

6-2-1981

## Trial Transcript, Vol. 71, Morning Session

Frontier Reporting Service

Follow this and additional works at: <https://digitalcommons.law.uidaho.edu/all>

---

### Recommended Citation

Frontier Reporting Service, "Trial Transcript, Vol. 71, Morning Session" (1981). *Hedden-Nicely Collection, All*. 210.  
<https://digitalcommons.law.uidaho.edu/all/210>

This Transcript is brought to you for free and open access by the Hedden-Nicely at Digital Commons @ UIIdaho Law. It has been accepted for inclusion in Hedden-Nicely Collection, All by an authorized administrator of Digital Commons @ UIIdaho Law. For more information, please contact [annablaine@uidaho.edu](mailto:annablaine@uidaho.edu).

File 178  
4429  
Box 12

case # 4993

File # 178

4429

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

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

IN RE:

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

)  
)  
)  
)  
)  
)

Civil No. 4993

FILED

6/23

1981

*Margaret V. Hampton*

CLERK

DEPUTY

VOLUME -71

BE IT REMEMBERED that on this 2nd day of June, 1981,  
at Room 302, State Capitol Building, Cheyenne, Laramie County,  
Wyoming, the above-entitled matter resumed for trial before  
the Honorable Teno Roncalio, Special Master, presiding, where-  
upon the following proceedings were had, to wit:

P R O C E E D I N G S :

**ORIGINAL**



APPEARANCES

FOR THE STATE  
OF WYOMING:

HALL & EVANS  
2900 Energy Center Building  
717 17th Street  
Denver, CO 80202  
BY: MR. MICHAEL D. WHITE and  
MR. JAMES MERRILL, Special  
Assistant Attorneys General  
and  
MR. CHRIS HERMAN

FOR THE UNITED STATES  
OF AMERICA:

MR. JOSEPH MEMBRINO  
Attorney at Law  
Land and Natural Resources Division  
Department of Justice  
P.O. Box 7415  
Benjamin Franklin Station  
Washington, DC 20044

and

MR. THOMAS ECHOHAWK  
Attorney at Law  
Land and Natural Resources Division  
Department of Justice  
1961 Stout Street  
Denver, CO 80294

FOR THE SHOSHONE and  
ARAPAHOE TRIBES:

WILKINSON, CRAGUN & BARKER  
1735 New York Avenue, N.W.  
Washington, DC 20006  
BY: MR. R. ANTHONY ROGERS

FOR THE PRIVATE  
WATER HOLDERS:

MR. GEORGE RADOSEVICH  
Attorney at Law  
910 15th Street, Suite 866  
Denver, CO 80202

CLERK TO THE  
SPECIAL MASTER:

MR. LEO SALAZAR  
Attorney at Law  
701 Rocky Mountain Plaza  
Cheyenne, WY 82001



1 THE SPECIAL MASTER: We can go on record if you  
2 want and show we're in session and show a slight break.

3 Are there any new appearances? Mr. Radosevich,  
4 anybody with you?

5 MR. RADOSEVICH: No, he's not an attorney.

6 THE SPECIAL MASTER: City of Lander.

7 MR. WHITE: We've got everybody here, Your Honor.  
8 You've already met Chris Herman last summer, he's another  
9 attorney from last summer who has not taken the Bar yet  
10 who will be doing some matters for us at counsel table  
11 but not in any representation matters.

12 THE SPECIAL MASTER: If you can learn, sir, some  
13 ways that the process of litigation can be shortened,  
14 you will be doing humanity and your country and your clients  
15 a great favor in some of this.

16 Mr. Merrill, anybody with you?

17 MR. MERRILL: No, Your Honor. I just thought before  
18 we started up I would serve on the Court the State of  
19 Wyoming's brief concerning the amended motion for judicial  
20 notice filed by the United States. I'm also serving copies  
21 on counsel who are present.

22 MR. ECHOHAWK: At the same time, Your Honor, I would  
23 like to file my brief on the same issue.

24 THE SPECIAL MASTER: You let me know when all your  
25 counsel appear.





1 MR. ECHOHAWK: We are here.

2 MR. MEMBRINO: We are ready.

3 THE SPECIAL MASTER: Oh, you're ready to go. Okay.

4 All right. We will please come to order.

5 Ladies and gentlemen, we have about three preliminary  
6 matters to dispose of today. I have been asked by Judge  
7 Joffe to notify all of you that the amendment to the  
8 first order of certification that we have discussed here-  
9 tofore in other proceedings now before him for his consid-  
10 eration will be signed by him unless he hears, if anyone  
11 has reason why that should not be signed, he wants a  
12 respectable time, several weeks, two or three weeks avail-  
13 able for whatever party may want to be heard or object to  
14 the application that was made to him for removing Paragraph  
15 2 and 3 from the first order of certification and the  
16 referral to the Special Master. And for -- in the amend-  
17 ment for ordering that the date for the final report con-  
18 tained in Paragraph 6(d) of that first order of certifi-  
19 cation be amended to read February 1, 1983 instead of Jan-  
20 uary 1, 1982. So if any of you have cause to raise that  
21 with the judge, please feel free to do so and you must  
22 do so in the next several weeks or the order will be signed.

23 MR. MERRILL: Your Honor, may we obtain a copy of  
24 your motion to Judge Joffe concerning modifying the order  
25 so that we can put it in our files?



1 THE SPECIAL MASTER: You have never had a request  
2 more quickly complied with. You'll Xerox those and --

3 MR. MERRILL: I will make copies for the other counsel  
4 also.

5 MR. WHITE: We will return your original.

6 THE SPECIAL MASTER: Okay. He'll get them for you  
7 too.

8 The next item this morning is something that may have  
9 already been disposed of, please advise me if it has been.  
10 During our last weeks of trial we got into an argument over  
11 the production of entire books used by the State where the  
12 State used "excerpts, excerpts and excerpts from books."  
13 You recall that, Mr. Echohawk?

14 MR. ECHOHAWK: Yes, Your Honor.

15 THE SPECIAL MASTER: And Mr. Merrill?

16 I'd like to think the matter may have been settled out  
17 of court, but I'm ready to rule on this proposition if  
18 it hasn't been settled out of court.

19 MR. MERRILL: I'm afraid we haven't been able to reach  
20 an agreement.

21 MR. ECHOHAWK: We haven't reached an agreement, Your  
22 Honor.

23 THE SPECIAL MASTER: Okay. I believe that Wyoming  
24 Rules of Evidence 106 deals with this matter and it gives  
25 the Court the discretion to determine whether to allow the



1 production, and I would think that the intent favors the  
2 position of the United States in this regard, and the rule  
3 states as follows: "When a writing or recorded statement  
4 or part thereof is introduced by a party, an adverse  
5 party may require him at that time to produce any other  
6 part or other writing or recorded statement which ought  
7 in fairness to be considered contemporaneously with it."

8 That raises two points, the fairness doctrine and  
9 the second, that is there an entitlement to it to be  
10 raised. I can see where taking a sentence out of con-  
11 text from a paragraph which alters its meaning or signifi-  
12 cance, requires, in fairness, the complete paragraph,  
13 but I don't believe a quotation from a handbook of BIA  
14 or Bureau of Reclamation on the subject matters with which  
15 we've been dealing on a particular page requires intro-  
16 duction of an 800 page book from which it's taken under  
17 this doctrine, therein, of course, where we hope to serve.

18 Now, the election of whether to require the production  
19 rests with the adverse party, the United States has so re-  
20 quested it, and I think that's how I'll rule on it. Take  
21 it accordingly from there, Mr. Echohawk.

22 Now, Mr. Radosevich is here -- This is the third item  
23 to dispose of this morning, and this is pending also from  
24 last week. And on this notice, Mr. Radosevich, I'm glad  
25 you are here today, I raise only these observations: I have





1 no objection to signing my name as Special Master to  
2 whatever type of announcement the State of Wyoming and  
3 the United States and Tribes feels should be made in  
4 the Lander-Riverton area for the benefit of the people  
5 there. I will do that, but we have, I again ask in all  
6 candor that we be quite careful in what we say and avoid,  
7 if humanly possible, and avoid if humanly possible of  
8 creating a rash of letters again from dozens of people  
9 to the Special Master which -- which upsets them. It  
10 doesn't bother me, that's our job, all of us, but it does  
11 bother many, many citizens when they see notice of this  
12 kind. One thing that I think we ought to be careful about  
13 is before we say that the State is maintaining that all  
14 adjudicated water rights of record are in good standing  
15 and should not be adversely affected by any claim for  
16 the right to use water other than under state law, is  
17 that what Wyoming is really ascerting? If it isn't, if  
18 you want to put it in a notice, that's your business  
19 and sign off State of Wyoming Counsel, but I'm not sure  
20 that's what you're maintaining. It would appear to me  
21 that what we have to say to people is that because, at  
22 long last and after a hundred and thirty years this nation  
23 and state has decided to quantify and adjudicate these  
24 areas rights to use water in this area. There may very  
25 well be a determination that will have some effect, adverse



1 or otherwise upon existing state water rights. I'd  
2 be a little more honest. There may not be much of an  
3 effect, but there may be some adverse effect.

4 Yes, Mr. White.

5 MR. WHITE: Your Honor, I think the notice that Mr.  
6 Radosevich prepared and which has been reviewed, the other  
7 notice, Your Honor, by the Attorney General fairly sets  
8 out the adversarial position of the State of Wyoming.  
9 We recognize that we may not be successful, but if positions  
10 are being described in the notice, that fairly and correctly  
11 demonstrates our position that the state awarded water  
12 rights, the certificated water rights are valid.

13 THE SPECIAL MASTER: That's true, they are valid,  
14 but this notice said that they should not be adversely  
15 affected by any other claims.

16 MR. WHITE: Well, that's also the State's position,  
17 Your Honor. We may well lose on it, but it's our position.

18 THE SPECIAL MASTER: I appreciate that's your position,  
19 but is it a realistic one, and is it -- Let's put it this  
20 way: Is it in fact an honest one?

21 MR. WHITE: Yes, Your Honor, under the facts and laws  
22 as we see it, it's quite honest. You may not agree and  
23 the Tribes and the United States clearly don't.

24 THE SPECIAL MASTER: Well, I guess it depends on how  
25 you want to define honesty. I don't assert that you're



1 committing a dishonest act, but I doubt very much if it's  
2 telling the truth, the whole truth and nothing but the  
3 truth.

4 MR. WHITE: Well, --

5 THE SPECIAL MASTER: You can't hardly say in good  
6 conscience that a water user in Water Division Number 3,  
7 your certificated water rights, most of which are practical-  
8 ly now confirmed, adjudicated certificated rights will not  
9 get adversely affected by those proceedings.

10 MR. WHITE: What we are trying to say there, Your  
11 Honor, it may not be very artfully done, is that the State  
12 of Wyoming's position is that they should not be adversely  
13 affected by these proceedings. There's nothing the State  
14 will do intentionally that will adversely affect them.  
15 In fact, we will take the position that they're not to  
16 be adversely affected.

17 THE SPECIAL MASTER: Does an announcement that the  
18 State hopes that your rights shall not be adversely affected  
19 and we are defending them to the fullest amount of the  
20 law's ability for us to defend your water rights against  
21 any incursion under the Federal Reserve Doctrine?

22 MR. WHITE: That's fair enough.

23 THE SPECIAL MASTER: That makes a little more sense  
24 and a little more candor.

25 MR. RADOSEVICH: Your Honor, we had discussed briefly,





1 we will get together at the start of the lunchbreak and  
2 work out, if there's any other modification of the language  
3 so that it meets with the approval in terms of description.

4 THE SPECIAL MASTER: All right.

5 MR. RADOSEVICH: Counsel for the Tribes and U.S.  
6 government may still have an issue with respect to whether  
7 the notice should even be published, but I think that part  
8 we can argue. Whether or not we want to decide on the  
9 verbage because primarily I set this out so we can start  
10 to get the ball rolling so we have a benchmark to work  
11 from and work with, particularly on the Tribe's description  
12 and with the State to get the verbage somewhat correct.

13 THE SPECIAL MASTER: All right. I'm glad you're  
14 planning to do it.  
15  
16  
17  
18  
19  
20

21 \* \* \* \* \*





1 THE SPECIAL MASTER: There is another assertion  
2 that individual allotment holders on trust lands,  
3 Indian and non-Indian holders of lands and fee simple,  
4 are not individually included in the representation  
5 made by the State Government or the Tribes. I don't  
6 have the right to say that, but if the State of Wyoming  
7 goes down and U.S. counsel wants to say that, I guess  
8 that's your concern.

9 MR. RADOSEVICH: Your Honor, this was my impres-  
10 sion in discussing this with Ms. Sleater previously  
11 and also counsel for the Tribes that they do not repre-  
12 sent individuals per se. The Federal Government repre-  
13 sents the federal interests in the trust lands. And  
14 not to say what you'll be stating later, but I think we  
15 should inform the individual water users that they as  
16 individuals are not represented; that they have the  
17 right to that; their interests as individuals are not  
18 being represented.

19 THE SPECIAL MASTER: Well, this is perhaps where  
20 I have my most serious question about a notice. When  
21 you say to an individual holder of a water right, "You  
22 are not represented," you do two things. In my opinion,  
23 he is represented. Every holder of a Wyoming water  
24 right is very competently represented in these proceed-  
25 ings, and to say that he is not is really not a candid



1 and reflective -- truthfully reflective statement. Two,  
2 when you say the water rights now, after we've been at  
3 this for nearly two years, since it's been filed, that  
4 you better find a lawyer, you're going to send a lot of  
5 them looking for lawyers. And we get up another fury  
6 of letters, oh, we're spending a fortune for lawyers  
7 that we shouldn't have to be. And, you know, we've been  
8 through that once. Does a water right holder have a  
9 duty to go find a lawyer to better defend him than he's  
10 already been defended now. I can't believe that he can.  
11 Frankly, how can there be a more proper cross-examination  
12 of these interests than that that's going on right now?

13 MR. WHITE: Can I say something about --

14 THE SPECIAL MASTER: Well, Mr. Radosevich, may I ask  
15 you to yield --

16 MR. RADOSEVICH: Your Honor, with respect to the  
17 very last sentence, which I realize you objected to week  
18 before last, I believe that portion should be stricken.  
19 We don't want to give any implication that the individual  
20 should go out and seek counsel. That part we can strike.  
21 However, the very last sentence, not the entire paragraph.  
22 I think the part that is important, if you have an Indian  
23 or a non-Indian fee simple landholder on the Reservation  
24 who is suspecting that his water right may be confirmed  
25 as of the date of the preservation of reserved rights to



1 the Tribe, and it is not then the fact it is a 1906 or  
2 whatever and later the reserved rights claims are adjudi-  
3 cated by the Court, he may be completely taken out of  
4 priority in the enclave of the Reservation itself.

5 So I think that there is a misimpression among a  
6 lot of the people I've spoken with that because their  
7 land is within the enclosure of the Indian Reservation,  
8 even though it is held in fee simple, that if the re-  
9 served right establishes the date of the water right,  
10 that is going to be the date of their water right, and  
11 this is a legal question which hasn't been resolved  
12 yet. This is the part I think that will cause perhaps  
13 more conflict.

14 THE SPECIAL MASTER: This is the part that is in  
15 issue, yes.

16 MR. RADOSEVICH: There is the real issue and if,  
17 in fact, they should be asserting that their lands -- I  
18 believe it was pointed out to me that there was something  
19 like 1800 acres, irrigated, Indian and non-Indian fee  
20 simple land. If, in fact, those lands are going to re-  
21 tain the date of the certificated water right by the  
22 State of Wyoming and all of the lands surrounding them  
23 and the other claims are given the 1868 date, they are  
24 just as much jeopardized as the City of Lander is in  
25 terms of their location.





1 THE SPECIAL MASTER: All right. I wish you good  
2 luck in your conference, and let me know what your results  
3 are tomorrow or the next day. And I wish you would use  
4 the benefit of the record on my observations on the first  
5 part of this regarding that announcement. Then if you  
6 concur, that is fine.

7 MR. WHITE: I concur with your observations. And  
8 if we can take some liberty with the punctuation, Your  
9 Honor, I'll go ahead and stick it in.

10 THE SPECIAL MASTER: Okay. Clarify it as best you  
11 can.

12 MR. ROGERS: Your Honor, while we are here and be-  
13 fore we depart, it has occurred to me, perhaps I furnished  
14 to you as a piece of information and other counsel here,  
15 I don't know if I got every other counsel a notice that  
16 the two tribes have placed in the Riverton Ranger in  
17 October of last year. What I'm wondering is, if it is  
18 not appropriate, rather than having the Master place a  
19 notice in the paper, for the State to do something similar  
20 to what the Tribes have done with their own language.  
21 That way the Court is not placed in the position of  
22 either endorsing or not endorsing the necessity of seek-  
23 ing representation.

24 THE SPECIAL MASTER: I was happy -- This is my point  
25 when I began this morning is: I will, if I'm asked by the





1 two of you to sign on something, you two prepare, I'll  
2 let my name appear as Special Master. But it is not  
3 going to be a Court Order; it is merely a fact that you  
4 two have submitted your notice to me and I have no reason  
5 to object to it. But I would welcome a notice from the  
6 State of Wyoming and you set it out the way you think  
7 it is. There's certainly no impropriety in doing that.

8 MR. WHITE: Well, Your Honor --

9 MR. ROGERS: The notice that the Tribes placed in  
10 the paper is not only a bit more detailed about their  
11 position with respect to how individual Indians owning  
12 fee lands or trust lands stand with respect to the Tribes'  
13 position in this case and in more detail than it appears  
14 in Mr. Radosevich's notice. But I think it also carries  
15 through the idea that if you do not agree, you, as an  
16 individual Indian, do not agree with this position, you  
17 are free to get your own counsel.

18 And the Court hasn't endorsed it, but I think it  
19 more accurately reflects our position, and I would think  
20 it might be better if the State were to file a similar  
21 notice itself with respect to the other individuals that  
22 it does not represent.

23 MR. WHITE: Your Honor, from the standpoint --

24 MR. MEMBRINO: The reason we are so concerned  
25 about this is what is being called for is a decision on



1 some ultimate decisions of law by the Master. It is one  
2 thing for the State to present its view of the case and  
3 publish a notice about that, and it might be another  
4 thing for us to do that. But for the Court to decide some  
5 issue of law regarding the nature of someone's entitlement  
6 in Wyoming before any evidence is heard, before a lot of  
7 legal issues are briefed and detailed, I think it is  
8 simply premature.

9 THE SPECIAL MASTER: Well, we're certainly not doing  
10 that in this notice.

11 MR. MEMBRINO: I think we are.

12 THE SPECIAL MASTER: In what instance and specifically  
13 where?

14 MR. MEMBRINO: Well, when this Court offers to sign  
15 as it is proposed that the Court sign the Order, includ-  
16 ing the paragraph at the bottom of Page 2 about what the  
17 State's maintaining --

18 THE SPECIAL MASTER: This here?

19 MR. MEMBRINO: No, no. It is the one up above that.

20 THE SPECIAL MASTER: You want it stricken: "The  
21 State of Wyoming does not represent --"

22 MR. MEMBRINO: That's right.

23 THE SPECIAL MASTER: I just got through reading to  
24 Mr. White from that sentence and we made up new language  
25 that is now in the record. You see, we made up some new



1 language on that.

2 The State can run a notice saying, "We believe that  
3 your water rights should not be adversely affected and  
4 we are doing all we can to see that they won't be adversely  
5 affected. Signed the Attorney General." Fine. That's  
6 none of my business.

7 MR. MEMBRINO: That's fine with us.

8 THE SPECIAL MASTER: But it would be a notice of the  
9 Court. We believe some language that we have earlier  
10 alluded to might be more appropriate.

11 Mr. White.

12 MR. WHITE: Your Honor, from the standpoint of the  
13 State, we are really not intending to publish a notice.  
14 We have acquiesced and agreed in the notice that has  
15 been suggested because we believe that it will help  
16 clear the record of some significant difficulties.  
17 Those are not difficulties which the State has; those  
18 are not difficulties which the Master has; those are  
19 difficulties which the United States and the Tribes  
20 have.

21 Now, the reason we were glad to go along with the  
22 proposed notice is that we thought it would keep us  
23 from having to come back and try this again when folks  
24 who assume, based on representations or implications,  
25 that they were represented individually in this case





1 came back in and said, "Look, we weren't." In fact, the  
2 same pleadings, the evidence, doesn't even match the  
3 pleadings in the case. We've got a bona fide complaint  
4 and our only reason for going along with this and agree-  
5 ing to it, we thought it was a good idea, but it is not  
6 something we are going to push. If it keeps us from com-  
7 ing back and trying this again, if the Tribes and the  
8 United States feel comfortable with the situation as it  
9 is, the State isn't going to go off on its own and publish  
10 some sort of notice that will help them in some regard.

11 So we are agreeable to going along with any reasonable  
12 notice that any party may suggest and the Court will ap-  
13 prove, but we are not going to take it on ourselves to  
14 cure problems for adverse parties.

15 THE SPECIAL MASTER: Mr. White, your comments open  
16 a whole new world of observations, and I'm going to have  
17 to make some:

18 One, if the failure of service in this lawsuit so  
19 renders it vulnerable to a retrial for failure of service  
20 upon water holders in Wyoming, that is the fault of the  
21 Legislature of this State or of its Attorney General,  
22 which one I don't know, it is none of my business. It  
23 is not the fault of we who are hearing the case or of  
24 those who are trying it, God knows. And I doubt very much  
25 if such defect could be cured by notice run now. But





1 that's not my concern.

2 MR. WHITE: It is not my concern either, Your Honor.

3 THE SPECIAL MASTER: I don't know. You raised it.

4 MR. WHITE: No, I didn't raise the service problem,  
5 Your Honor, at all.

6 THE SPECIAL MASTER: Mr. Radosevich.

7 MR. RADOSEVICH: Your Honor, I raised the issue  
8 primarily because as counsel for the City of Lander and  
9 many of the fee' title owners live in the Lander and  
10 Hudson area, we have had a number of questions come up.  
11 Are they being represented by counsel for the United  
12 States or counsel for the Tribes because their land  
13 physically is located in there. As a result of those  
14 questions that I had, I just had a discussion with Regina  
15 and a number of other counsel for the Federal Government  
16 and for the Tribes, and there appeared to be a question  
17 as to the representation of individual allottees, fee  
18 simple --

19 THE SPECIAL MASTER: Indian and non-Indian?

20 MR. RADOSEVICH: Indian and non-Indian, and, of  
21 course, several of the legal issues have not been decided  
22 as to the date of their water right - should, in fact,  
23 the reservation date be confirmed as the date of the  
24 water right on the Reservation.

25 And I think the real issue rests with the fact that



1 those people -- certainly we can't decide that issue at  
2 this point in time, but they certainly ought to be apprised  
3 of the fact that they are under a misimpression because  
4 they think their land is physically located there, that  
5 they have their interests represented by either the  
6 United States or the counsel for the Tribes if, in fact,  
7 they are not having their interests represented.

8 And my discussions indicate that, in fact, individual  
9 fee simple landholders are not being represented.

10 THE SPECIAL MASTER: Let me inject an inquiry right  
11 there. The individual fee simple landholder who may have  
12 taken his land and is now a non-Indian from an Indian you  
13 feel is the man who may be ending up thinking he's going  
14 to inherit that Indian reserved doctrine water right and  
15 he ends up with a 1909 --

16 MR. RADOSEVICH: Instead of an 1868.

17 THE SPECIAL MASTER: And you feel that he, therefore,  
18 feels that the Tribes let him down on his title or that  
19 we have let him down?

20 MR. RADOSEVICH: Yes. My feeling is that not knowing  
21 the fact --

22 THE SPECIAL MASTER: Well, if you gentlemen --

23 MR. RADOSEVICH: -- that he had an opportunity to  
24 assert. In fact, if he is a non-Indian fee simple land-  
25 holder, he should be asserting that the priority date



1 follows the date of reservation if it is not being  
2 asserted by counsel for the U.S. Government or counsel  
3 for the Tribes. If he should be asserting it, he should  
4 be given the opportunity of knowing that.

5 I think because of the complexity of the issue that  
6 is where the real problem lies. And ten years from now,  
7 fifteen years from now we all know the value of water  
8 rights -- Colorado has experienced much more than  
9 Wyoming --

10 THE SPECIAL MASTER: This is rapidly becoming a  
11 crisis situation in every state in the West.

12 MR. RADOSEVICH: Particularly if you are in an en-  
13clave where you have the various dates and the majority  
14 water rights are held far senior to yours and you had it  
15 at one point in time, asserting your priority date should  
16 be the same as the rest of the Reservation. I think it  
17 is our responsibility as attorneys to the public, not  
18 necessarily looking at this suit and who we are represent-  
19 ing, but I think we ought to let the public know that  
20 their rights are not being covered at this point in  
21 time. I don't know exactly how we might solve this  
22 issue. I think it is a very crucial issue in terms of  
23 the importance to the landholders. Whether it is done by  
24 notice or however - we've got good minds here to figure  
25 out what it is.



1 I raise the issue because it is a problem. Now, how  
2 we come up with a solution, whether it is in the form of  
3 a notice, I certainly don't think it is the obligation of  
4 the State to publish it. And that's why I felt that per-  
5 haps it should come from the Special Master since you  
6 more or less are responsible to make -- in adjudicating  
7 all of the water rights in this area.

8 THE SPECIAL MASTER: Well, good luck, gentlemen,  
9 in your powwow, and do the best you can and we'll look  
10 forward to what you come up with.

11 MR. ROGERS: I'm stunned by Mr. White's statement  
12 because I think that -- I think he has precisely mis-  
13 stated the entire problem here. The State of Wyoming  
14 instigated this litigation under its laws and, as the  
15 Master has correctly pointed out, the jurisdictional  
16 defect and the problem of notice are the State of  
17 Wyoming's and they are not the problems of the United  
18 States or the Tribes. The individual members of the  
19 Tribes or any other persons living off the Reservation  
20 or anywhere else in the Basin have just cause to challenge  
21 the jurisdiction that issues or the lack of notice or  
22 service. Those are the folks over there that have to  
23 answer that, not the Tribes and the United States.

24 THE SPECIAL MASTER: Would you like the record to  
25 show that you were pointing to the Wyoming table, not to





1 me?

2 MR. ROGERS: Yes. Yes, Your Honor.

3 THE SPECIAL MASTER: I would be grateful if the  
4 record will show that.

5 MR. ROGERS: It is the greatest Pontius Pilot state-  
6 ment I've ever heard in my life.

7

8

9

10

11

12

13

14

15

16

\* \* \* \* \*

17

18

19

20

21

22

23

24

25



1 MR. WHITE: We're willing to whip up a rough cross  
2 for Mr. Rogers' benefit.

3 THE SPECIAL MASTER: Okay. Gentlemen, let's return  
4 to the -- let's return to the subject matter of the law-  
5 suit.

6 MR. WHITE: Let me say this, Your Honor. The  
7 statement which I made surely can't come as a surprise  
8 to counsel who have followed the course of this litiga-  
9 tion. The statement I made had nothing to do with  
10 jurisdiction of this Court or service on parties and  
11 potential parties. I think, as I alluded and I will  
12 more specifically describe now, the pleadings in this  
13 action, specifically those of the United States, with  
14 respect to the Indian Reservation, bear very little  
15 relationship to the evidence that's been submitted.  
16 Time and time again we have evidence that does not  
17 conform to the pleadings. When the United States moves,  
18 as I'm sure it will at the end of its case in chief, to  
19 conform the pleadings to the evidence, then what sort  
20 of notice will be required to ensure that every party  
21 has its day in court? Any person who's a party to this  
22 action who read the Statement of Claims by the United  
23 States was entitled to rely on that being the, comprising  
24 the claims of the United States. They have not comprised  
25 those claims, and the reason the State is happy not having to go



1 along with the proposed notice is that, if accomplished,  
2 that notice may well have the effect of finding those  
3 parties which have not participated in this action, with  
4 respect to the Order that the Court may issue, actually  
5 confirming the pleadings to the evidence. There is no  
6 notice of any sort given by the United States, and it's  
7 their Statement of Claims, that the evidence they're sub-  
8 mitting is outside or in contradiction to or not in com-  
9 pliance with their Statement of Claims.

10 The reason the State is agreeable to Mr. Radosevich's  
11 notice is that we believe that that notice may well quash  
12 the kind -- or prevent the kind of later injection into  
13 this case of the lack of notice asserted by parties who  
14 were not on notice as to the actual evidence that was  
15 going to be submitted by the United States. Therefore,  
16 it's not the State's problem. We've got no problem with  
17 jurisdiction.

18 It's not something you need to rule on. If the  
19 Tribes and the United States are comfortable with that  
20 situation, then they're comfortable with it. We'll let  
21 it lie.

22 MR. MEMBRINO: Your Honor, I can't agree with what Mr.  
23 White said. The nature of this case is a general adjudica-  
24 tion. Everyone has been given notice that if they claim a  
25 water right in this Water Division 3, they have to submit





1 it. They cannot -- They cannot assume that someone else  
2 is going to take up the battle in their behalf. Now, the  
3 United States is in a very complicated presentation of its  
4 evidence, and that's the nature of this case. And we are  
5 entitled to conform our pleadings to the evidence at the  
6 end of trial. And, in the meantime, everyone who is noti-  
7 fied of this case is permitted to sit in on this case and,  
8 in fact, should if their water rights are in jeopardy and  
9 they also have to submit their own claims. So it's just,  
10 it makes no sense to me how Mr. White can say what he's  
11 saying, 'Everybody's rights are at stake, this is not the  
12 United States versus Wyoming, it's a general adjudication.  
13 Everyone has to put forth his or her claim to water.

14 MR. WHITE: Your Honor --

15 MR. ROGERS: May I say something first?

16 MR. WHITE: I say what I say based on substantial  
17 experience in the western United States. Mr. Membrino  
18 may hope that's the law with respect to general adjudica-  
19 tions, but it simply is not in general adjudications. The  
20 pleadings are allowed to be conformed to the evidence  
21 only if the evidence discloses that the pleadings over-  
22 state the claim, not that they understate the claim or  
23 involved another aspect of a water right which was not  
24 included in a claim, and it's only reasonable because the  
25 general adjudication process came up in the western United





1 States as a substitute for large quiet title actions.

2 The law applied to general adjudications is in most part,  
3 not entirely, the law that carried over from quiet title  
4 and in the quiet title action, if I sought to quiet title  
5 to the NW 1/4 of the NW 1/4 and the pleadings and publica-  
6 tions all went to the NW to the NW, especially the plead-  
7 ings, and my evidence went to the SW to the SW, then  
8 you've got substantial and due process problems. And,  
9 of course, that's the problem, the precise problem, we're  
10 trying to deal with. It's not the State's problem, it's  
11 the United States' problem and Tribes' problem. They can  
12 do with it what they want.

13 MR. ROGERS: Your Honor, this is a very interesting  
14 discussion about amendments of pleadings and whatnot, but  
15 the relevant pleadings that raises the problems with res-  
16 spect to any notice and what people are aware of in terms  
17 of what interest they need to have represented were not  
18 instituted initially by the filing of claim by the United  
19 States or the Tribes. They were invoked initially by the  
20 filing of the complaint in this case in 1977 by the State  
21 of Wyoming, which was, that's where the service of process  
22 comes in by mail on whatever it is, 25,000, 26,000 interests  
23 in the State of Wyoming.

24 And I think that is, that is where you go back to  
25 examine exactly what jurisdictional and what notice problems



1 have been created by this, and that is, again, as I say,  
2 not a problem with the Tribes or the United States.

3 MR. WHITE: Well, I suspect from the discussion, Your  
4 Honor, it's not a problem that's going to be decided by  
5 this Court. On the other hand, I want it to be absolutely  
6 clear, the concerns of the State of Wyoming, that they've  
7 been brought to the attention, especially to counsel of  
8 the United States and the Tribes. The position and the  
9 argument will come up again on appeal, I'm quite sure, if  
10 there is an appeal in this case, and there may well be an  
11 appeal in this case. And I just want the record to be  
12 absolutely clear that we view this as a problem of evidence  
13 outside the pleadings. It's a problem that's dealt with the  
14 law applicable to general adjudications in the western  
15 United States. We are comfortable with that law as being  
16 very supportive of our position. And whether it's the  
17 State's problem or the United States' problem or the  
18 Tribes' problem is something that I suppose an appellate  
19 court, one of these days, will have to decide.

20 At any rate, the State of Wyoming's position, I  
21 believe, is clear for the record as well as those of the  
22 Tribes and the United States.

23 THE SPECIAL MASTER: Okay, gentlemen. Mr. Merrill,  
24 are you ready to proceed?

25 MR. RADOSEVICH: Your Honor, may I say one thing?



1 THE SPECIAL MASTER: Yes.

2 MR. RADOSEVICH: Partly what we're talking about is  
3 very academic in terms of what the legal right and legal  
4 response of the parties is. I think what we really should  
5 be concerned about are the individual water users. They  
6 are the ones that are going to actually suffer in the  
7 future if we've made an error by not giving a proper  
8 notice earlier.

9 THE SPECIAL MASTER: If we would have given them a  
10 proper notice earlier, what could they have done in this  
11 case that hasn't already been done to guard their interests?

12 MR. RADOSEVICH: For example --

13 THE SPECIAL MASTER: Except have a few more lawyers  
14 in the courtroom.

15 MR. RADOSEVICH: That should probably excite the  
16 Court.

17 THE SPECIAL MASTER: How could the cross-examinations  
18 have been any more competent than they've been?

19 MR. RADOSEVICH: At this stage, Your Honor, perhaps  
20 not, but we're talking about from this stage forward.

21 THE SPECIAL MASTER: I understand.

22 MR. RADOSEVICH: If, in fact, the individual water  
23 rights holders, whether they be fee simple, non-Indian,  
24 Indian owners, wish to assert that their date should be  
25 earlier, then that is where the real crucial part is for





1           them.

2           THE SPECIAL MASTER:   Okay.

3           MR. RADOSEVICH:   I think that is where we have to  
4           get --

5           THE SPECIAL MASTER:   Okay.   You gentlemen do your  
6           work, and we'll see what you come up with.

7           Mr. Merrill.

8           MR. MERRILL:   Your Honor, I simply want to return to  
9           you your original copy of the amendment to the first  
10          order of certification and supply copies to counsel of  
11          the United States and Tribes.

12          THE SPECIAL MASTER:   I think it's my duty to inquire  
13          from time to time about the hope for settlement, at least  
14          that's what the federal judges tell me in their textbooks.  
15          Is there any -- Has there been any settlement discussion,  
16          gentlemen?

17          MR. WHITE:   Yes, there has.   I don't think it would  
18          be appropriate to discuss it --

19          MR. ROGERS:   Especially on the record.

20          THE SPECIAL MASTER:   Do you want to go off the  
21          record?

22          MR. WHITE:   Nothing I'm going to say need be off the  
23          record.

24          THE SPECIAL MASTER:   Just a minute.   Do you want it  
25          on the record?





1 MR. WHITE: Yes, sir.

2

3

4

5

6

7

8

9

10

11

12

13

14

\* \* \* \* \*

15

16

17

18

19

20

21

22

23

24

25



1 THE SPECIAL MASTER: Any objection to this being on  
2 the record?

3 MR. ECHOHAWK: No objection.

4 THE SPECIAL MASTER: All right, proceed.

5 MR. WHITE: There have been substantial discussions  
6 with respect to settlement, primarily before the United  
7 States began its case in chief. Since the beginning of the  
8 case in chief there have not been significant discussions  
9 of settlement which is only understandable because of the  
10 press of putting on evidence both by the United States and  
11 cross-examining that evidence by and on the part of the  
12 tribes and the United States. From the standpoint of  
13 the State, we feel that it may be premature at this time  
14 until at least the close of the tribe's case in chief to  
15 discuss settlement because quite frankly if a strong case  
16 is made by the two claimants, three claimants, we're far  
17 more interested in settlement than if a weak case is made.  
18 And we won't be in a position to really judge that until  
19 the conclusion of the evidence, Your Honor. So, from the  
20 standpoint of the State of Wyoming, we're ready, willing  
21 and able, but I think it's somewhat premature.

22 THE SPECIAL MASTER: I thank you, Mr. White. I think  
23 I have a duty to say to all of you, especially those  
24 tribal members here today, tribal Council here today,  
25 United States lawyers and State of Wyoming staff and counsel,



3-2

1 that if any of you feel that the fact that there has been  
2 a change in administration in the last few months and  
3 a new Secretary of Interior lessens the possibility of  
4 cooperation from the Secretary of Interior with me or  
5 with you parties, you are in error. My relationships with  
6 the encombant Secretary of Interior is just as friendly  
7 as with the last one. They stem back to the fact that I  
8 was in Washington with him for a number of years, on a  
9 committee overseeing outdoor recreation activity in the  
10 Rocky Mountain West week after week. I was able to be  
11 of some friendly assistance to him on matters of the  
12 Federal Power Commission legislation, and we enjoy a  
13 mutual respectful position although God knows we differ on  
14 matters of clear cutting in Wyoming and a few other things.  
15 But I would submit that I am willing and ready and able  
16 to make entree or approachment discussion for you all  
17 regarding settlement insofar as it would require funds by  
18 the United States for the construction of additional dams  
19 for additional water storage in the springs, of spring  
20 runoff, which I think is the most promising hope for  
21 settlement that there is for this lawsuit, frankly.

22 Okay. Mr. Merrill.

23 MR. MERRILL: That's all I have, Your HONor.

24 MR. ECHOHAWK: Your Honor, the United States in reading  
25 the transcript finds no need to have any redirect



1 examination by Mr. David Dornbusch. The next witness the  
2 United States would call would be Mr. David Vogel and Mr.  
3 Membrino would conduct the cross-examination.

4 THE SPECIAL MASTER: Mr. Vogel of the U.S. Fish and  
5 Wildlife Service?

6 MR. VOGEL: Yes.

7 THE SPECIAL MASTER: Will you come forth and take  
8 your oath, Mr. Vogel.

9 DAVID VOGEL

10 being first duly sworn, was examined and testified as follows,  
11 to-wit:

12 DIRECT EXAMINATION

13 BY MR. MEMBRINO:

14 Q. Mr. Vogel, will you state your name and address for the  
15 record, please.

16 A. David Allen Vogel. My address is 727 Givens Road,  
17 Red Bluff, California.

18 THE SPECIAL MASTER: Is that A-l-a-n?

19 THE WITNESS: A-l-l-e-n.

20 THE SPECIAL MASTER: 727 Gibbons?

21 THE WITNESS: Givens, G-i-v-e-n-s.

22 THE SPECIAL MASTER: What city, please?

23 THE WITNESS: Red Bluffs, two words, California.

24 THE SPECIAL MASTER: Zip?

25 Vogel-direct-membrino





1 THE WITNESS: 960080.

2 Q. (By Mr. Membrino) Your occupation?

3 A. I'm a fishery management biologist with the U.S. Fish and  
4 Wildlife Service.

5 Q. And where are you currently employed?

6 A. Red Bluff, California.

7 Q. Would you describe for the Court your educational background  
8 including your undergraduate and graduate work.

9 A. I have a bachelor of science degree in biology, specializing  
10 in equatic science from Bowling Green State University. I  
11 received that degree in 1974.

12 I also have a master of science degree in natural  
13 resources, specialized in fishery management and research,  
14 from the University of Michigan. I received that degree  
15 in 1979.

16 Q. In your undergraduate work at Bowling Green, did you have a  
17 minor?

18 A. Yes, I did, it was chemistry.

19 Q. Since graduation, have you engaged in any seminars, work  
20 shops or other post-graduate education related to your work?

21 A. Yes, I have. I've taken a statistics class through the  
22 Civil Service Commission in Seattle. I've taken two  
23 work shops sponsored by instream flow group of the U.S.  
24 Fish and Wildlife Service in Fort Collins, Colorado, dealing

25 Vogel-direct-membrino



1 with the use and applications of their instream flow and  
2 incremental methodology. I've also taken some --

3 THE SPECIAL MASTER: Instream flow group what?

4 THE WITNESS: Incremental methodology.

5 I've also attended a symposium in the management of  
6 wild trout. That was in Yellowstone, it was taught in  
7 Yellowstone Park in 1979.

8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25 Vogel-direct-membrino



4-1-LM-vlb

1 Q. How about your employment, your relevant employment during  
2 your time as a student, would you describe that for the  
3 Court, please?

4 A. Yes, I will. I had seasonal employment with the U.S. Fish  
5 and Wildlife Service between my period of education that  
6 was in Pierre, South Dakota, and it was North Central  
7 Reservoir Investigations that is a branch of the U.S. Fish  
8 and Wildlife Service. I had those periods of employment  
9 from 1973 through 1976 and they were seasonal appointments  
10 in between the times I was in college.

11 Q. Would you describe a little bit about what you did during  
12 that time?

13 A. Basically I was employed to assist the fishery biologists  
14 employed at the research station there to help them in  
15 their research activity, the data collection, working up  
16 the data summary, statistics and things.

17 Q. Were your duties the same throughout these four years?

18 A. No, throughout the four years I had increasing levels of  
19 responsibility.

20 Q. Since leaving school what has been your employment back-  
21 ground?

22 A. I obtained employment through National Marine Fisheries  
23 Service in San Diego. That's part of the federal government  
24 and that was in early 1977. I was employed as a government

25 Vogel-direct-membrino



1 observer to serve aboard commercial tuna vessels to watch  
2 their operations during their high seas fishing operations  
3 for yellow/fin tuna.

4 Q. You were the only government employee on board?

5 A. That's correct.

6 Q. What were some of your responsibilities?

7 A. Basically I had three responsibilities. One was to collect  
8 information dealing with the life history of marine  
9 mammals and the marine mammals such as whales or porpoises  
10 I record in daily logs. Another responsibility dealt with  
11 recording data concerning the actual fishing operations,  
12 the actual techniques, timings, equipment used during the  
13 fishing operations. My third responsibility was to  
14 observe compliance of the fishermen dealing with the  
15 regulations of the Marine Mammal Protection Act.

16 Q. What did those regulations concern?

17 A. Basically they were designed to eventually reduce the  
18 mortality of marine mammals in the course of fishing  
19 operations on yellow fin tuna.

20 Q. Did you do any biological investigation of the marine  
21 mammals while you were involved in that observation?

22 A. Yes, I did.

23 Q. Any porpoise-- incidently when I say porpoise this is  
24 the same thing as a dolphin, any porpoise that they killed

25 Vogel-direct-membrino





1 during their operations and were brought onboard the deck  
2 I dissected to collect life history information on them.

3 Q How many operations such as that did you perform?

4 A It was pretty close to 400.

5 Q And is that a usual volume of work for someone in your  
6 work to do, in your position to do?

7 A No, it was far above the normal amount that anyone dis-  
8 sected.

9 Q How many voyages did you take?

10 A I had two high-seas cruises, both were approximately two  
11 months in duration.

12 Q And as a result of your observations, could you tell us  
13 what was done with your work, if you know?

14 A The most significant was my second cruise. The skipper  
15 on that boat had alleged violations of the Marine Mammal  
16 Protection Act, and I was called back to San Diego to  
17 testify in Federal Court in August of 1980 dealing with  
18 my observations during the course of the fishing operations  
19 while at sea.

20 Q Now, you have since moved on from that work, could you  
21 tell us the reason for your leaving that position?

22 A Yes, I received a promotion as a Fishery Management Bio-  
23 logist employed with the U.S. Fish and Wildlife Service  
24 in Olympia, Washington.

25 Q Could you describe some of the work you did there?

~~Vogel - direct - membrino~~

**Frontier Reporting Service**

409 West 24th Street  
Cheyenne, WY 82001  
(307) 635-8280



201 Midwest Building  
Casper, WY 82601  
(307) 237-1493

1 A My main duties were assigned to studying the population  
2 dynamics of Salmon in the Puget Sound area and the rivers  
3 of western Washington.

4 Q Did you have any supervisory responsibilities there?

5 A Yes, I did. I had crews that would assist me in the  
6 field that were biological technicians or biological  
7 aides, young adult conservation corps employees or em-  
8 ployees through the CETA program.

9 Q And how long were you at that job?

10 A It was approximately one year; it would be approximately  
11 from early 1978 to early 1979.

12 Q What did you do after that by way of employment?

13 A I obtained a promotion again through the U.S. Fish and  
14 Wildlife Service as a Fishery Management Biologist in  
15 Lander, Wyoming.

16 Q And could you describe some of your responsibilities  
17 there?

18 A My main duties dealt with providing technical assistance  
19 in the field of Fishery Management to the Shoshoni and  
20 Arapahoe Indian Tribes on the Wind River Indian Reserva-  
21 tion.

22 Q How long were you there?

23 A Well, approximately two years, that would be from early  
24 1979 to early 1981.

25 Vogel - direct - membrino



1 Q Were you given any responsibilities while at Lander in-  
2 volving this case?

3 A Yes, probably about three-fourths of my duties were  
4 assigned to working developing instream flow recommenda-  
5 tions for selected rivers and streams on the reservation.

6 Q Mr. Vogel, I will show you what has been marked for identi-  
7 fication as United States Exhibit WRIR C-279 and ask you  
8 to identify that, please.

9 A This is a copy of my resumé.

10 Q Does the resumé fairly reflect your academic and profession-  
11 al qualifications and experience?

12 A Yes, I believe it does.

13 MR. MEMBRINO: Your Honor, at this time we would move  
14 into evidence Exhibit, United States Exhibit WRIR 279 and  
15 offer the qualifications of David Vogel as an expert in  
16 Fishery Management Biology and move that he be permitted  
17 to testify as an expert in this case.

18 THE SPECIAL MASTER: Let me have a few minutes to  
19 read it and then Mr. White may have some voir dire or  
20 Mr. Radosevich.

21 MR. WHITE: Joe, what was the offer, Fisheries Man-  
22 agement Biologist?

23 MR. MEMBRINO: That's right.

24 THE SPECIAL MASTER: I must say your experience in  
25 Vogel - direct - membrino



1 dissecting on that second cruise in the high seas reminds  
2 me of Mr. Darwin's early days on the Beagle. I'm reading  
3 his book now in similar type of work.

4 Mr. White, Counsel at your table?

5 MR. WHITE: I believe Mr. Radosevich on behalf of  
6 the private parties, Your Honor.

7 MR. RADOSEVICH: Yes, Your Honor. I have just a few  
8 questions.

9 VOIR DIRE EXAMINATION

10 BY MR. RADOSEVICH:

11 Q Mr. Vogel, you stated you have been employed as a  
12 Fisheries Management Biologist in Lander, Wyoming?

13 A That's correct.

14 Q Is that since 1979 when you left Washington?

15 A Right.

16 Q Okay, then are you intimately familiar with the stream  
17 system that runs through the reservation, the drainage  
18 system of the third division?

19 A Of the third division? What is that?

20 Q Yes, the streams that run through the reservation, the  
21 Popo Agée, the Wind, the other rivers.

22 A I have a familiarity with them.

23 MR. RADOSEVICH: Okay --

24 THE SPECIAL MASTER: You asked two questions and with  
25 vogel - voir dire - radosevich





1 the third division. You said -- did you mean --

2 MR. RADOSEVICH: What I meant was on the reservation,  
3 Mr. Vogel.

4 THE SPECIAL MASTER: Thank you.

5 MR. RADOSEVICH: Not the entire third division.

6 Q (By Mr. Radosevich) In examining your resumé it appears  
7 that most of the work you have done was directed towards  
8 salmon and ocean fishes, is that correct?

9 A Prior to moving to Lander.

10 Q So then since you have been in Lander, you have been  
11 working with the various species of trout and other fish  
12 in the streams of that area?

13 A That's correct.

14 MR. RADOSEVICH: Okay. Your Honor, I have no further  
15 questions then.

16 THE SPECIAL MASTER: Mr. White:

17 VOIR DIRE EXAMINATION

18 BY MR. WHITE:

19 Q Mr. Vogel, aside from your depositions in this action, have  
20 you previously been qualified and testified as an expert  
21 in Fisheries Biology?

22 A No, I haven't.

23 Q Do you have any qualifications as a hydrologist??

24 A Only what I have obtained through training with the Instream  
25 vogel -voir dire - white



1 Flow Group in Fort Collins, Colorado.

2 Q Do you have any expertise as a computer programmer?

3 A I did receive training through my academic background  
4 and through my work experience when I was employed as a  
5 Fisheries Biologist in Olympia, Washington.

6 Q You described two short courses, I believe, that you took  
7 from the Instream Flow Group in Fort Collins?

8 A That's correct.

9 Q Could you be a little more specific in your description  
10 of those courses?

11 A The first course I took was called a Computer Transfer  
12 Workshop that was designed to teach users how to apply  
13 the use of the computer programs developed by the IFG  
14 for the particular situation. It told all the basic re-  
15 quirements and how to run the programs. The second course  
16 I took was a field techniques class that told exactly how  
17 you applied the methodology in the field, how you collect  
18 your data.

19 Q Isn't it true, Mr. Vogel, that prior to your assignment  
20 in Lander you never had quantified instream flows for  
21 fisheries purposes?

22 A I personally had not.

23 Q And isn't it true that the only quantification of those  
24 flows which you have made are those which is the subject

25 vogel - voir direc- white



1 matter of this litigation?

2 A That's correct.

3 Q Aside from your two years in Lander, what experience did  
4 you have with the fish species which exist on the Wind  
5 River Indian Reservation?

6 A I had some experience on a minor scale working in fresh  
7 water -- or salmonoids -- when I say salmonoids that is  
8 all inclusive of the species dealing with the species;  
9 it deals with salmon; it includes fresh water trout;  
10 they are all inclusive. But in Olympia, Washington I  
11 had some experience in the management of those fresh  
12 water fish.

13  
14  
15  
16  
17  
18  
19 \* \* \* \* \*

20  
21  
22  
23  
24  
25 vogel - voir dire - white



1 MR. WHITE: Your Honor, the State would have no  
2 objection to the acceptance of this witness or this  
3 witness as an expert in the area of fisheries biology. We  
4 would object to his acceptance as an expert in any other  
5 field including that of hydrology or that of computer  
6 programmer or the person applying computer programs; which  
7 he has not developed. Insofar as his observations or his  
8 testimony that come from personal observations and  
9 conclusions reached on those observations as a fisheries  
10 biologist, we have no objection. Once it goes beyond that  
11 into the area of hydrology and the application of computer  
12 science we will have an objection, and since he was not  
13 offered for those purposes, we reserve that objection until  
14 that time.

15 MR. MEMBRINO: Your Honor, Mr. Vogel was offered as  
16 an expert in the field of fishery management biology .  
17 As he testified, it included the use of computer work, it  
18 included, of course, biology as well.

19 THE SPECIAL MASTER: Biology; or did you say hydrology?

20 MR. MEMBRINO: Biology. We're not offering him as  
21 a hydrologist, but he has, since he's dealing with fish,  
22 of course, had to apply information received from  
23 hydrologists, and that's what someone in his field, we  
24 believe, is certainly entitled and required to do.

25 Vogel-direct-membrino





1 As I said, he has testified as to his computer back-  
2 ground, he had experience in Olympia, Washington, with  
3 computers, and he's taken courses in computers that related  
4 to his field. And we believe that it's inappropriate for  
5 him not to be permitted to testify in the application of  
6 computer science to his -- to his work.

7 MR. WHITE: Your Honor --

8 THE SPECIAL MASTER: We have two things before us,  
9 one, an expert witness, and the other an admission of  
10 an exhibit. Let me rule now since the voir diring has been  
11 completed, and admit the exhibit. Exhibit WRIR C-279 is  
12 hereby admitted into evidence.

13 (Thereupon Exhibit WRIR C-279 was  
14 (admitted into evidence.

15 THE SPECIAL MASTER: Let me next pass on the matter  
16 of his expertise and for what purposes. Mr. Vogel will be  
17 admitted as an expert witness in the field of fisheries  
18 and wildlife -- rather as biologist and also as an expert  
19 in those software computer programming which stems from  
20 his expertise as a biologist, and if that includes  
21 something like hydrology, that he can testify to from his  
22 own personal knowledge rather than what some hydrologist  
23 has said to him, that would be qualified and opened to  
24 objection, and that may be raised at the time. So, proceed,  
25 Vogel-direct-membrino



5-3

1 Mr. Membrino.

2 Your Honor --

3 THE SPECIAL MASTER: We've been at it for almost an  
4 hour, do you want to take a ten-minute break?

5 MR. MEMBRINO: Just one point before we do break,  
6 Your Honor.

7 Does your ruling encompass Mr. Vogel as an expert in  
8 fishery management biology?

9 THE SPECIAL MASTER: That is correct.

10 MR. MEMBRINO: Thank you.

11 THE SPECIAL MASTER: That is correct. All right.  
12 Let's take a short break.

13

14

15

16

17

18

19

20

21

22

23

24

25

Vogel-direct-membrino



1 THE SPECIAL MASTER: Shall we come to order, please.

2 Q (By Mr. Membrino) Mr. Vogel, you testified that you have  
3 been assigned to assist the United States in the preparation  
4 of its claims in this case. Would you tell the Court what  
5 your assignment was?

6 A It was basically to develop instream flow recommendations for  
7 fish resources in selected rivers and streams on the Wind  
8 River Indian Reservation.

9 Q Did you prepare a report reflecting your findings and  
10 conclusions?

11 A Yes, I did.

12 Q I show you what has been marked for identification as  
13 United States Exhibit WRIR-C-280 and ask you to identify  
14 that, please.

15 A This is a report summarizing the findings of my instream  
16 flow study on the reservation.

17 Q Was this prepared by you or under your direct supervision?

18 A Yes. Yes, it was.

19 Q Do you know whether the development of instream flow  
20 recommendations is considered to be within the expertise  
21 of fisheries biologists?

22 A Yes, it certainly is.

23 Q In preparing your recommendations, did you make any use of  
24 the services of the Cooperative Instream Flow Service Group?

25 vogel - direct - membrino





1 A. Yes, I did.

2 MR. WHITE: Your Honor, at this time I would interpose  
3 an objection to the line of questioning. There is absolutely  
4 no evidence before the Court that instream flows facilitate  
5 or keep from being defeated or in otherwise, in any other  
6 way, complies with the intent of Congress in establishing  
7 this particular reservation. We know that the United  
8 States, as part of the record of this case and previous  
9 litigation shortly after the turn of the century, or around  
10 1912, as I recall, took the position that the purposes of  
11 the reservation were for irrigation and stock water, and  
12 those were the purposes that went with any asserted reserved  
13 right. Now we find evidence going beyond those areas,  
14 going to an area of instream flows. And there has been  
15 absolutely no showing that instream flows constitute one  
16 of the purposes for which water may have been reserved for  
17 the benefit of the Wind River Indian Reservation. And as  
18 a result, we would object to the continuation of this  
19 questioning for the lack of foundation and would move to  
20 strike that testimony concerning instream flows which has  
21 already gone into the record similarly on the basis of  
22 lack of foundation, i. e., no evidence that Congress  
23 intended to reserve water for the purposes of instream flows.

24 THE SPECIAL MASTER: The Motion to Strike will be  
25 vogel - direct - membrino





1 taken under advisement. On the evidence that is already  
2 in the record regarding instream flows, the Motion to  
3 terminate the evidence of this witness on the same basis  
4 shall be taken under advisement, also pending the evidence  
5 that may be in this case upon its conclusion regarding the  
6 purposes for which the reserved doctrine was intended by  
7 Congress.

8 MR. MEMBRINO: Thank you, Your Honor.

9 I think it is important to note that there has been  
10 evidence submitted in the case about the creation of a  
11 reservation, and there is evidence, documentary evidence  
12 in the record of Chief Washakie's concern in his selection  
13 of the reservation and specifically, as I recall, he men-  
14 tioned fishing, hunting and particularly remarked about  
15 the waters of the Wind River Valley that are so important  
16 to him in that regard.

17 THE SPECIAL MASTER: I might say now, gentlemen, I  
18 would welcome, in fact, I could probably call for modest  
19 briefs on the question of the reservation doctrine applying  
20 to instream flows for fisheries. And you may not so much  
21 cite that as you can the evidence already in the record and  
22 the law in support of your respective positions.

23 MR. MEMBRINO: I would point out, Your Honor, that in  
24 our dates and boundaries brief, we do make, and I believe  
25 in our brief describing the legal parameters of our claim,



1 we cite authority, court and judicial precedent for the  
2 proposition that instream flows are within the reserved  
3 rights doctrine.

4 MR. WHITE: Your Honor, we appreciate the opportunity  
5 to submit a brief, and we will do so, perhaps at the end of  
6 this week or early next week.

7 THE SPECIAL MASTER: Well, submit it at the same time,  
8 gentlemen. If you need more time than that, please let me  
9 know.

10 MR. WHITE: Why don't we fix Monday then as the date?

11 MR. MEMBRINO: We'll need a little more time.

12 THE SPECIAL MASTER: We're not working next week in  
13 the case. We're working, but not in the case. Why don't  
14 we make it two weeks from now?

15 MR. WHITE: That's fine, Your Honor.

16 THE SPECIAL MASTER: And I appreciate that there is  
17 some material in those briefs. You might cite me to those --  
18 I don't mean to impose duplicate or redundant duties on  
19 you, so cite the other materials in the briefs that we now  
20 have.

21 MR. MEMBRINO: Thank you, Your Honor.

22 Q (By Mr. Membrino) Would you, Mr. Vogel, describe briefly  
23 what you know of the Cooperative Instream Flow Group?

24 A As I said earlier, they are an agency off-shoot of the U. S.  
25 vogel - direct - membrino



1 Fish and Wildlife Service. As I understand it, they were  
2 formed around 1976, whose main purpose was to improve the  
3 state of the art methodology in determining instream flows.

4 Q Have you worked with that group?

5 A Yes, I have.

6 Q Approximately how long have you associated with them?

7 A My first exposure was in March of 1979, and I've had contact  
8 with them ever since then.

9 Q What was the reason for that first meeting with the IFG?

10 A The first --

11 THE SPECIAL MASTER: With what?

12 MR. MEMBRINO: I'm sorry. I was using a shorthand  
13 abbreviation referring to the Instream Flow Group, often  
14 know as the IFG.

15 MR. WHITE: We would have no problem, Your Honor,  
16 with all parties referring to them as the "IFG". It is a  
17 standard abbreviation, and it makes it a lot easier.

18 THE SPECIAL MASTER: Thank you.

19 THE WITNESS: Would you please repeat the question.

20 Q (By Mr. Membrino) Sure. I just wanted to know what the  
21 reason for your first meeting with them was.

22 A I attended their computer soft ware transfer workshop in  
23 Fort Collins.

24 Q You said you also took a workshop in field methods?

25 vogel - direct - membrino



1 A That's correct.

2 Q Having taken those two courses, did you become -- have you  
3 become aware of other methods for calculating instream flow  
4 requirements?

5 A Yes, I have.

6 Q Could you describe some of them briefly?

7

8

9

\* \* \* \* \*

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25 vogel - direct - membrino





1 Q (By Mr. Membrino) Could you describe the method for us.  
2 A There is actually numerous methods. To determine an instream  
3 flow method today, the variety is quite diverse. One of the  
4 more simplistic methods is to take the mean annual flow in  
5 a stream, and simply take a certain percentage of that mean  
6 annual flow. That was developed by Don Tennant from the U. S.  
7 Fish and Wildlife Service, who is currently employed with  
8 the Fish and Wildlife in Billings, Montana. He studied  
9 many streams throughout the western states and came up with  
10 final recommendations as far as what the proper percentage  
11 of instream flow should be according to what the base is  
12 on an annual basis. For example, sixty to a hundred percent  
13 of mean annual flow, he determined to be optimum conditions  
14 for fish habitat. A percentage of thirty percent was con-  
15 sidered to be adequate or good conditions. A flow of ten  
16 percent was supposed to be a bare minimum, absolute low flow  
17 for fishery resources.

18 There's other methods that deal with computers, the  
19 application of computer programs. One of the more common  
20 older versions was the use of a transect through a riffle  
21 of a stream. There was certain cross sections to be made  
22 through a transect, certain measurements of velocity of  
23 substrate were recorded. These were run through a computer,  
24 and a researcher, biologist, as it may be, would examine  
25 vogel - direct - membrino



1 the computer output and try to determine what the optimum  
2 level of flow to inundate a certain portion of habitat --  
3 excuse me, a certain portion of substrate. When I say  
4 "substrate", by that I mean the streambed material. And he  
5 would make his recommendations upon that.

6 There is other methods that deal with instream flow,  
7 but they don't necessarily quantify an exact amount. They're  
8 more or less quantifying what might be present at a given  
9 flow if you had gone out and examined and measured. An  
10 example of this would be the HQI Method developed by  
11 Alan Binns of the Wyoming Game and Fish Department. In this  
12 method, I'm not too familiar with it, but I know it basically  
13 involves going out and measuring a multitude of physical and  
14 biological parameters and doing a correlation with that,  
15 with a standing crop of fish in the stream.

16 There is other methods such as the one that's used in  
17 Billings, Montana, Ecological Services Division, where they  
18 use the water surface profile. That program, as I understand,  
19 was originally developed for the use below dams, I think it  
20 was developed by the U. S. Bureau of Reclamation. It's simply  
21 a taking of measurements at one flow, one specific discharge  
22 at multiple transects, and then they go in and look at the  
23 output from each transect at various extrapolated or inter-  
24 polated flows, and a biologist makes a judgment on the  
25 vogel - direct - membrino



1 quantity of substrate that's inundated by more or less flows,  
2 and it's up to the biologist to make his recommendation  
3 upon what he observes and to the computer output.

4 THE SPECIAL MASTER: How do you spell transect?

5 THE WITNESS: T-r-a-n-s-e-c-t.

6 MR. MEMBRINO: We'll be getting into transects a  
7 little bit more in a --

8 THE SPECIAL MASTER: One more question while I've  
9 interrupted you. On the first matter, first formula,  
10 you testified to the use of an average or stream average  
11 over a long period of time. What is it, a hundred year  
12 cycle?

13 THE WITNESS: You mean the base period that they use?  
14 It depends on what the historic records are. Whatever the  
15 stream has. If a stream's got only 25 years of historic  
16 flows --

17 THE SPECIAL MASTER: Then that's all you use?

18 THE WITNESS: Right.

19 Q (By Mr. Membrino) Having discussed those other methodolo-  
20 gies, could you tell the Court a little bit about the  
21 IFG method and why you chose it over the other methods for  
22 your work in this case?

23 MR. WHITE: Object to the form of the question, Your  
24 Honor. There is no such thing as an IFG method. He's  
25 vogel - direct - membrino





1 referring to an incremental method, and that would be  
2 appropriate, but there are several methods that could be  
3 called "IFG".

4 THE SPECIAL MASTER: Do you want to clarify it?

5 Q (By Mr. Membrino) Sure. Would you describe the incremental  
6 method and identify why you chose it.

7 A. Yes. I believe that the IFG incremental methodology has  
8 advantages over the previous methods I mentioned, in that  
9 it quantifies fish habitat. It gives the biologist an  
10 indication of what an incremental increase or decrease of  
11 flow would have on a -- it would have on a fish habitat.  
12 In other words, you can actually determine that a certain  
13 percentage of increase of flow might have a certain per-  
14 centage of increase in fish habitat; likewise, for a decrease.

15 Q Does the method tell you how much fish will be there?

16 A. No, it doesn't. It's not intended to be an eco-system  
17 model or to model biomath. It's simply intended to model  
18 fish habitat.

19 Q Did you consult with anyone about selecting this method?

20 A. Yes, I did.

21 Q Would you tell us who those persons were.

22 A. Originally when I moved to Lander in late February of 1979,  
23 I took over the work of the fishery biologist who vacated  
24 the position. I -- I was employed as, in Lander. In his  
25 vogel - direct - membrino





1 opinion, he thought IFG incremental methodology was the  
2 state of the art for determining stream flows for fisheries.  
3 I picked up in his footsteps, and I talked with various  
4 people. I talked with my boss. He's the Project Leader of  
5 Lander Fish and Wildlife Office, and his name is Dick Baldes.  
6 In his opinion, he thought it was the state of the art and  
7 the best thing to use in this water rights adjudication.  
8 I contacted the staff of the Instream Flow Group in Fort  
9 Collins, and they basically gave me their opinions about  
10 the various methodologies and why this one would be appropri-  
11 ate to use in this adjudication.

12 I also was familiar with the work of Phil Wampler, a  
13 Fishery Biologist, who I worked with out at Olympia,  
14 Washington, who was using the IFG incremental methodology for  
15 establishing instream flows on the Siskomish River in western  
16 Washington, and in his opinion, he believed that it was the  
17 best methodology to date for establishing instream flows for  
18 fisheries.

19 MR. WHITE: Your Honor, I move to strike the last  
20 answer, based on hearsay. I'm not sure what probative  
21 value other people's opinion, who are not here to be cross-  
22 examined, are. They certainly have very little probative  
23 value, and I believe they're inadmissible on the grounds  
24 of hearsay.

25 vogel - direct - membrino



1 THE SPECIAL MASTER: Well, we'll admit them for  
2 whatever probative value they have, although I'd like the  
3 name of the witness that he talked with, gave his title,  
4 of your predecessor. What is his name?

5 THE WITNESS: His name is Rich Reisenbichler.

6 THE SPECIAL MASTER: R-e-i-s-e-n- --

7 THE WITNESS: -- b-i-c-h-l-e-r.

8 MR. MEMBRINO: Your Honor, we're showing through  
9 this questioning that some extensive research was done in  
10 determining just what the best approach would be to go  
11 about determining instream flows.

12 MR. WHITE: Well, then I'll --

13 MR. MEMBRINO: I think it's evidence of his diligence  
14 that this evidence presents.

15 MR. WHITE: I will add another ground for my objection  
16 then, or my Motion to Strike, Your Honor, because there's  
17 no evidence that the witness sought to obtain information  
18 or opinions, if those are proper, from persons outside the  
19 Instream Group or the U.S. Fish and Wildlife Service. All  
20 the persons he's named are employees of the Fish and Wildlife  
21 Service. And this happens to be their favorite method.  
22 Persons outside the Fish and Wildlife Service may or may not  
23 agree with that, and if we're trying to show general accep-  
24 tance in the community, the community is much larger than  
25 the Fish and Wildlife Service, so I would move to strike on



1 the grounds that if the purpose of the questioning is as  
2 stated by Mr. Membrino, the answer is unresponsive and  
3 incomplete.

4 MR. MEMBRINO: Your Honor, --

5 THE SPECIAL MASTER: Proceed with your questioning. I  
6 know that if there's a void or shortcoming in having picked  
7 this IFG incremental system, it would be brought out on  
8 cross-examination.

9 MR. MEMBRINO: That's right, Your Honor. It goes to  
10 the credibility not whether it should be stricken.

11 THE SPECIAL MASTER: Go ahead.

12 Q (By Mr. Membrino) Since you began your work with the  
13 incremental method, have there been any changes or  
14 additions to the program that you are familiar with?

15 A Yes.

16 MR. WHITE: Objection. What program of the incremen-  
17 tal method is he talking about? Incremental method has  
18 at least five programs that I'm aware of, and I think --

19 MR. MEMBRINO: I will stick with the incremental  
20 methodology, Your Honor.

21 MR. WHITE: I object to that. The incremental  
22 methodology is made up of several computer programs.

23 THE SPECIAL MASTER: All right. May I have the question  
24 reread, please, Merissa?

25 vogel - direct - membrino





1 (Thereupon, the following question  
2 (was read back as follows: "Q.  
3 (Since you began your work with  
4 (the incremental method, have  
5 (there been any changes or addi-  
6 (tions to the program that you are  
7 (familiar with?

8 MR. WHITE: Your Honor, I'd like to state that I can  
9 think of the following, off the top of my head, IFG-2,  
10 IFG-4, Habtat, P. F. Simm. I think there are several --

11 MR. MEMBRINO: Not to have a continuing --

12 THE SPECIAL MASTER: Let him finish.

13 MR. WHITE: There's several different programs. All  
14 I'm asking is for Mr. Membrino to ask the witness about  
15 a specific program. There is no general program for the  
16 incremental methodology. There's several specific programs,  
17 some are used, and some are not at the same time.

18 THE SPECIAL MASTER: I think the witness can answer the  
19 question, and I think the question's an appropriate one,  
20 and I overrule the objection. Do you remember the question?

21 THE WITNESS: Yes.

22 THE SPECIAL MASTER: Proceed with an answer.

23 THE WITNESS: The IFG Incremental Method is an  
24 evolving methodology. They're constantly updating the  
25 methodology, improving it. There has been revisions in  
the methodology. The two of which I'm most familiar are  
the incorporated water quality into their modeling. As I  
vogel - direct - membrino





1 understand it, they're also incorporating cover as a  
2 variable. By "cover", I mean material within it, actually  
3 within the stream that would serve as cover for protection  
4 for fish or material over the banks of a stream such as  
5 brush that may serve as a protection for fish.

6 At the time I did my study, these variables had not  
7 been a portion of the methodology, but they are being  
8 developed now. I believe they're operational.

9 Q (By Mr. Membrino) Have you attempted --

10 THE SPECIAL MASTER: At the time you did the work  
11 that went into C-280, their work had not been completed,  
12 is that what you just said?

13 THE WITNESS: That's right.

14 THE SPECIAL MASTER: Go ahead.

15 Q (By Mr. Membrino) Have you made any evaluation of what  
16 effect those additions might have had on your conclusions?

17 A. Yes. Generally, I believe if we had incorporated these  
18 variables into the methodology back in 1979, 1980, we  
19 probably would have ended up with higher flow recommendations  
20 which I have presented in the report. I basically believe  
21 that the figures that I have in my report would be conserva-  
22 tive compared to what the recommendations would be had I  
23 incorporated these new variables.

24 MR. WHITE: Your Honor, I'd move to strike the answer  
25 vogel - direct - membrino



1 on the basis of foundation. How does he know these things,  
2 how did he derive these beliefs? Has he actually run these  
3 new variables as part of the program and data which he  
4 used to come up with greater stream flows? I'd move to  
5 strike for lack of foundation; there is absolutely no  
6 foundation.

7 THE SPECIAL MASTER: That may be a good --

8 MR. MEMBRINO: Your Honor, --

9 THE SPECIAL MASTER: Just a minute. I may not sustain  
10 the Motion to Strike, but I see in it the basis for a little  
11 more evidence to show what the scientific data on which  
12 conclusions he's made that more water is required if you're  
13 going to have brush along the side for cover or something  
14 that facilitates a better wildlife or fish habitat? In what  
15 way does that require more water? Isn't there an argument  
16 that it could require less water if it holds the water  
17 longer in the stream? Some more evidence is required.

18 MR. MEMBRINO: I think the witness would like to  
19 address himself to that, Your Honor.

20 THE SPECIAL MASTER: Okay.

21 THE WITNESS: It's my belief that most of these  
22 recommendations we have, I have made for the reservation,  
23 are at a point, I'm familiar enough with the streams, I've  
24 been out to the sites numerous times. For cover to be a  
25 good variable, for it to be effectively used by the fish



1 species, the stream, the water level in the stream has to  
2 be raised to a point where it would touch one bank or the  
3 other or possibly both. Oftentimes they weren't in our  
4 flow recommendations.

5 I might add too that Ken Bovee, who is an employee  
6 of the IFG in Fort Collins, did some preliminary work with  
7 one of my study sites to actually evaluate whether the  
8 cover would actually increase the flows or not, and he  
9 actually ran some of the data through the computer, and he  
10 determined that the flow recommendations would be somewhat  
11 higher.

12  
13  
14 \* \* \* \* \*





1 MR. WHITE: I would move to strike the answer based on  
2 the most rampant type of hearsay. What Mr. Bovee did or did  
3 not do is not an appropriate subject of this witness'  
4 testimony. If the United States wants to call Mr. Bovee,  
5 I know him, he is a very capable witness or would be a  
6 very capable witness and we could cross-examine him with  
7 respect to the facts, data and statistical assumptions  
8 which he used in that computer run. That would be one  
9 thing. But simply to refer to an opinion for which there  
10 is no, absolutely no foundation, I think it is improper,  
11 Your Honor, and we would move to strike on two grounds,  
12 hearsay and no foundation.

13 THE SPECIAL MASTER: The Motion to Strike is over-  
14 ruled on the basis that he said he invited him up to one  
15 of his study areas, that he had been working on on the  
16 Reservation and work was done on the Reservation under  
17 his supervision and invitation and, therefore, it stands.

18 MR. WHITE: Your Honor, Mr. Bovee was never on the  
19 Reservation. I think you might want to have that answer  
20 read back because I think just certain --

21 THE SPECIAL MASTER: Well, I'll ask the witness:  
22 Didn't you say you invited him up to work on your model  
23 or was it on your site?

24 THE WITNESS: No, it wasn't on the site. It was the  
25 results of the data that we collected at one particular





1 site. He simply took that data and ran through --

2 THE SPECIAL MASTER: He examined your data and ran it  
3 through the computer?

4 THE WITNESS: Right.

5 THE SPECIAL MASTER: And came up with those conclusions?

6 THE WITNESS: I would like to finish the answer, too.  
7 I wasn't done with what I was saying.

8 A. We did have one particular site on the Reservation where  
9 water quality in my opinion would be a problem. I believe  
10 the claim was conservative as we ran it through IFG  
11 incremental methodology in that the water supply in the  
12 stream would be too low in my opinion in that water quality  
13 might be limited or even possibly lethal to the fish.  
14 What happened was we examined only the physical fish  
15 habitat present. I ran it through the computer model and  
16 I developed a flow recommendation that I believed and my  
17 boss in Lander, Dick Boldus, believed to be too low during  
18 the summer months, and that water temperature may rise  
19 with these lower levels in the stream and be lethal to the  
20 fish. So the only way that we could avoid that was to  
21 have a higher flow claim in that study.

22 THE SPECIAL MASTER: Mr. Vogel, I know of at least  
23 50 friends, visitors in Wyoming, who would agree that  
24 that's what happened throughout this entire state in the  
25 last 25 or 30 years - the fish just aren't here anymore.  
vogel - direct - membrino



1 They have been overfished, they are underpropagated or the  
2 streams are lower or the fishing isn't what it used to be.  
3 Have you heard that sort of an observation?

4 THE WITNESS: Yes, I have.

5 THE SPECIAL MASTER: So if it's occurred on the  
6 Reservation as it has in the rest of the West, it is part  
7 of an order -- it is a part of an unfortunate area-wide  
8 result of our times, is it not; the abuses that have  
9 caused it?

10 THE WITNESS: I should clarify that a little. When  
11 I referred to a flow recommendation being lower, this is  
12 simply referring to the computer modeling since historically  
13 the flows are higher than that in that particular system.  
14 And we are trying to run it through the computer model and  
15 establish a recommendation that we feel would be adequate  
16 for the fish. However, when the computer model told me  
17 indirectly that we should have lower flows there based on  
18 only the physical habitat, we did not incorporate the  
19 water quality model, incorporate things such as temperature  
20 into it. So if we would, in other words, if we would go  
21 to that stream and reduce the flows below what they  
22 naturally occur at the moment, I believe that the tempera-  
23 ture would be lethal to the fish.

24 THE SPECIAL MASTER: I am confused as to why water  
25 quality has a result with regard to water temperature --



1 MR. MEMBRINO: Maybe I can ask a question in that  
2 regard.

3 Q (By Mr. Membrino) Mr. Vogel, when you speak of water  
4 quality, is it the temperature that you're talking about  
5 in that context?

6 A. Water quality refers to numerous variables. It could be  
7 dissolved oxygen, it could be dissolved solids, it could  
8 be temperature, it could be things such as sediment, it  
9 could be pollutants either manmade or nature, such as  
10 nitrates, ammonia levels, all these refer to water  
11 quality.

12 Q Now, in the stream you described what was the -- what was  
13 the quality component that was at issue for you?

14 A. I believe it was simply temperature.

15 THE SPECIAL MASTER: I never heard temperature dis-  
16 cussed as water quality before, and that's why I asked  
17 about it.

18 MR. MEMBRINO: Just to direct myself to a point you  
19 made, Your Honor:

20 If it is true that water quality or water levels have  
21 deteriorated throughout the West as well as on the Reser-  
22 vation, I think it has begged that the question be liti-  
23 gated in this case as to whether or not the Indians have  
24 the right to keep water in the streams as a part of their

25 vogel - direct - membrino





1 reserved right. And that's why we -- I don't think we can  
2 say that if the situation obtains throughout the West,  
3 then the Indian Reservation is stuck with that condition  
4 as well. That's precisely why we are here litigating the  
5 issue of instream flows.

6 Q (By Mr. Membrino) Mr. Vogel, besides the work you did with  
7 the incremental methodology on the Wind River Indian  
8 Reservation, do you know if anyone else has used the  
9 method in Wyoming?

10 A Yes, it has been used by other people in Wyoming.

11 Q Could you describe what you know about that for the Court?

12 A I'm familiar with the work being done by a fellow by the  
13 name of Al Condor; he is an employee of the Wyoming Fish  
14 and Game Department. As I understand it, he's currently  
15 under contract by the Bureau of Land Management to develop  
16 instream flow recommendations relating to this water rights  
17 adjudication further down in the Big Horn River system in  
18 Wyoming.

19 In addition, I know that some instream flow work has  
20 been done by the instream flow group themselves in Yellow-  
21 stone National Park. That work, I believe, was done in  
22 1980.

23 Q What is the basis for your knowledge of Mr. Condor's work?

24 A He attended one of the workshops at the same time that I

25 vogel - direct - membrino





1 attended it. He's made several visits to me in Lander  
2 asking me questions about the application and use of IFG  
3 incremental methodology.

4 Q Thank you. Do you know if the methodology, the incremental  
5 methodology has been used elsewhere outside of Wyoming?

6 A Yes. I stated previously I was aware of the work by a  
7 fishery biologist in Olympia, Washington, who was establish-  
8 ing instream flow recommendations for the Snohomish River  
9 in Washington. I'm also familiar with the work done by  
10 Ecological Services Division of the U.S. Fish and Wildlife  
11 Service in the Trinity River in northern California. This  
12 work, incidentally, was reviewed by the Secretary of  
13 Interior, Cecil Andrus, and he adopted their recommenda-  
14 tions for stream flows.

15 Q Having heard your testimony about why you selected the  
16 IFG method for your work in this case, I would now like  
17 you to turn to an outline of how you went about gathering  
18 the data and making your recommendations for instream  
19 flows using this methodology.

20 A What I'll do is I'll simply give you a broad overview of  
21 what my work entailed on the Wind River Indian Reservation  
22 starting right from the beginning point as far as selecting  
23 the stream reaches that we're concerned with to establish  
24 instream flows all the way to the end to establish our

25 vogel - direct - membrino



1 flow recommendations.

2 (Witness approached the easel  
3 (and began writing.

4 A. The first was the selection of the stream reach. Again,  
5 this is the stream reach for which we are claiming in-  
6 stream flow for fishery resources.

7 Upon establishing which stream reach we want to have  
8 a flow recommendation, we had to select a study site  
9 within that stream reach. I'll be referring to this out-  
10 line throughout my testimony.

11 Upon establishment of a study site, our next task was  
12 to go to the study site and do our measurements of hydraulic  
13 and habitat characteristics. These measurements included  
14 measurements of velocity, how fast the water was moving in  
15 the stream, depth and substrate.

16 After we've got to the study site and actually  
17 measured these physical variables, the next step was to  
18 run it through the computer to actually simulate the  
19 stream, do the computer modeling.

20 Once we simulated the hydraulic characteristics in  
21 terms of velocity, depth and substrate with the computer,  
22 our next step was to actually tie it in with what the fish  
23 actually prefer. I'll refer to that as fish preferences.

24 Now that we have tied these two together, what we  
25 vogel - direct - membrino



1 know can be simulated in the stream to what the fish  
2 actually prefer, we can actually predict what the habitat  
3 may be in the stream. The instream flow group refers to  
4 the output, the computer output, as weighted usable area  
5 that I'll be referring to periodically throughout my  
6 testimony.

7 We are using that basically interchangeably with  
8 fish habitat. Having established what we know of the  
9 habitat and how habitat characteristics may change with  
10 different flow regimes, I was able to make the final flow  
11 recommendations for those stream reaches. This is the  
12 final result.

13 Q With that outline in mind, Mr. Vogel, I direct your  
14 attention to what's been marked for identification as  
15 United States Exhibit WRIR C-281 and ask you to identify  
16 that, please, for the Court.

17 A This is a map showing the instream flow claims for the  
18 fisheries on the Wind River Indian Reservation.

19 Q Was this exhibit prepared by you or under your direct  
20 supervision?

21 A It was prepared under my supervision.

22 Q And what is the source of the information that's depicted  
23 on that map -- on that exhibit?

24 A It's basically a result of my findings of the flow

25 vogel - direct - membrino



1 recommendations for the Wind River Indian Reservation.

2

3

4

5

6

7

8

9

10

11

12

13

14

\* \* \* \* \*

15

16

17

18

19

20

21

22

23

24

25





1 Q (By Mr. Membrino) Does this exhibit fairly illustrate  
2 your conclusions reached during the instream -- reach  
3 concerning instream flows?

4 A Yes. It's generally illustrative of the claims. However,  
5 I would like to point out in the bottom left-hand corner  
6 of Exhibit C-281 we have our flow recommendations stated  
7 in cubic feet per second for each stream reached, and  
8 we have the low-flow claim and the high-flow claim per-  
9 study site or per-study reach. I should point out in the  
10 report we actually have the entire range of flows in be-  
11 tween the low and the high, so in that sense it's a little  
12 limited.

13 THE SPECIAL MASTER: You have it between the low  
14 and high, in what terms?

15 THE WITNESS: On an annual basis, what may actually  
16 occur.

17 THE SPECIAL MASTER: By gallons -- by cubic feet  
18 per second or by acreage?

19 THE WITNESS: Everything I have, as far as my flow  
20 recommendations, are mean monthly flows, mean monthly  
21 instantaneous flows and cubic feet per second.

22 Q (By Mr. Membrino) In preparing your recommendations,  
23 were you assisted by anyone?

24 A Yes, I was.

25 vogel - direct - membrino



1 Q Could you tell the Court who that was?

2 A I had assistance in the fieldwork. There was several  
3 people that helped me in that area. The person that  
4 helped me most was an enrolled Shoshone Indian who's  
5 currently enrolled on the reservation. His name is  
6 Ray Nation. He is employed as a Biological Technician  
7 with our Fish and Wildlife Office in Lander.

8 I also had assistance from personnel of the Ecologi-  
9 cal Services Division out of Billings, Montana; also the  
10 U.S. Fish and Wildlife Service. They helped me in two  
11 of the study reaches.

12 Q Did you consult with anyone else about the -- about your  
13 work?

14 A Yes. I had periodic contact with the staff of the In-  
15 stream Flow Group in Fort Collins. As far as the recom-  
16 mendations themselves, they were reviewed by my superiors  
17 in the Fish and Wildlife Service.

18 Q Okay. Now, to get us oriented to Exhibit C-281, I notice  
19 that there are highlighted in blue on the map what appear  
20 to be portions of streams. Could you describe what that  
21 blue highlighting is?

22 A Yes. Referring to Exhibit C-281, the blue portion of  
23 the stream outlined in red denote our actual stream  
24 reach. They're bounded on the upstream portion and down-  
25 vogel - direct - membrino



1 stream portion by a hash mark.

2 Q All right. And what are the --

3 THE SPECIAL MASTER: Can you define a "stream  
4 reach" for me now? It might help us, Mr. Membrino.  
5 Could you have the witness do that?

6 Q (By Mr. Membrino) Please do that.

7 A Okay. A stream reach is simply a segment of the river.  
8 We broke the entire stream reaches -- or excuse me, the  
9 entire -- say, for example -- it's best to use an example.  
10 This right here is the entire Wind River crossing from the  
11 left-hand portion of the map to the lower right-hand  
12 portion of the map, going to Boysen Reservoir, and from  
13 Boysen Reservoir out to the northeast boundary of the  
14 reservation (indicating). That's one river in itself.  
15 Now, we broke that into segments. Each one of those  
16 segments I refer to as a stream reach.

17 MR. MEMBRINO: We will get into more detail of what  
18 the, of why he selects the stream reach and what goes into  
19 that, very shortly, Your Honor.

20 Q (By Mr. Membrino) First, Mr. Vogel, I'd like you to ex-  
21 plain what the yellow dots are on that map.

22 A The yellow dots that you're referring to on Exhibit C-281  
23 show the approximate location of the study site where we  
24 actually went out and did our physical measurement of  
25 vogel - direct - membrino





1 hydraulic and fish habitat characteristics.

2 Q And the red circles containing different numbers?

3 A That's simply a reference point showing the number of  
4 the stream reach, that can be used by the index in the  
5 bottom left-hand corner of the exhibit.

6 Q Thank you. Now, to turn to the Special Master's earlier  
7 question about stream reaches, could you tell us how you  
8 go about selecting the stream reach?

9 A Yes. Basically what we did on the reservation was first  
10 establish which streams were of importance for establishing  
11 instream flows. The ones we selected were the ones that  
12 were important for fishery resources and also could have  
13 had impacts on them caused by existing and potential water  
14 development.

15 So using these as our guide, we went to the field,  
16 we looked at maps. The maps are referred to, things such  
17 as topographic maps. We even used aerial photographs in  
18 some cases to compile as much information as we could of  
19 each stream that we were going to investigate.

20 So what we did was we break the entire segment of --  
21 the entire river up into segments. We did this through  
22 examination of characteristics of the watershed. By that  
23 I mean whether there was decretions or depletions or  
24 both, or whether there was a tributary coming in, whether  
25 vogel - direct - membrino





1 there was a major diversion going off from the stream;  
2 the general stream morphology. In other words, what  
3 kind of stream did it look like, was it a highly gradient  
4 stream, was it really a steep gradient stream, what did  
5 the substrate look like, was it cobbly substrate or muddy  
6 substrate. And then we broke it into homogeneous sections,  
7 and these were our stream reaches. Referring back to the  
8 example on the Big Wind River, this right here was deter-  
9 mined to be a stream reach, from the left-hand corner of  
10 the map by the reservation boundary down to the confluence  
11 of Dinwoody Creek.

12 Q Now, that's designated on the map as stream reach number  
13 1?

14 A Number 1.

15 THE SPECIAL MASTER: Why does it have a line hatched  
16 to the left and cross-hatch to the right of it?

17 THE WITNESS: There's two stream reaches denoted in  
18 the left central portion of this exhibit. The one stream  
19 reach is number 1, as I just referred to as being Big  
20 Wind and down to the confluence to Dinwoody Creek. There's a  
21 second stream reach on Dinwoody Creek itself below the lakes  
22 down at the confluence with the Big Wind River, so that  
23 cross-hatch is just referring to the dividing line for those  
24 two separate stream reaches.

25 vogel - direct - membrino



1 Back to the selection of the actual stream reach,  
2 upon examination of all the variables I referred to,  
3 we broke segments of the river into what we considered  
4 homogeneous segments.

5 Q (By Mr. Membrino) What do you mean by that?

6 A I mean by homogeneous segments, that those portions of  
7 the streams that I felt were homogeneous, have similar  
8 characteristics. They have similar type substrates, simi-  
9 lar type fish habitat, similar general stream morphology.

10 Upon breaking it into those segments, we would go  
11 out and examine it from say one stream reach to another and  
12 verify our findings, our division of stream reaches.

13 Q Did you have to make any assumptions about these stream  
14 reaches?

15 A Yes. Basically before we even do the study, we had to  
16 determine if the watershed is an equilibrium. In my  
17 opinion we believe as far as the study was concerned --

18 THE SPECIAL MASTER: Mr. Vogel, what do you mean that  
19 the water should have to be in equilibrium?

20 THE WITNESS: Basically what that means, we want to  
21 make sure the balance is not -- We want to make sure the  
22 stream is not upgrading or degrading, there's not a tre-  
23 mendous load of sediment coming into the stream, raising  
24 the streambed, or there may not be a scouring action of

25 vogel - direct - membrino



1 the stream. In other words, a digging action, a degrada-  
2 tion of the stream.

3 THE SPECIAL MASTER: How can you avoid that kind of  
4 action in a one hundred year cycle?

5 THE WITNESS: That's what is referred to, that's called  
6 dynamic equilibrium. Over long periods of time there is  
7 some form of acridation or degradation of the stream  
8 channel, but in terms of short periods, it's not that  
9 obvious. If it's out of the dynamic equilibrium, those  
10 conditions would be apparent over a short period of  
11 time, you are right. That does appear over a long period  
12 of time, but we didn't feel it was important for the  
13 study to take them.

14 Q (By Mr. Membrino) When you speak of dynamic equilibrium,  
15 are you talking more in terms of hydrology, the balance of  
16 water in the system or what is happening to the stream-  
17 bed itself?

18 A I will be referring to both.

19 Q Okay.

20 A Originally I was talking about the hydrology as far as  
21 the stream, as far as what is happening to the stream,  
22 but it's also tied with what is happening to the stream-  
23 bed itself. In other words, if there is a scouring action  
24 it is changing the streambed morphology.

25 Q In selecting the stream reaches, did you -- did you con-  
vogue - direct - membrino





1 sult with anyone?

2 A Yes, I did. I consulted with my boss, Dick Baldes  
3 in Lander, and I conferred with him and he agreed that  
4 the segments I had selected were proper stream reaches  
5 to evaluate.

6 Q Could you describe his position?

7 A He's the Project Leader of the Lander U.S. Fish and  
8 Wildlife Service Office. He's also a Fishery Management  
9 Biologist and Shoshone Indian of the Wind River Indian  
10 Reservation.

11 Q Who is the one who made the final determinations about  
12 the stream reaches?

13 A I did.

14 Q Now, I note on the map that there are, appear to be wide  
15 variations of the lengths of different stream reaches on  
16 the map. I think you have touched on that, but could you  
17 elaborate a little bit more about that?

18 A Yes. Again, as I stated earlier, these stream reaches  
19 I consider to be relatively homogeneous. In other words,  
20 I'll use a graphic example. On Exhibit C-281, stream  
21 reach 2 is a pretty long reach of stream. However, with-  
22 in that reach of stream there is, in my opinion, there  
23 was not a significant amount of accretion or depletion  
24 of flows. From the upstream point to the downstream point  
25 vogel - direct - membrino





1 there was very little change as far as characteristics  
2 of substrate, general channel morphology, presence or  
3 absence of fish habitat.

4 Other portions of streams such as up above Dinwoody  
5 Creek refer to as, in this exhibit, stream reach number 1,  
6 had definite characteristics apart from stream reach  
7 number 2.

8 Q Does that fairly conclude your discussion of the selection  
9 process for the stream reaches?

10 A Yes, it does.

11 Q That brings us to what I say as the second part of your  
12 outline, the selection of a study site. Would you des-  
13 cribe for the Court how you go about doing that?

14 A Upon the selection of the stream reach, our next objective  
15 is to go outline and actually chose the site where we are  
16 going to do our physical measurements of the stream. To  
17 do this we have to do so on a random basis. By "random"  
18 I am not referring to haphazard, I'm referring to a sta-  
19 tistically random selection, eliminate as much bias as  
20 possible in the process.

21 What I did was break the entire segment of stream  
22 reaches into equal segments. More often than not on the  
23 reservation I used one mile segments of stream. For  
24 example, if stream reach number 2 on Exhibit C-281, if  
25 vogel - direct - membrino



1 this segment was 40 miles long I broke it into 40  
2 equal one-mile segments, and I numbered those segments  
3 consecutively up the stream.

4 Now, I referred to the back of a statistical text-  
5 book, most of the textbooks have this in the back. They  
6 have a random numbers table. A random numbers table is  
7 a compilation of a tremendous volume of numbers that  
8 statistically have no bearing on each other. In other  
9 words they're completely unbiased numbers. They're  
10 usually generated by computers.

11 So, I referred to the back and I chose my study  
12 sites just by simply choosing numbers off the random  
13 number table. Like, for example, if I was going to  
14 choose three candidate reaches, three potential reaches  
15 where I might want to go out and look at, I would choose  
16 maybe the first three numbers off the second page of  
17 this random numbers table. Once I did that, I would  
18 take them in the order I chose them; number 1, number  
19 2, number 3.

22 \* \* \* \* \*

25 vogel - direct - membrino



1 A. The first one I would look at on the map: I would take  
2 my USGS topographic map out and look at where I had  
3 actually broken that one, my division. I would look at  
4 it as far as a general channel shape. I would look at  
5 it as far as access, whether there's roads to it, and  
6 then I would go out and examine this stream reach that is  
7 one of my segments myself. I would actually drive out in  
8 the field or use a boat to go upstream or downstream and  
9 examine what that particular candidate reach looked like.  
10 If I determined that this first collection of a candidate  
11 reach was not representative of the rest of the stream  
12 reaches -- excuse me, the rest of the candidate reaches  
13 within those -- within that stream reach, I would have  
14 thrown it out because it was not representative of the  
15 rest of the system. Ideally, I wanted to choose a reach  
16 that is representative of entire segments of the stream  
17 within reason.

18 Q. Would you give an example of what would be an atypical  
19 feature that you stumbled on in one of your candidate  
20 reaches?

21 A. Well, it might be -- I can't think of one offhand, but I'll  
22 just use roughly for example, say, a reach area, referring  
23 to Reach No. 2, somewhere in this portion there happened  
24 to be an extremely steep grade. Say a waterfall or a

25 vogel - direct - membrino





1 cascading rapid that was not present anywhere else in that  
2 stream. If I happened to pick that particular candidate  
3 reach and that was within it, I would determine it was  
4 not representative of the rest of the reach, so I would  
5 not use that and I would go to my second candidate reach.

6 Q Okay.

7 A Okay, upon selection of a candidate reach and one that I  
8 felt was satisfactory in terms of representing the rest of  
9 the stream reach and it was one that I could gain access  
10 to, I would choose my study site within that candidate  
11 reach.

12 Q Let me ask you --

13 A Now, this is where we are actually getting into closing  
14 the point, the actual location within the stream reach  
15 that we wanted to do our physical measurement of the  
16 hydraulic and fish habitat characteristics.

17 Q I would like to ask you, in your testimony you described  
18 how important the statistical -- the statistically random  
19 basis for your selection is. Were there any physical  
20 problems of access or otherwise that worked against that  
21 random selection?

22 A Yes, we did the best job we could as far as gaining access  
23 to them. We did have numerous problems gaining access to  
24 some of these reaches on the Reservation because a large

25 vogel - direct - membrino



1 portion of these streams are inaccessible. For example,  
2 in the Wind River Canyon it's a deep, swift-flowing river.  
3 This is denoted as Stream Reach No. 6 on Exhibit 281. As  
4 I said, it was a steep, swift-flowing river and there is  
5 no boat ramps there for us to launch our boat. So, to  
6 gain access, we had to actually lower a boat over the side  
7 of the canyon through the use of ropes and pulleys.

8 There was another instance, for example, in Stream  
9 Reach No. 8 it is the Bull Lake Creek above Bull Lake  
10 where we had to launch a boat at the dam of Bull Lake,  
11 drive the boat up to the end of Bull Lake, park our boat  
12 and walk about a mile or so upstream carrying all of our  
13 equipment. So in many cases. it was a definite problem.

14 Q But, by and large, you didn't let that overcome your random  
15 selection?

16 A That's correct. We used -- We had the advantage of using  
17 the jet boat which is capable of running very shallow water  
18 up over riffles, so major portions on the Wind River, once  
19 we would choose a reach, even if we couldn't -- we could  
20 use the jet boat to drive, to go upstream or downstream to  
21 gain access.

22 Q Were there any other situations aside from access which  
23 you apparently were able to overcome; but situations in  
24 selecting study sites in which you could not use the

25 vogel - direct - membrino



1 random selection basis?

2 A Yes, these was three, to my recollection -- no, there was  
3 two and actually located on Bull Lake Creek below Bull  
4 Lake, Bull Lake Creek above Bull Lake, and also in Crow  
5 Creek above Crow Creek Canyon. And those areas, I can go  
6 through them and just refer to them one by one.

7 Q Sure.

8 A For example, in Crow Creek above Crow Creek Canyon,  
9 denoted as Stream Reach 16 on Exhibit C-281. Upon the  
10 actual visit to the field, we found that there was numerous  
11 beaver ponds in that section of stream. The IFG incremen-  
12 tal methodology does not allow one to actually go in and  
13 model a beaver pond. It is more like a reservoir or a  
14 lake on a smaller scale. We were more concerned with  
15 flowing water in the stream. So we actually had to pick  
16 our study site there upon its merits of fish habitat and  
17 its merits as far as being a stream in itself and not  
18 influenced by things such as beaver dams.

19 On Bull Lake Creek itself these were very short  
20 segments of stream, so we could not really break the stream  
21 into many segments and then choose them randomly from that.  
22 We were already dealing with a small portion of the stream,  
23 so we simply went to those areas, chose our study sites and  
24 its merits as far as fish habitat and its merits as far as

25 vogel - direct - membrino





1 use in modeling the hydraulics for the IFG computer pro-  
2 grams. Those are the only three of which I am aware.

3 Q Okay. I now direct your attention to what's been marked  
4 for identification as United States Exhibit WRIR C-282  
5 and ask you to identify that, please.

6 A This is an example, top view schematic, of a study site.

7 MR. MEMBRINO: Just one moment, please.

8 MR. WHITE: We'll pick those up later. That's all  
9 right.

10 THE SPECIAL MASTER: Let me ask a question, if I may,  
11 in the interim.

12 MR. MEMBRINO: Sure.

13 THE SPECIAL MASTER: Give me a description of the  
14 numbers, for example, on the flow at the top of the  
15 exhibit, 4 plus 70 refers to what?

16 THE WITNESS: That refers to 470 feet. The plus  
17 sign is simply a denotation made by surveyors. When we  
18 surveyed all these transects, I simply adopted their  
19 notation, so that refers to 470 feet above transect zero  
20 plus zero zero. Each one of these is the distance in feet  
21 above the downstream most transect.

22 Q (By Mr. Membrino) Is that same Exhibit C-281 (sic)  
23 reproduced in your report on Page 16?

24 A Yes, it is.

25 vogel - direct - membrino



1 Q I think it would be helpful for us to identify some of the  
2 features on that exhibit. Would you describe for the  
3 Court what is depicted on that in a schematic fashion?

4 A Okay. Again, this is just an example of the placement of  
5 transects within a study site. This figure encompasses  
6 the entire study site. As you remember, we have selected  
7 our stream reach where we wanted to make a claim and we  
8 have actually selected our study site. Now, the next  
9 step was to go into Step 3 and do our actual hydraulic  
10 and habitat measurements.

11 The whole objective of establishing these transects  
12 is to simulate what is actually in the stream. So, to do  
13 so, we went in and we placed transects at various portions  
14 across the stream itself.

15 THE SPECIAL MASTER: Define that and describe that  
16 transect or that act you just stated.

17 You went in and placed a transect?

18 THE WITNESS: Okay, we --

19 THE SPECIAL MASTER: What did you do?

20 THE WITNESS: We placed a head stake on the left bank  
21 and the right bank of the stream --

22 MR. MEMBRINO: If I can interrupt. I think in aid to  
23 his explanation of that, Your Honor, I would like to put  
24 on and have Mr. Vogel identify United States Exhibit

25 vogel - direct - membrino



1 WRIR C-283, which is another drawing.

2 THE SPECIAL MASTER: Okay.

3 Q (By Mr. Membrino) Would you please identify that, Mr.  
4 Vogel?

5 A Yes, Exhibit C-283 is a cross-sectional profile of a hypo-  
6 thetical transect.

7 Q And is that reproduced at Page 17 of your report, Exhibit  
8 C-280?

9 A Yes.

10 Q Please continue with your answer to the Master's question  
11 about head stake placement?

12 A Yes, a transect is simply a cross section of a stream.  
13 We place a head stake on the left bank and the right bank.  
14 I'll be referring to left bank and right bank in the  
15 future in the testimony. That just simply refers to, as  
16 though you were standing in the stream facing downstream,  
17 the left bank would be on your left side and the right bank  
18 would be on your right side. So we place a cross section,  
19 we place a wire across the stream for use in reference --  
20 not only in reference to the stream channels on both sides,  
21 but also in reference to the streambed itself. And also  
22 in reference to each transect at upstream locations.

23 Q Is Exhibit 283 an example of a cross section of a transect?

24 A Right. For example, this Exhibit 283 hypothetically could  
25 vogel - direct - membrino





1 be this transect right here (indicating) referred to on  
2 Exhibit C-282 as the transect stationed as zero plus 50.  
3 That's simply a cross-sectional view of this top view of  
4 the transect.

5 Q All right, could you point out where the head stakes are  
6 and where your wire is stretched on 283?

7 A Yes. In Exhibit 283, this is a head stake denoted on it  
8 as far as on my right, on the right-hand corner of the  
9 exhibit and one on the left-hand corner of the exhibit,  
10 and the wire was simply stretched between those two head  
11 stakes.

12 Q Would you tell us about the significance of the placement  
13 of the head stakes, please?

14 A Yes, the head stakes were our point of reference for the  
15 entire study site. It was from the head stakes that we  
16 did our measurements of the streambed itself as far as  
17 what the elevation of the bed is. We did our measurement  
18 of distance from each transect upstream.

19 Q All right. And in terms, in lateral terms, that is the  
20 distance between the left bank and the right bank in the  
21 head stakes, what is the -- what does the placement of  
22 those head stakes enable you to do?

23 A First of all, it was important to apply this data to the  
24 computer model of IFG incremental methodology. We had to

25 vogel - direct - membrino



1 have exact measurements of the distances between head  
2 stakes. The reason we had to know this is that we're  
3 going to take -- or we took point velocity measurements,  
4 we took point measurements of substrate composition, we  
5 took point measurements of depth. It's important for the  
6 computer model to know exactly where these point measure-  
7 ments are made within the stream. So when we stretch  
8 this tape across there, we simply measure the distance  
9 in feet between those measurements.

10 Q Can the computer --

11 THE SPECIAL MASTER: Between those what?

12 THE WITNESS: Between the different measurements.

13 Q (By Mr. Membrino) Can you tell me whether or not then the  
14 computer will be informed about anything outside the head  
15 stakes? Do you take any measurements outside the head  
16 stakes?

17 A Yes, it's -- there's several pieces of information we can  
18 gain from the head stakes themselves. Once we have  
19 established the head stakes, we have a reference point to  
20 go back to. We can use that reference point to establish  
21 what the elevation of each one of these distances --  
22 excuse me, each one of these locations of a point measure-  
23 ment, we can actually reconstruct streambed profile, what  
24 the contour of the streambed itself looks like. We can

25 vogel - direct - membrino



1 also use these head stakes as to how far it is up to the  
2 next transect in the stream.

3 THE SPECIAL MASTER: How do you do that and what is a  
4 head stake? Is it a piece of wood, 4x4, driven down with  
5 guy wires, or what are we talking about?

6 THE WITNESS: The head stakes we used were simply  
7 pieces of rebar pounded into the ground, 1/4-inch rebar.

8 Q (By Mr. Membrino) And what is that --

9 THE SPECIAL MASTER: Quarter-inch rebar?

10 THE WITNESS: Yes.

11 THE SPECIAL MASTER: And it sustains the wire that  
12 you pull taut across the river no matter how long it is  
13 to the other stake?

14 THE WITNESS: Right. Usually what we did, if it was  
15 going to be a long distance, we would pound a stake behind  
16 the head stake and cement it into the ground, so it was  
17 very strong and secure to support our wire across the  
18 stream.

19 Q (By Mr. Membrino) Could you describe what the vertical  
20 hash marks are on 283?

21 A This is just an example again, but in this example, C-283,  
22 the vertical lines that are dotted refer to the actual  
23 locations that we make for these velocity depths and sub-  
24 strates. They are also referring to the locations where

25 vogel - direct - membrino





1 we are going to do our measurements of what the streambed  
2 elevation would be at each one of those points.

3 Q Now, would you explain the information gathering process  
4 now that you have set your head stakes and --

5 A Okay, this is again back to Step No. 3, our hydraulic and  
6 habitat measurements.

7 Our very first concern was to place our downstream  
8 most transects in the study site at a hydraulic control.  
9 This is determined by the IFG to be the proper method for  
10 establishing the study site. And the hydraulic control is  
11 any physical feature within the stream, whether it be  
12 natural or manmade, that has a -- exhibits a stage dis-  
13 charge relationship. It is a feature that would have a  
14 damming influence on the water upstream from that point.  
15 For example, in this Exhibit C-282 would be the head of  
16 a riffle or the head of these rapids. There might be a  
17 shallow section there of cobble that actually has a damming  
18 influence on the water upstream from that point. So that  
19 was our very first consideration.

20 Q So, for example, behind that 0+00 transect upstream the  
21 water would be deeper than at the riffle?

22 A That's correct. The important thing to remember is there  
23 are two things we are looking for in placement of the  
24 transects within a study site. One, we want to identify

25 vogel - direct - membrino



1 the hydraulic characteristics of the stream and the other  
2 is we want to identify the habitat characteristics of the  
3 stream.

4 Q So subsequent transects are placed upstream at portions  
5 of the river to describe both those values. For example,  
6 in this Exhibit C-283 (sic), the transect most immediately  
7 upstream, zero plus 50 may denote a pool? This is actually  
8 fish habitat?

9 A Maybe a pool, a deeper portion of the stream where fish  
10 may live.

11 THE SPECIAL MASTER: Does the zero plus 50 mean that  
12 it is the same elevation from mean sea level as zero plus  
13 zero zero?

14 THE WITNESS: No. All these transects, all the water  
15 surface at all these transects will be increases in  
16 elevation as we go upstream. The zero plus 50 simply  
17 refers to the distance between transect zero plus zero  
18 zero and zero plus 50.

19 THE SPECIAL MASTER: As being what, 50 feet?

20 THE WITNESS: Fifty feet.

21 THE SPECIAL MASTER: From what point to what point?

22 THE WITNESS: It is an average distance from the left  
23 bank and the right bank, both head stakes taken and the  
24 distance between the next set of head stakes.

25 vogel - direct - membrino



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

THE SPECIAL MASTER: Thank you.

\* \* \* \* \*





1 Q (By Mr. Membrino) Please continue.

2 A So we continued to place these transects further upstream  
3 to describe both the hydraulics of the stream and fish  
4 habitats present in the stream. Going upstream, this here  
5 most likely would be a hydraulic control, so we place a  
6 transect through there (indicating). Further upstream we  
7 have an island in this exhibit, there might be different  
8 types of fish habitat present that we want the computer  
9 to know about when it's going to model the stream. The  
10 same thing goes for the other transects upstream, and we  
11 added another hydraulic control at 470 feet. So we en-  
12 compassed the entire study site and we've placed transects  
13 in places we thought it was necessary to meet the charac-  
14 teristics describing habitat and hydraulics.

15 Q Having set all the transects in place now, what did you do  
16 at each one?

17 A Now, we had to do our actual measurements; the velocity,  
18 depth and streambed profile, so we started off with the  
19 very first transect -- excuse me, we didn't talk about the  
20 elevation of the headstakes. The very first thing we do  
21 once we place these headstakes at both the left bank and  
22 right bank, we went back and surveyed each one of those  
23 headstakes to obtain their actual elevation. When I  
24 refer to the elevation, I mean, referring again to Exhibit

25 vogel - direct - membrino



1 C-283, I'm referring to the actual elevation of the top of  
2 this headstake.

3 This isn't an elevation above sea level, it's just  
4 simply a level from a benchmark that we may have established  
5 arbitrarily as 100 feet. The important thing is that every-  
6 thing be referenced to one central elevation so the computer  
7 has something to go by when it does its modeling.

8 Q So to amplify your response to the Master's question, you  
9 described that the Exhibit 282 describes horizontal dis-  
10 tances, that is, zero plus zero zero to 50 and so forth,  
11 between the transects, and you're now saying that you  
12 also established vertical, vertical distances between each  
13 transect?

14 A That's correct. We found out it's called differential  
15 leveling. We went and found what the difference in eleva-  
16 tion between a headstake and a transect downstream and  
17 referred it to one that would be upstream. For example,  
18 if this hypothetical transect referred to in Exhibit C-283,  
19 on the left-hand portion of the exhibit, or to be this  
20 transect on my left, the left-hand portion of the exhibit,  
21 and the transect zero plus zero zero were 100 feet, a  
22 transect upstream for that would be referred to in rela-  
23 tion to that. In other words, say, if this up here was  
24 101 feet, those would be our measurements, 100 feet for

25 vogel - direct - membrino



1 this headstake, 100 feet for that one. These measurements  
2 were made to the nearest one hundredth of a foot.

3 Q Now, we're back again to the specific transect and what you  
4 do with -- what you do at it.

5 A Upon establishing all our transects within a study site,  
6 we went to our very first transect, the downstream tran-  
7 sect, and began our measurements. Our first concern was  
8 to measure the streambed profile. We now have a measure-  
9 ment for what the headstake elevations would be. Now, our  
10 objective was to measure actually what the streambed profile  
11 would be, what the elevations may be one foot away from the  
12 headstakes, 10 feet or 100 feet away from the headstakes.  
13 This information is used for the computer to model the  
14 stream hydraulics and fish habitat.

15 So our first objective was to go out and do point  
16 measurements at distances away from each headstake. And  
17 at each one of those measurements, as far as the streambed  
18 elevation, we also do a measurement of what the substrate  
19 may be. Again, when I say "substrate", I'm referring to  
20 the actual streambed material. For example, cobble was  
21 a substrate that appeared quite frequently in most of our  
22 study regions.

23 Q Could you give a rough definition of what cobble is?

24 THE SPECIAL MASTER: I don't need that if anybody  
25 vogel - direct - membrino



1 else doesn't.

2 MR. WHITE: You may want to hear it. It may be  
3 different from what you've heard before.

4 THE WITNESS: IFG's got a scale that they use as far  
5 as denoting different sizes of substrates. We refer to  
6 cobble as approximately just a little bit less than 3 inches  
7 to up to about 10 inches in diameter.

8 Sand was -- Gravel would be something less than 3  
9 inches down to, say, a couple millimeters.

10 THE SPECIAL MASTER: Diameters of the rocks?

11 THE WITNESS: Yes, diameters. So we've done two  
12 things here. We've now established the streambed eleva-  
13 tions across, between the different headstakes, and we've  
14 established what the substrate type is at each one of those  
15 measurements.

16 Our next concern was to measure the depth and velocity  
17 at each one of those distances that we've previously  
18 measured across the stream.

19 Now, to do this, we'd actually go out in the  
20 stream. If it was shallow, we could wade across. If it  
21 was deep, we had to use a boat. We'd take a measurement  
22 of the mean vertical velocity in each one of those areas  
23 denoted as hash marks on 283. At the same time we  
24 recorded what the depth was at each one of those areas.

25 vogel - direct - membrino





1 THE SPECIAL MASTER: How would you find that depth if  
2 it's more than your feet would tell you or a stick? You  
3 use the probing?

4 THE WITNESS: Pardon?

5 THE SPECIAL MASTER: Probing or soundings?

6 THE WITNESS: They would be soundings. I think the  
7 deepest place we had in the Reservation was the Wind River  
8 Canyon. It had a depth of 9 feet. We simply used a winch  
9 that had graduations marked in feet, tenths of feet,  
10 and would sound off to the bottom.

11 Once we established what the depth was, we would  
12 take our readings of current to obtain the mean vertical  
13 velocity. If the water was over 2 1/2 feet deep, we would  
14 take two readings. We would take one reading at 2/10 of  
15 the distance from the surface of the water to the water  
16 to the bottom of the stream and take another at 8/10 of  
17 a distance from the surface of the water to the bottom of  
18 the stream and simply average them to obtain the mean  
19 vertical velocity.

20 If it was less than 2 1/2 feet in depth, we did take  
21 a reading at 6/10 of a distance from the surface of the  
22 water to the bottom.

23 THE SPECIAL: What, in your state of art, warranted  
24 a conclusion that you could draw a line like the third line  
25 vogel - direct - membrino



1 from the top on Exhibit 283 and conclude that is where the  
2 water surface was at the lowest of all measured flow and  
3 do that in transect after transect at any given study area?  
4 Where were the statistics available to you or how did you  
5 conclude that?

6 THE WITNESS: There was -- We used two computer models  
7 with the IFG incremental methodology. One computer model  
8 is referred to as IFG-2, The second computer hydraulic  
9 simulation model is referred to as IFG-4. IFG-2 requires  
10 measurements of only one discharge and IFG-4 requires at  
11 least two or three or maybe more measured discharges.

12 The IFG-4 requires also that those discharges be  
13 significantly different, such that we measure the flow at  
14 a low discharge, a medium discharge and a high discharge,  
15 and we do the same process for each.

16 THE SPECIAL MASTER: That line is a hypothetical or a  
17 projection based upon the statistics that you've been  
18 given?

19 THE WITNESS: Right.

20 THE SPECIAL MASTER: And you would extrapolate that  
21 or apply to a given area.

22 THE WITNESS: For example, if we used --

23 MR. RADOSEVICH: Your Honor, we object. We haven't  
24 had any testimony as to what the differences between IFG-2

25 vogel - direct - membrino



1 and IFG-4. What are we having described?

2 THE SPECIAL MASTER: Well, of course, he was just  
3 answering my question.

4 It's almost lunchtime, so why don't we take a break  
5 and be back at 1:30?

6 MR. MEMBRINO: Sure.

7 THE SPECIAL MASTER: Let's do that; it's a good place  
8 to break.

9 (Thereupon a lunch recess was  
10 taken at 11:35 a.m.

11

12

13

14

15

16

17

18

\* \* \* \* \*

19

20

21

22

23

24

25

