 THE SPECIAL MASTER: My God, he doesn't have
20 to answer that question.

21 MR. DONNELL: The point I'm trying to make, Your
22 Honor, this is not necessarily an entirely practical
23 sort of layout.

24 THE SPECIAL MASTER: That can come on your case
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1 and not on his cross-examination.

2 MR. DONNELL: I think it's fair to bring it in
3 on his cross-examination; he's represented that this
4 is an accurate and workable operation.

5 THE SPECIAL MASTER: No. Mr. Donnell, I take --

6 MR. ECHOHAWK: The question is --

7 THE SPECIAL MASTER: I take -- You're going to
8 make me buy a gavel yet, aren't you, guys?

9 The question is the amount of water, and is it,
10 therefore, respective United States' claims. The
11 United States has claimed some water for an ammonia
12 plant, and he says it is available and will do the
13 job at that amount. How it's going to be run in the
14 wintertime is irrelevant to his testimony, and the
15 question is overruled.

16 MR. DONNELL: That's fine, I'll go on to something
17 else.

18 THE SPECIAL MASTER: All right.

19 MR. ECHOHAWK: We could move this a little quicker
20 if Mr. Donnell would stop taking breaks and conferring
21 with Mr. White, and we could keep this going.

22 MR. DONNELL: I'm just about finished.

23 THE SPECIAL MASTER: It's a two-man operation,
24 their cross, the same kind of thing. Go ahead with
25 your cross.



1 Q (By Mr. Donnell) Now, Mr. Billstein, we heard quite
2 a bit of discussion about periods when there is a
3 time of shortage and how that could be taken care of
4 by management.

5 A. Right.

6 Q. That would be, as I understand it, management of the
7 government lands; is that right?

8 A. No, not entirely.

9 Q. Okay. Who would be involved in this management?

10 A. Well, let's take a case study.

11 Q. All right.

12 A. The Little Wind Unit, for example, or the Little Wind
13 Study Unit. The private water users in that area,
14 specifically the North Fork water users of the Little
15 Wind River, the South Fork Little Wind users, we got
16 the Trout Creek water users, the water -- as well as
17 the Wind River Federal Irrigation Project water users,
18 who utilize the water supply in the Little Wind Unit.
19 All those people have had to work together in the past
20 to allow sufficient waters to be available to serve all
21 their needs. They set up delivery schedules between
22 each other, and they trade off in terms of irrigation,
23 if necessary, to enable water to go a little bit farther.
24 In particular, the North Fork water users, they are

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1 just below the diversion of the North Fork of the Big
2 Wind to the South Fork of the Big Wind, which serves
3 the Ray Canal, which is one of the priority conveyance
4 systems in the Little Wind Unit. Now, it's very
5 important that the federal irrigation project people
6 work with the North Fork irrigation people so that
7 when they have a large call with that transbasin
8 canal, that they don't dry up the stream.

9 And during drought year 1977, when, in fact,
10 the federal irrigation project people met, the
11 respective private water users was also involved
12 because they have had a history of cooperating in
13 the area, and their particular demands were built into
14 the overall demands of the water plan for that low flow
15 year.

16 Q Okay. Now, the question I have is this, as long as
17 we are talking about private people: Assume we've
18 got a situation like you've talked about, where we've
19 got a fifteen percent shortage in a given month, and
20 that's fifteen percent short of serving only the
21 federal lands. Now, I assume if you bring the private
22 people into that, you're going to have a greater shortage
23 than that, aren't you?

24 A. Counsel, when you say "federal lands", are you talking
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1 about trust lands?

2 Q. I mean the lands claimed and as taken in under your
3 study.

4 MR. ECHOHAWK: Could I have the question read
5 back, the previous one?

6 THE SPECIAL MASTER: He meant trust lands, and
7 he says if there's fifteen percent shortage, from
8 his testimony, if you were to consider the non-Indians
9 on the river, wouldn't there be, in fact, a little
10 higher than fifteen percent.

11 MR. ECHOHAWK: Mr. Billstein's testimony relates
12 to asserting the 1868 priority date.

13 THE SPECIAL MASTER: Once again I appreciate
14 that. Once again I overrule that, and once again
15 he may answer that, if he can.

16 THE WITNESS: Your Honor, it's obvious, any
17 time you bring on additional acres with the corres-
18 ponding additional demands, that it's going to impact
19 your management strategy as to how to make water go
20 a little bit farther during low flow periods.

21 Q. (By Mr. Donnell) And it is possible, is it not, that
22 given sufficient private acreage to be added into
23 this system, that management would no longer be
24 feasible? Isn't it possible --

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MR. ECHOHAWK: Objection.

THE SPECIAL MASTER: I would think that that question goes a little too far, Mr. Donnell. He's answered the question that it requires cooperation between the trust land owner and fee land owner in short water periods.

Q (By Mr. Donnell) I understand it, you use natural flows in your computations; is that right?

A. That's right.

Q Did you also use storage, man-made storage?

A. That's right.

Q Why did you do that if we are looking at a natural flow condition where man-made storage doesn't exist?

MR. ECHOHAWK: Objection, Your Honor. As Mr. Billstein has testified, it's not that they're using the natural system, they're set out to use a system to operate first priorities.

MR. WHITE: That's 1868, Your Honor --

MR. DONNELL: That's 1868, Your Honor --

MR. ECHOHAWK: We're talking of first priority.

THE SPECIAL MASTER: Gentlemen, we don't need a duet.

MR. DONNELL: Might I make my return comment, and that's all I'll have to say. We are using an billstein-cross-donnell



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1868 priority, we are using natural flow conditions except where, as I understand it, the water is short and there is storage available and it's not convenient to use natural flow, then we pick up the man-made storage.

MR. ECHOHAWK: Your Honor --

THE SPECIAL MASTER: Mr. Donnell, we had three or four or five days of which, which went into depletions, return, credit for return higher than depletion and vice versa, the simulation of natural flow and historic flow and back and forth, and it's all a process and a formula, and I think if you can sharpen up your questions onto that process, I'll permit them to be asked.

MR. ECHOHAWK: Your Honor, I think we need to clear up the understanding. The reason that the natural flows were established is so we could find out what the system is like to operate a first priority, and that's all we're doing.

THE SPECIAL MASTER: What the system was like, you're saying before there was a taking of any water?

MR. ECHOHAWK: Which is a system. If everyone else goes out of priority, you take everyone else out of priority and let the first person on the system operate it as it is there today, that's what we're

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1 doing. We're not trying to take it back to the
2 creation of the reservation or anything like that.
3 We're taking first priorities.

4 MR. DONNELL: That's my point, Your Honor.
5 They're going backwards and forwards, depending on
6 what's convenient.

7 THE SPECIAL MASTER: Ask your question again
8 and see if you can't get it specific, either to a
9 particular place or study, or particular application
10 of a technique or particular methodology.

11 Q (By Mr. Donnell) Mr. Billstein, as I understand in
12 this adjudicated area, there's a reservoir that was
13 used to provide storage water on the minor tributaries;
14 is that right? I don't remember the name of it. You
15 mentioned it this morning.

16 THE SPECIAL MASTER: I don't think there's a
17 reservoir there that could hardly provide storage
18 for the fields upstream of it, Mr. Donnell.

19 Are you pointing to Stagner Ridge or something
20 in that area? Steamboat Butte Reservoir?

21 Can you identify what you looked at?

22 Q (By Mr. Donnell) How about Washakie Reservoir, is
23 that programmed into the study?

24 A. Yes, it is.

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- 1 Q And is Washakie Reservoir a natural reservoir or
2 man-made?
- 3 A. That's a man-made reservoir.
- 4 Q So you're using both natural flows and man-made storage
5 that occurred after 1868?
- 6 A. In this particular case, this reservoir was built into
7 the system.
- 8 Q Are there other instances where that was done?
- 9 A. Ray Lake.
- 10 Q Any others?
- 11 A. Well, the particular example that you chose initially
12 on Dry Pasup Creek, is that you have a block of trust
13 land being operated by Joline Sheer, who is a farmer-
14 rancher in the lower part of Dry Creek. She has a
15 storage facility in place to -- she uses to serve her
16 land. Looking at the overall ability of Dry Pasup
17 Creek, that particular storage facility was recognized.
18 In this particular case, in terms of the early season
19 flow relationship between demand and water availability,
20 it made little or no difference because just like most
21 reservoirs in the minor tributaries, they're extremely
22 small.
- 23 Q Did you use the HEC-3 Program in, in your computations
24 in the minor tributaries?
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1 A. No.

2 Q. How did you go about -- go about that process?

3 A. We took a look at study sites. Those study sites
4 have previously been introduced in Mr. Keene's
5 testimony.

6 We established water flow estimates for those
7 study sites, either from Mr. Keene's work or field
8 observations, and the water supply in those cases
9 was compared against the demand for the lands that
10 would be served above those particular sites or
11 which would be charged against the water supplies
12 at that particular location.

13 Q. So it was done by hand, essentially?

14 A. That's right.

15 Q. All right. On these adjudicated lands, as they
16 operate right now, do they use a priority system
17 on those lands currently?

18 MR. ECHOHAWK; Objection, Your Honor, irrelevant.

19 THE SPECIAL MASTER; I would say he's not the
20 witness who would know.

21 MR. DONNELL; He's testified that --

22 THE SPECIAL MASTER; The point is there are too
23 many areas of adjudicated acres that are being irri-
24 gated. If you can specify some particular place on
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1 the tributaries, north or somewhere in the FIP's,
2 or somewhere in which system.

3 Q (By Mr. Donnell) I'll ask the question the other way
4 around. Do you know of any areas on the minor
5 tributaries, Mr. Billstein, these light blue areas,
6 where the priority system is in effect?

7 MR. ECHOHAWK: Objection, Your Honor. It's
8 irrelevant.

9 MR. DONNELL: It's not --

10 THE SPECIAL MASTER: It may be irrelevant, but
11 if he can answer, let him. I'll allow him to answer
12 if he can, if he knows.

13 THE WITNESS: That wasn't part of my study
14 research.

15 Q (By Mr. Donnell) You did not, in the course of your
16 conversations with all these people, ask them about
17 that?

18 A. That wasn't the purpose of my study. I can't recall
19 any of them speaking to the fact that they have a
20 priority system on any of the minor tributaries.

21 Q Apparently even though it's adjudicated land, they
22 don't work it that way?

23 THE SPECIAL MASTER: Now, you're getting argu-
24 mentative. He said, no, he didn't talk to them; he
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1 said, no, he didn't find out. He said they didn't
2 say anything to him.

3 MR. DONNELL: I think that is all I have, Your
4 Honor.

5 THE SPECIAL MASTER: Okay. Mr. White.

6 MR. WHITE: Could I have about a five-minute
7 recess? We've been going about an hour, Your Honor.
8 I'll get my notes together and be ready.

9 MR. ECHOHAWK: Could we go off the record?

10 (Off the record discussion.)

11 THE SPECIAL MASTER: In that case, let's go carry
12 out what you two have agreed to. Next time you make
13 an agreement, include me.

14 We'll stand in recess.

15 MR. ECHOHAWK: The word I'd gotten was we were
16 going to quit at two o'clock.

17 THE SPECIAL MASTER: We'll stand in recess until
18 the next meeting.

19 (Thereupon, the proceedings
20 (were recessed at 2:15 p.m.

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7 facts as stated in the caption hereof are true; that we did
8 at the time, date and place, as set forth, report the pro-
9 ceedings had before the Honorable Teno Roncalio, Special
10 Master Presiding, in stenotype; that the foregoing pages,
11 numbered 7333-7488, inclusive, constitute a true, correct and
12 complete transcript of our stenographic notes as reduced to
13 typewritten form under our direction.

14 We further certify that we are not agents, attorneys
15 or counsel for any of the parties hereto, nor are we interested
16 in the outcome thereof.

17 Dated this 19th day of June, 1981.

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