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Case # 4993

File # 165

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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 \_\_\_\_\_  
5/20 1981  
*Margaret V. Hampton* CLERK  
DEPUTY

VOLUME 58

Morning Session

Tuesday, May 12, 1981

**ORIGINAL**

APPEARANCES

FOR THE STATE  
OF WYOMING:

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

FOR THE UNITED STATES  
OF AMERICA:

MR. JAMES CLEAR and MR. JOSEPH MEMBRINO  
Attorneys 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  
1961 Stout Street  
Denver, CO 80294

FOR THE SHOSHONE  
and ARAPAHOE TRIBES:

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

CLERK TO THE  
SPECIAL MASTER:

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

ALSO PRESENT:

MR. BILL DEVINE of Hall & Evans

1 THE SPECIAL MASTER: Ladies and gentlemen,  
2 we will please come to order.

3 Mr. Echohawk and Mr. Clear.

4 MR. CLEAR: Your Honor, the United States  
5 would like to have called Tom Stetson to the  
6 witness stand.

7 THE SPECIAL MASTER: No middle initial?

8 MR. STETSON: M as in Michael.

9 MR. CLEAR: M.

10 THE SPECIAL MASTER: All right, Mr. Stetson,  
11 you haven't been sworn yet. Would you please raise  
12 your right hand?

13 THOMAS M. STETSON

14 was called as a witness by the United States and  
15 having been first duly sworn, testified as follows,  
16 to wit:

17 DIRECT EXAMINATION

18 BY MR. CLEAR:

19 Q Mr. Stetson, could you state your address,  
20 please?

21 A Business address is 550 Kearney Street,  
22 San Francisco, California 94108.

23 Q And what business are you in?

24 A We are consulting civil engineers.

25 stetson-direct-clear

1 Q What is the name of your business?

2 A Stetson Engineers, Inc.

3 Q And what position do you hold with that company?

4 A I am the president of the firm.

5 Q Are you a registered civil engineer?

6 A Yes, sir.

7 Q In what state?

8 A California.

9 Q Would you briefly run through your education and

10 professional experience?

11 A After graduating from high school I attended

12 Sacramento Junior College in Sacramento,

13 California for a year and a half. I attended

14 the Univeristy of California at Davis for a

15 half year. I attended the California Maritime

16 Academy at Tiburon, California for a year. After

17 that I was called into the service in the Navy

18 in the summer of 1941, a few months before the

19 war started, so I did not finish college and I

20 did not get a degree. While I was in the service

21 I took Armed Forces Institute courses in civil

22 engineering and got a diploma finally from the

23 International Correspondence School. While I was

24 in the Navy I was in the Navy Intelligence. I was

25 stetson-direct-clear

1 stationed first at the District Intelligence  
2 Office in San Francisco. After the war broke  
3 out I was transferred to a branch intelligence  
4 office at the Naval Air Station at Alameda, in  
5 regard to the intelligence work for the Pacific,  
6 what they called the Pacific Naval Air Bases.  
7 In about August of 1942, I went overseas with  
8 a combat intelligence team to the South Pacific.  
9 I spent the remainder of the war in the South  
10 and Central Pacific, came back to the states  
11 in 1944 for 30 days leave and then went back out.  
12 And, my duties for those three years was in  
13 primarily aerial mapping of the islands in the  
14 Pacific, preparing hydrographic charts, aerial  
15 bombardment charts, intelligence charts and that  
16 type of thing. When I returned from the service  
17 in October of 1945, I took a job with the  
18 State of California division of forestry. I  
19 worked there through 1948 as an assistant  
20 forestry engineer. Then, I transferred to the  
21 State of California Division of Water Resources,  
22 where I was an assistant civil engineer. With  
23 the State, my first assignment was a water  
24 resources investigation of Lake County, in

25 stetson-direct-clear

1 Northern California. At that time the State  
2 was engaged in preparing what became known as  
3 the State Water Plan and there were a number of  
4 cooperative investigations with various counties  
5 where they had water supply problems. And, on  
6 those cooperative investigations, they would  
7 each last about two years, and we would inventory  
8 the water resources of the county, inventory the  
9 current water uses, both domestic, municipal,  
10 industrial and agricultural. We would have our  
11 soils people classify soils and determine  
12 irrigable acreage. We would go through the  
13 normal consumptive use studies, the efficiency  
14 study and water development studies to determine  
15 how much water could be developed in the county,  
16 and how much water could be used in the county  
17 for present and future purposes. We completed  
18 the Lake County investigation in early -- late  
19 1950. I went back to Sacramento and wrote up  
20 the draft report on that study. In July of 1951,  
21 I was sent to Ventura County in Southern  
22 California to conduct a similar study but on  
23 a much larger scale. We completed that study in  
24 1953. At that time I was employed by the County  
25 stetson-direct-clear

1 of Ventura as a full-time consultant to their  
2 flood control and water conservation district,  
3 to attempt to develop some of the projects  
4 that we had recommended the county should develop.  
5 After about eight months it became apparent  
6 that the county did not either desire, or have  
7 the funding to go ahead with these large projects,  
8 so I went back to the Division of Water Resources,  
9 the Los Angeles office, where I was a senior  
10 hydraulic engineer.

11 My duties there were in connection directly  
12 with the State Water Plan for all of Southern  
13 California, that is from San Luis Obispo County  
14 on the north to San Diego County on the south,  
15 the entire, what we call South Costal Area.

16 We had a field office in San Luis Obispo and a  
17 field office in San Diego, both of which were  
18 under my jurisdiction, but I was based in Los  
19 Angeles.

20 In addition to those duties, we reviewed  
21 all federal reports on projects in Southern  
22 California under the law which requires the  
23 Governor to respond within 90 days, and we did  
24 miscellaneous water supply studies for state

25 stetson-direct-clear

1 institutions such as the prisons and agricultural  
2 stations and that type of thing.

3 In 19 -- July 1st of 1955, I transferred  
4 to another state agency called the Colorado  
5 River Board of California, where I was supervising  
6 hydraulic engineer and I was invited to take  
7 that position because of the filing of Arizona  
8 versus California lawsuit. So, I worked for the  
9 Colorado River Board in preparation for that  
10 lawsuit until of April of 1957, and in April  
11 of 1957 I established my private practice and  
12 became a consultant to the California Attorney  
13 General's office on the Arizona versus California  
14 case.  
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stetson-direct-clear

1 A (Continued) In private practice we always  
2 specialized in water resource treatment, in  
3 the water resources field, although we have done  
4 some other city engineering type work, but very  
5 little of it.

6 Q What projects aside from the Wind River Project  
7 are you currently involved in?

8 A Projects of any type?

9 Q Well, general, not everything, but water resource  
10 projects?

11 A Well, we have -- Much of my time is spent on the  
12 Kern River in Southern California, in the Southern  
13 San Joaquin Valley. I'm a consultant to the  
14 City of Bakersfield and have been since 1965.  
15 We were involved, we were originally hired to  
16 determine whether the City of Bakersfield should  
17 take its supplemental water from the state water  
18 project, from the proposed Central Valley East  
19 Side Project or try to get local water. And after  
20 making a study of this, we advised them to do,  
21 follow several alternate courses. One was to  
22 attempt to contract for state project water, but  
23 because the state project water comes down the  
24 west side of the valley and the city is on the  
25 stetson-direct-clear

2-2

1 east side of the valley we proposed that with  
2 the state project water, that they exchange  
3 that for Kern River water owned by water  
4 Districts on the west side, so they could take  
5 the state project water and the city on the east  
6 side could pick up the Kern River water,  
7 which is of a better quality and much cheaper.  
8 It's right there, you don't have to pump it  
9 across the valley.

10 As a result, we entered into negotiations  
11 with various Kern River interests in attempting  
12 to make exchange, and we were not successful.  
13 We then determined that much of the water  
14 established under the old Miller-Haggins  
15 Agreement was formally used for irrigation in  
16 areas that were now urbanized by the City of  
17 Bakersfield. So we filed a lawsuit against the  
18 Kern River interest in the hope of getting some  
19 of that water for the City. As a result of that,  
20 Tenneco, Tenneco West, they call it, which had  
21 bought out the old Kern County Land Company  
22 after two or three years of litigation, offered  
23 to sell to the City of Bakersfield all of its  
24 Kern River Water rights and so the City purchased  
25 stetson-direct-clear

2-3

1 those, they purchased about 300,000 acre-feet  
2 per year of water rights, much of which was  
3 committed to one large irrigation utility. We  
4 sold off that irrigation utility to the water  
5 district that was -- it was located to a public  
6 water district, and retained to the City about  
7 150,000 acre-feet of water rights, including  
8 a small irrigation utility. And then we entered  
9 into contracts to sell the excess water the City  
10 now had to other irrigation districts on a  
11 long-term contractual basis. And the City's  
12 operation has a lot of large canals, diversion  
13 facilities, delivers this water to the contractors  
14 as well as delivering water to the irrigation  
15 utility, which it still owns and operates.

16 I'm also District Engineer for the San  
17 Ynez River in Santa Barbara County, which serves  
18 both, its irrigation and municipal type operation;  
19 the San Gabriel Valley Municipal Water District,  
20 which is strictly a municipal water operation;  
21 the Upper San Gabriel Valley Municipal Water  
22 District, which is mainly municipal, there's  
23 some small amount of irrigation left in San Gabriel  
24 Valley, but not much.

25 stetson-direct-clear

2-4

1 We have represented a number of other  
2 districts in the past, Dos Palmas Irrigation  
3 District down in Coachella Valley; did a study  
4 for it to develop about 8,000 acres of land for  
5 irrigation. They had a problem with their water  
6 rights and were never able to get their water  
7 rights and the project was never built.

8 In the past, back in 1959 and '60 we were  
9 involved with construction of the Sausalito  
10 Irrigation District Projects, which takes water  
11 from the prime Kern Canal in Teller County.  
12 That's a closed pipe system, they pump out of  
13 the canal into a closed pipe distribution system.

14 We represent the City of Ventura on its  
15 water rights matters, we represent the City of  
16 San Bernadino on its water rights matters, City  
17 of Glendora. We're consultants for the City  
18 of Los Angeles Water and Power, we are consultants  
19 to the State of California, in addition to its  
20 Colorado River litigation. We have four or five  
21 other contracts with them on water rights, usually  
22 on water right matters.

23 Q Have you ever testified or qualified as an expert  
24 in litigation before?

25 stetson-direct-clear

2-5

1 A Yes, sir.

2 Q Federal court?

3 A Well, the Arizona versus California case.

4 THE SPECIAL MASTER: Just a minute. I  
5 don't know what's going on, but it's something.

6 MR. ROGERS: There's fire trucks down here,  
7 it's coming out of the Supreme Court Building.

8 THE SPECIAL MASTER: Let's take five or  
9 ten minutes.

10 (Off the record.

11 MR. CLEAR: Your Honor, as you probably  
12 know, Mr. Stetson is going to testify today as  
13 to the water duty of the, what's been called the  
14 historic lands except as to Type VIII, which  
15 Dr. Mesghinna will testify to.

16 THE SPECIAL MASTER: Except what?

17 MR. CLEAR: Except the Type VIII lands.

18 I would at this time like to offer Mr.  
19 Stetson as an expert.

20 THE SPECIAL MASTER: Let me just ask  
21 one or two questions. Mr. Stetson, about how  
22 many employees do you have in your firm?

23 THE WITNESS: Oh, 20 to 22, it varies.  
24 We have two offices, one in San Francisco, and  
25 stetson-direct-clear

2-6

1 one in West Covina, and we have about ten or  
2 11 people in each office.

3 THE SPECIAL MASTER: Were you ever familiar  
4 with the problems that Harold Johnson had with  
5 New Melanos Dam near Hometown?

6 THE WITNESS: Yes, sir.

7 THE SPECIAL MASTER: I laboured with those  
8 a good many years with him and came to hearings.

9 THE WITNESS: I imagine you did.

10 THE SPECIAL MASTER: That still isn't  
11 built, is it?

12 THE WITNESS: It's built, but they won't  
13 let --

14 THE SPECIAL MASTER: No water --

15 THE WITNESS: No water in.

16 THE SPECIAL MASTER: There's a dam without  
17 water.

18 All right, Mr. White.

19 MR. WHITE: Could I just ask a couple  
20 questions on voir dire?

21 THE SPECIAL MASTER: I figure you two know  
22 each other from depositions, but go ahead.

23

24

25 stetson-direct-clear

VOIR DIRE EXAMINATION

BY MR. WHITE:

Q Mr. Stetson, you testified, you've indicated that you've testified as an expert witness in Arizona versus California; is that correct?

A Yes, sir.

Q And what was the subject matter of your testimony?

A I testified on three different occasions in that case. The first occasion was on the safe yield of the Gila River System in Arizona and New Mexico. The second occasion was the long-term safe yield of the Colorado River, the mainstem Colorado River in the lower basin. And the third matter was in connection with the boundary dispute with the Colorado River Indian Reservation. The -- We disputed boundary in the State of California.

Q Mr. Stetson, could you describe any professional experience that you personally have with respect to the duty of water in the State of Wyoming.

A In the State of Wyoming?

Q Yes.

A It has all been in connection with this case.

MR. WHITE: Your Honor, while if we were in stetson-voir dire-white

1 California we undoubtedly would seek the  
2 services of Mr. Stetson, we're not in California,  
3 we are in Wyoming. We would object to the  
4 acceptance of the Court of this man as an  
5 expert witness with respect to the duty of water  
6 in Wyoming where he has no experience, especially  
7 with respect to the subject matter of this  
8 litigation for which he, by his testimony, appears  
9 never to have been qualified before as an expert  
10 witness.

11 THE SPECIAL MASTER: Objection's overruled,  
12 the witness will be admitted as an expert witness.

13 DIRECT EXAMINATION (CONTINUED)

14 BY MR. CLEAR:

15 Q Now, Mr. Stetson, while discussing your  
16 qualifications, I did mention about what you're  
17 to testify about concerning historic lands. Can  
18 you explain in more detail than I did of the  
19 study you undertook for your testimony today?

20 A What we undertook was to determine the duty of  
21 water requirements, and annual water requirements  
22 for the adjudicated trust lands, the unadjudicated  
23 trust lands, which are now in use and the Type VII  
24 idle lands, idle trust lands.

25 stetson-direct-clear

2-9

1 Q Now, when you said unadjudicated trust lands  
2 and adjudicated trust lands, Type VII lands,  
3 as you know, Dr. Mesghinna testified to what's  
4 been called future lands which are not now  
5 receiving water. Are the lands you're about  
6 to testify to receiving water?

7 A They are either receiving water or have received  
8 water in the past, yes, sir, but they are not  
9 the future lands which Dr. Mesghinna testified  
10 to.

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25 stetson-direct-clear

1 Q And are all these lands within the Federal Indian  
2 Project or the Midvale Irrigation District or other  
3 irrigation districts?

4 A Some of the lands are in the Federal Indian Irriga-  
5 tion Project, some of the trust lands are in the Mid-  
6 vale Irrigation District, and some are in the LeClair  
7 Irrigation District, but much of the trust lands are  
8 in what we call nonproject areas, they are outside  
9 of the Federal Irrigation Projects and outside of  
10 those two irrigation districts.

11 MR. CLEAR: Your Honor, we have had for some  
12 time a map prepared by Mr. Billstein, it was not pre-  
13 pared by Mr. Stetson. And I wanted to use it for  
14 illustrative purposes to help everyone follow the  
15 testimony a little bit, and I don't intend to use it  
16 for substantive evidence. And it shows where the  
17 irrigation projects are.

18 THE SPECIAL MASTER: I'm sure Mr. White would  
19 have no objection to that.

20 MR. WHITE: As long as it is for illustrative  
21 purposes, Your Honor.

22 MR. CLEAR: That's right.

23 THE SPECIAL MASTER: Okay, Mr. Clear.

24 MR. WHITE: I assume the United States will

25 stetson - direct - clear

1 provide us with a copy of it?

2 MR. CLEAR: I don't know if we have another  
3 copy, but we may. I think we do.

4 Your Honor, let me mark that. I don't have a  
5 sticker on it.

6 THE SPECIAL MASTER: Will this be ultimately  
7 made an exhibit or offered later in the case, do  
8 you think, Mr. Clear?

9 MR. CLEAR: Well, I think we'll identify it  
10 for the record with a -- and if we offer it, just  
11 for illustrative purposes.

12 THE SPECIAL MASTER: All right.

13 (The instrument hereinbefore  
14 (described was identified as  
(U.S. Exhibit WRIR C-276.

15 MR. CLEAR: Your Honor, I have marked for iden-  
16 tification United States Exhibit C-276, which we  
17 will use for illustrative purposes during the course  
18 of Mr. Stetson's testimony.

19 Q (By Mr. Clear) Mr. Stetson, could you describe for  
20 us generally the various components of the Wind River  
21 Federal Irrigation Project?

22 A Yes. May I step up to the exhibit?

23 THE SPECIAL MASTER: Sure.

24 A We have the Upper Wind Unit, which comprises the Wind  
25 stetson - direct - clear

1 River bottom lands and the so-called Dinwoody bench  
2 lands as the uppermost on the Wind River system.  
3 Then down in the Little Wind system we have the Ray  
4 Unit, uppermost on this watershed, the Coolidge Unit  
5 and the Subagency Unit moving downstream toward the  
6 Wind River. Then back onto the Main Stem of the Wind  
7 River we have the small Johnstown Unit and the Left-  
8 hand Unit. There are also some trust lands on the  
9 other side of the -- the northerly side of the river  
10 in the LeClair Irrigation District and some in the  
11 Midvale Irrigation District.

12 THE SPECIAL MASTER: Is the area in the Midvale  
13 District marked on that exhibit?

14 THE WITNESS: Well, the boundaries of the dis-  
15 trict are shown and there's some -- there should be  
16 some trust lands in there, although I can't tell  
17 from these boundaries if there is. I believe these  
18 so-called historic lands here are not necessarily  
19 complete.

20 MR. CLEAR: I think there are some inaccuracies  
21 on that map, Your Honor, and we are relying to -- as  
22 we said, Mr. Billstein prepared this in his testimony,  
23 but we are relying on the identification and location  
24 of those on the hydrographs and photographs that he  
25 stetson - direct - clear.

1 introduced into evidence.

2 THE SPECIAL MASTER: All right.

3 THE WITNESS: It is a relatively small area in  
4 the Midvale Irrigation District.

5 Q (By Mr. Clear) Are you familiar with the rivers and  
6 streams which service those various units? Can you  
7 identify those?

8 A Well, of course, the Upper Wind is served mainly from  
9 the Wind River with its East Fork and its various  
10 tributaries, Dinwoody Creek. As we come downstream,  
11 of course, you have the Midvale Project diverting  
12 much of the water, but the Johnstown and Lefthand  
13 get most of their water out of the Wind River. On  
14 the Little Wind we have the various branches of the  
15 Little Wind River; North Fork, Mid Fork or Main Fork  
16 and South Fork; and we have the Popo Agie which served  
17 the combination of the Ray Unit, Coolidge Unit and  
18 Subagency Unit.

19 Q Mr. Stetson, how did you determine the location and  
20 acreage of the nonadjudicated lands currently receiv-  
21 ing water within the Type VII lands?

22 A We received from HKM Associates maps showing the loca-  
23 tions of the unadjudicated trust lands in use.

24 Q And are you familiar with the testimony of Mr.  
25 stetson - direct - clear

1 Billstein and Mr. Waples?

2 A Yes, I have read the transcripts.

3 Q And these are the lands they identified in their  
4 testimony?

5 A Mr. Billstein testified on the unadjudicated trust  
6 lands and Mr. Waples testified on the arable Type VII  
7 lands, as I recall.

8 THE SPECIAL MASTER: Mr. Stetson, when you say  
9 Type VII lands, what do you mean?

10 THE WITNESS: Well, I'm using the same definition  
11 that I hope everybody is using, that the Type VII is  
12 idle lands which are trust lands that at one time  
13 used water but are not now using water.

14 MR. CLEAR: Your Honor, I think the types were  
15 discussed somewhat earlier in the testimony --

16 THE SPECIAL MASTER: Yeah, I recall that.

17 MR. CLEAR: -- and Exhibit, I think, HB-8, which  
18 was a State exhibit, was introduced, and I have a copy  
19 of that if you want.

20 THE SPECIAL MASTER: No, that's quite all  
21 right. I just --

22 Q (By Mr. Clear) How did you determine the acreage  
23 and the location of the so-called adjudicated lands?

24 A The adjudicated lands?

25 stetson - direct - clear

- 1 Q Yes.
- 2 A Those were furnished to us by HKM Associates.
- 3 Q Now, Mr. Stetson, how did you come about determining
- 4 the water duty for the adjudicated and nonadjudicated
- 5 lands receiving water within the project areas?
- 6 A Within the project areas we reviewed the historic
- 7 record of acreage served and water diverted on an
- 8 annual basis.
- 9 Q When you say "acreage served", is that all the acreage,
- 10 Indian and non-Indian and so on?
- 11 A All the acres classified as irrigated acres in those
- 12 respective years. We went through the historic re-
- 13 cord, and for the years in which there were data for
- 14 both irrigated acres and diversions, we used those
- 15 data and determined an average for each unit; that
- 16 would be Upper Wind --
- 17 Q Average what?
- 18 A Average duty. In other words, the average diversion
- 19 in acre-feet per acre for the irrigated acres.
- 20 Q And once you obtained that average, what did you do
- 21 with it?
- 22 A Well, we reviewed -- we consider that to be a repre-
- 23 sentative unit diversion requirement for those lands
- 24 under their existing types of use.
- 25 stetson - direct - clear

1 Q So you have assigned the average diversion require-  
2 ment in acre-feet per acre, is that right?

3 A. Acre-feet per acre-year for each of the units.

4 Q Uh-huh.

5 A. The three subunits in the Little Wind Unit, the  
6 Upper Wind Unit, the Johnstown Unit, the Lefthand  
7 Unit, and also for Midvale Irrigation District and  
8 the LeClair Irrigation District. Now, these unit  
9 diversion rates were derived from the total number  
10 of acres irrigated each year in those units. There  
11 were lands other than trust lands irrigated.

12 Q Uh-huh. All right.

13 A. But we did this simply to derive the average diver-  
14 sion rate.

15 Q Uh-huh. Where did you get the records as to the  
16 annual diversions and the irrigated acres served?

17 A. We got -- For the Federal Indian Irrigation Projects  
18 we got them from the BIA and the Fort -- and Mr.  
19 Crook at Fort Washakie. We obtained data from the  
20 -- for the Midvale Irrigation District and the  
21 LeClair Irrigation District from records of those  
22 districts, published data.

23 Q So now, you have an average water duty -- I'm sorry,  
24 an average diversion requirement per acre, and you

25 stetson - direct - clear

1 took that and what, multiplied it by --

2 A. For each of the respective units we then looked at  
3 the acreage of adjudicated lands --

4 Q. Uh-huh.

5 A. -- in that category and the acreage of unadjudicated  
6 trust lands in use and applied the same average duty  
7 to those lands.

8 Q. And that total gave you what?

9 A. That total gave us the -- By that application, we got  
10 the acre-feet per year diversion requirement for those  
11 lands.

12 Q. For the adjudicated?

13 A. For the trust lands, the adjudicated trust and the  
14 unadjudicated trust.

15 Q. Could you tell us, in your opinion -- or could you  
16 tell us the number of acres in each unit -- number  
17 of adjudicated trust lands in each unit and the  
18 number of the Federal Irrigation Project and the  
19 water duty for those total acres?

20 MR. WHITE: Objection, Your Honor. There's no  
21 foundation with respect to the adjudicated trust  
22 lands. The Court's taken judicial notice of the  
23 state water rights that exist, the certificated  
24 water rights. There is no evidence before the Court

25 stetson - direct - clear

1 that the acreage contained in those certificated  
2 water rights are actually trust lands.

3 THE SPECIAL MASTER: The objection is overruled.  
4 You may answer.

5 A. In the Ray Unit of the Little Wind there were 347  
6 acres of adjudicated lands. The average duty in that  
7 unit was 5.32 acre-feet per acre, which would indicate  
8 an annual diversion requirement of 1,846 acre-feet.  
9 In the Coolidge Unit there were 311 acres of adjudi-  
10 cated lands; the duty in that unit was 4.95 acre-feet  
11 per acre for an annual diversion requirement of  
12 1,539 acre-feet. There were no adjudicated lands  
13 in the Subagency Unit. There were 492 acres of ad-  
14 judicated trust lands in the Dinwoody bench area of  
15 the Upper Wind --

16 THE SPECIAL MASTER: How many?

17 THE WITNESS: Four hundred and ninety-two acres.

18 THE SPECIAL MASTER: Thank you.

19 A. The duty in that unit is 12.06 acre-feet per acre,  
20 which would indicate an annual diversion requirement  
21 of 5,934 acre-feet. There were no adjudicated trust  
22 lands in the Johnstown Unit. Twenty acres of adjudi-  
23 cated lands in the Lefthand Unit. In the Lefthand  
24 Unit the average annual diversion duty was 6.9

25 stetson - direct - clear

1 acre-feet per acre, so that would indicate an annual  
2 diversion requirement of 138 acre-feet.

3 There were no adjudicated trust lands in either  
4 Midvale or LeClair Irrigation Districts, so we had a  
5 total of 1170 acres of adjudicated trust lands in the  
6 project acres, and the total annual diversion require-  
7 ment would come out to be 9,457 acre-feet.

8 Q Okay --

9 THE SPECIAL MASTER: May I ask you a question  
10 now about the nature of lands that required 12 acre-  
11 feet, 4.06, as a requirement, isn't that abnormally  
12 high?

13 THE WITNESS: That is high. There is no ques-  
14 tion about it. If I may step over to the map --

15 THE SPECIAL MASTER: Sure. Dinwoody --

16 MR. CLEAR: Do you want a pointer? I think  
17 you're in the Master's way a little bit.

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1 THE WITNESS: This is in an area in  
2 the Upper Wind River where there's apparently  
3 ample water, and they divert a large unit  
4 diversion, probably run their canals full for  
5 the ease of operation. What isn't consumed  
6 or most of what isn't consumed gets back into  
7 the river system, so it's not as if they were  
8 depleting the stream by that much, but it is  
9 a very high duty of water, there's no question  
10 about it.

11 Q (By Mr. Clear) Let's move on to the unadjudicated  
12 trust lands within the projects.

13 A All right.

14 Q Did you determine water duty for the unadjudicated  
15 trust lands which are now receiving water in  
16 the same manner that you determined the water  
17 duty for the adjudicated trust lands in the  
18 project?

19 A Yes, I did.

20 Q Can you --

21 THE SPECIAL MASTER: Is this Type VII lands  
22 that are unadjudicated or just lands receiving  
23 water like you asked?

24 MR. CLEAR: These are unadjudicated lands,  
25 stetson-direct-clear

1 but they are currently receiving water from  
2 the irrigation projects.

3 THE SPECIAL MASTER: Are there no un-  
4 adjudicated trust land that historically might  
5 have received water that are not now?

6 THE WITNESS: Those would be Type VII.

7 MR. CLEAR: Those would be Type VII.

8 THE SPECIAL MASTER: They're not in the  
9 figures you're giving now?

10 THE WITNESS: No, sir.

11 THE SPECIAL MASTER: Neither the ones you  
12 just have given or the ones you're about to?

13 THE WITNESS: That's right.

14 THE SPECIAL MASTER: Thank you. Go ahead,  
15 Mr. Clear.

16 Q (By Mr. Clear) Could you run through the  
17 acreage of unadjudicated trust lands receiving  
18 water and their water duty in the various units  
19 in the irrigation project.

20 A Going through unit by unit, in the Ray Canal Unit  
21 there are 782,000 acres of unadjudicated trust  
22 lands now receiving water. Average water duty is  
23 5.32 acre-feet per acre, annual diversion  
24 requirement would be 41,400 acre-feet.

25 stetson-direct-clear

1 In the Coolidge Unit there are 6,357  
2 acres, an average duty of 4.59 acre-feet per  
3 acre, annual diversion requirement, 31,467 acre-feet.

4 In the Subagency Unit there are 2,962  
5 acres, average diversion unit is 5.26 acre-feet  
6 per acre, annual diversion requirement would  
7 be 15,580 acres.

8 In the Upper Wind, from the Wind River  
9 A Canal, 1,019 acres, average duty, 12.06,  
10 annual diversion requirement, 12,289 acre-feet.

11 Dinwoody Bench Area, 4,611 acres, average  
12 duty, 12.06, annual diversion requirement,  
13 55,609 acre-feet.

14 Johnstown Unit, there are 465 acres,  
15 average duty is 6.94 acre-feet per acre, annual  
16 diversion requirement, 3,227 acre-feet.

17 Lefthand Unit, 1,541 acres, average duty,  
18 6.9 acre-feet per acre, annual diversion  
19 requirement, 10,633 acre-feet.

20 For the trust lands in the Midvale  
21 Irrigation District there are 569 acres,  
22 average duty is 5.58 acre-feet per acre, annual  
23 diversion requirement, 3,175 acre-feet.

24 In the LeClair Irrigation District there  
25 are 1,271 acres, average duty is 5.48 acre-feet

steston-direct-clear

1 per acre, annual diversion requirement, 6,965  
2 acre-feet. So we have a total of unadjudicated  
3 trust lands within the project areas of 26,577  
4 acres with an annual diversion requirement of  
5 180,345 acre-feet.

6 Q Mr. Stetson, you've testified now as to how  
7 you reached your conclusions on the adjudicated  
8 trust lands and the nonadjudicated trust lands  
9 within the projects. How did you go about  
10 studying the adjudicated trust lands and non-  
11 adjudicated trust lands outside the projects?

12 A We determined the -- First of all, we established  
13 a cropping pattern for the historic lands. We  
14 had -- and this was done by climatic stations,  
15 so we ended up with acutally three different  
16 cropping patterns for a total of seven climatic  
17 stations.

18 Q The seven climatic stations are the same climatic  
19 stations Dr. Mesghinna testified to?

20 A Yes, they are. In fact, Dr. Mesghinna then,  
21 from his computer analysis, determined the  
22 consumptive use of each of these crops by months,  
23 by climatic stations.

24 From the consumptive use data, and depending  
25 stetson-direct-clear

1 upon -- and some of these units we have more  
2 than one climatic zone, so we applied the  
3 consumptive use, the net irrigation requirement,  
4 which is the consumptive use less effective  
5 precipitation.

6 Q This is the same methodology with respect to the  
7 future lands?

8 A Yes, it is. We applied that to the lands in  
9 each of the units by climatic zones if there  
10 were more than one climatic zone in the unit.  
11 And that way we derived an average net irrigation  
12 requirement for each of these project areas.  
13 We then looked at the annual diversion, unit  
14 diversion requirement, and by dividing that into  
15 the annual net irrigation requirement, we  
16 arrived at an annual overall efficiency for each  
17 unit.

18 Q These are the efficiencies within the project  
19 now?

20 A This is the total overall efficiency from the  
21 point of diversion to the --

22 Q Right.

23 A To the point of use.

24 In that, by doing that, we found a range  
25 stetson-direct-clear

1 of efficiencies that run from as low as 16.2  
2 percent, which is your Upper Wind Unit to  
3 as high as 38 percent on the LeClair, 39.5  
4 percent on Subagency, 37 percent on Coolidge  
5 and so forth. And the others are between 16  
6 and 39.5, that's the range.

7 After reviewing this and recognizing that  
8 the low efficiencies in the Upper Wind Unit  
9 probably distort the average efficiencies  
10 because these averages came out for just the  
11 Federal Irrigation Project units, came out to  
12 23.3 percent. If you eliminate the Upper Wind  
13 Unit from the calculation and just average  
14 the Little Wind, Johnstown and Lefthand, you  
15 get an average of about 34.7 percent.

16 THE SPECIAL MASTER: May I hear that again?  
17 If you eliminate the Little Wind --

18 THE WITNESS: We eliminate the Upper Wind  
19 Unit, which has the low efficiency, that's the  
20 one with the 12. -- the 12 foot diversion unit,  
21 which gives a 16 percent --

22 THE SPECIAL MASTER: You end up with  
23 what?

24 THE WITNESS: We end up with 34.7 percent  
25 stetson-direct-clear

1 as the average overall efficiency.

2 Dr. Mesghinna had done some studies  
3 on various streams throughout the -- on the  
4 nonproject lands on irrigation requirements  
5 and the net irrigation requirements, and then  
6 did a theoretical analysis using, looking at the  
7 lands, the types of lands, so forth, types of  
8 soils, assuming a farm efficiency, and then  
9 looking at how these lands would be served,  
10 what the conveyance efficiencies would be, and  
11 he, in his work, came up with a range of 29  
12 percent to 37 percent as a general range of overall  
13 efficiencies.

14 Also, in reviewing some of the older  
15 reports by the Bureau of Reclamation, you get  
16 some feel for efficiency, they give data on  
17 diversion requirements and consumptive use  
18 requirements. And it seems to be in the range  
19 of, using actual data, of 20 to -- low 20 percent  
20 to the high 30 percent range.

21 On the basis of this, it was my opinion  
22 that we could use a 35 percent efficiency  
23 as being an achievable efficiency on the non-  
24 project lands. So I have applied a 35 percent

25 stetson-direct-clear

1 efficiency on the nonproject lands.

2 Now, historically their efficiencies were  
3 undoubtedly lower than that, but I believe 35  
4 percent is an achievable efficiency.

5 Q What would be the effective lower efficiency  
6 of the diversion requirement?

7 A The lower efficiency requires a higher unit  
8 diversion. Then from that diverted water  
9 the crop consumes so much of it, there's --  
10 The rest is either returned to the stream or  
11 is dissipated in the swampy areas, just depends  
12 on the topography and the cover in that particular  
13 region.

14 Q All right. Now, you have an efficiency for the  
15 nonproject lands. Then what did you do to  
16 determine the water duty for those lands?

17 A All right. For the acres of either adjudicated  
18 or unadjudicated lands in use that were  
19 furnished to us, they were furnished by aerial  
20 photo number and field number. We looked at  
21 those in comparison with your climatic zone  
22 maps and applied the proper units and also the  
23 cropping pattern for those respective climatic  
24 zones, and we determined a proper average net

25 stetson-direct-clear

1 irrigation requirement for each of those  
2 lands, each of those parcels.

3 Then we used the 35 percent efficiency  
4 to divide into the net irrigation requirement  
5 to derive a diversion requirement.

6 Q Can you give us your opinion as to the diversion  
7 requirements for the nonproject adjudicated  
8 trust land?

9 MR. WHITE: Objection, Your Honor; again,  
10 there is no foundation, no evidence before the  
11 Court that these lands are in fact trust lands.

12 THE SPECIAL MASTER: I would -- I would  
13 overrule the objection, but ask you to restate --  
14 You're asking for the diversion requirements for  
15 what lands, for all of the totals of the acreage  
16 that Dr. Mesghinna testified to in his report?

17 MR. CLEAR: No, Your Honor. These are  
18 different lands, these are adjudicated lands  
19 having --

20 THE SPECIAL MASTER: Unadjudicated but  
21 not a part of future?

22 MR. CLEAR: Not a part of future lands,  
23 Your Honor, and I believe --

24 THE SPECIAL MASTER: Then I will overrule it.

25 stetson-direct-clear

1 Q (By Mr. Clear) Could you give us your acreage  
2 figures for water duty requirements on the  
3 adjudicated trust land outside the projects?

4 A All right. You want basin by basin, tributary  
5 by tributary?

6 Q I think that would be helpful to the Court.

7 A We start with the Wind River Basin, main Wind.  
8 On the East Fork Wind River there were 259 acres.  
9 The indicated diversion requirement is 5.06  
10 acre-feet per acre which would indicate an annual  
11 diversion requirement of 1,310 acre-feet.

12 THE SPECIAL MASTER: Three hundred and ten?

13 THE WITNESS: One thousand three-hundred  
14 and ten acre-feet, yes, sir.

15 On Dinwoody Creek there were 17 acres.  
16 The indicated diversion requirement was 5.57  
17 acre-feet per acre for an annual requirement  
18 of 95 acre-feet.

19 We had zero acres on Dry Creek, zero  
20 acres on Bull Lake Creek, we have 166 acres on  
21 Meadow Creek, diversion duty, 5.43 acre-feet  
22 per acre, annual requirement, 901 acre-feet.

23 On Dry Pasup Creek we have 1,977 acres,  
24 diversion duty, 5.31 acre-feet per acre,

25 stetson-direct-clear

1 requirement of 10,490 acre -- I'm sorry --

2 THE SPECIAL MASTER: Ten thousand --

3 THE WITNESS: Ten thousand four hundred  
4 and ninety acre-feet per year.

5 On Crow Creek we have 2,927 acres, diversion  
6 duty, 5.13 acre-feet per acre, annual diversion  
7 requirement, 15,542 acre-feet.

8 On Willow Creek, 60 acres, annual diversion  
9 requirement, 5.57 acre-feet per acre, annual  
10 requirement of 334 acre-feet.

11 On the Wind River Mainstem, 1,338 acres,  
12 annual diversion duty, 5.54 acre-feet, annual  
13 requirement, 7,413 acre-feet.

14 So, for the Wind River Basin we have 6,744  
15 acres total and a diversion requirement of  
16 36,093 acre-feet.

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stetson-direct-clear

1 Q (By Mr. Clear) Adjudicated lands?

2 A Adjudicated lands:

3 In the Little Wind River Basin we have lands,  
4 adjudicated lands, on four of the tributaries:  
5 North Fork, South Fork, Sage Creek and Mill Creek.  
6 On North Fork, 485 acres, the diversion duty is  
7 5.49 acre-feet per acre; annual requirement, 2,663  
8 acre-feet. On South Fork Little Wind, 107 acres;  
9 diversion duty, 4.94 acre-feet per acre; annual  
10 requirement, 529 acre-feet. On Sage Creek, 207  
11 acres; diversion duty, 5.57 acre-feet per acre;  
12 annual requirement, 1,153 acre-feet. On Mill Creek,  
13 37 acres; diversion duty, 5.57 acre-feet per acre;  
14 and the annual requirement, 206 acre-feet.

15 So the sum for the Little Wind River Basin  
16 would be 836 acres with an annual diversion require-  
17 ment of 4,551 acre-feet.

18 On the Big Horn River Basin segment on the Main  
19 Stem Big Horn, 100 acres; diversion --

20 THE SPECIAL MASTER: On which again, Mr. Stetson?

21 THE WITNESS: Main Stem Big Horn.

22 THE SPECIAL MASTER: Right.

23 A One hundred acres; average diversion, 5.94 acre-feet  
24 per acre; annual requirement, 594 acre-feet.

25 stetson - direct - clear

1 Cottonwood Creek, 505 acres; annual diversion re-  
2 quirement, 5.89 acre-feet per acre; annual require-  
3 ment, 2,974 acre-feet. On Muddy Creek we have  
4 2,901 acres; 5.43 acre-feet per acre duty; annual  
5 requirement, 15,752 acre-feet. On Five Mile Creek  
6 we have 156 acres with a duty of 5.57 acre-feet per  
7 acre and an annual requirement of 869 acre-feet.

8 THE SPECIAL MASTER: You said 156 acres in  
9 that Five Mile --

10 THE WITNESS: One hundred and fifty-six acres,  
11 yes, sir.

12 THE SPECIAL MASTER: Thank you.

13 A For -- So that for the Big Horn River, that would  
14 total 3,600 and -- 3,662 acres with an annual diver-  
15 sion requirement of 20,189 acre-feet.

16 On the Popo Agie, we have 320 acres on the  
17 North Fork with an annual duty of 5.4 acre-feet  
18 per acre and an annual requirement of 1,720 acre-  
19 feet. On the Main Stem Popo Agie we have 40 acres;  
20 the duty is again 5.4 acre-feet per acre; annual  
21 requirement, 216 acre-feet. So we have a total of  
22 360 acres for the Popo Agie with an annual require-  
23 ment of 1,944 acre-feet.

24 Then we move up to Owl Creek Basin. On the  
25 stetson - direct - clear

1 South Fork of Owl Creek, 1,620 acres; a duty of 5.46  
2 acre-feet per acre, annual requirement of 8,845 acre-  
3 feet. On Main Stem Owl Creek we have 2,265 acres, a  
4 duty of 5.4 acre-feet per acre, and an annual require-  
5 ment of 12,231 acre-feet. On Mud Creek we have  
6 754 acres, a duty of 5.43 acre-feet per acre, and an  
7 annual requirement of 4,094 acre-feet. The grand  
8 total for the nonproject lands --

9 Q (By Mr. Clear) Adjudicated trust lands?

10 A Yeah, adjudicated trust in the nonproject area would  
11 be 4,639 acres and an annual requirement of -- Let  
12 me check something here, it doesn't look right.

13 Just a moment. I want to check a figure on it.

14 The adjudicated trust lands in the nonproject  
15 areas would be 16,241 acres with an annual diversion  
16 requirement of 87,947 acre-feet.

17 THE SPECIAL MASTER: You are now giving us the  
18 totals of Owl Creek, Popo Agie, Big Horn, Little  
19 Wind and the Main Stem?

20 THE WITNESS: Yes. Outside the project areas.

21 THE SPECIAL MASTER: Give me the totals on Owl  
22 Creek again. Forty-six, thirty-nine, and the acreage as to--  
23 what is the total?

24 THE WITNESS: Owl Creek is 4,639 acres --

25 stetson - direct - clear

1 THE SPECIAL MASTER: Right.

2 THE WITNESS: And 25,170 acre-feet.

3 THE SPECIAL MASTER: Right. Now, those  
4 totals also again for all --

5 THE WITNESS: For all of the nonproject lands  
6 would be 16,241 acres, 87,947 acre-feet.

7 Q (By Mr. Clear) Nine hundred and forty-seven, did  
8 you say?

9 A Nine hundred and forty-seven acre-feet annual diver-  
10 sion requirement.

11 When you combine that with the project lands,  
12 you have the total of adjudicated acreage, which is  
13 the 17,411 acres, and the total diversion requirement  
14 then would be 97,404 acre-feet.

15 THE SPECIAL MASTER: You add the 1170 acres of  
16 adjudicated to the 16,241?

17 THE WITNESS: Yes, sir.

18 THE SPECIAL MASTER: You get what?

19 THE WITNESS: Seventeen thousand four hundred  
20 and eleven.

21 THE SPECIAL MASTER: Okay. And we add the  
22 9,457 to the 87,000, you get the total annual re-  
23 quirement of how much?

24 THE WITNESS: Of 97,404.

25 stetson - direct - clear

1 THE SPECIAL MASTER: Okay. Thank you.

2 Q (By Mr. Clear) Let's go on to the unadjudicated  
3 trust lands receiving water outside the Federal  
4 Irrigation Projects. Did you determine the water  
5 duty in the same method that you determined the  
6 nonproject adjudicated lands?

7 A Yes, I did.

8 Q Would you give us the figures on the unadjudicated  
9 trust lands, nonproject lands?

10 A These are the unadjudicated in use, nonproject areas.  
11 For the Wind River Basin, East Fork Wind River, 10  
12 acres, the duty is 5.06, annual diversion require-  
13 ment, 51 acre-feet. Dinwoody Creek, 154 acres; the  
14 duty is 5.57; annual requirement, 858 acre-feet.  
15 Dry Creek, 183 acres; annual diversion requirement,  
16 5.54; annual requirement, 1,014 acre-feet. Bull  
17 Lake Creek, 26 acres; duty is 5.4 acre-feet per  
18 acre; annual requirement, 140 acre-feet. Meadow  
19 Creek, 179 acres; the duty is 5.51 acre-feet per  
20 acre; the annual requirement, 986 acre-feet. Dry  
21 Pasup Creek, 56 acres; duty is 5.2 acre-feet per  
22 acre; annual requirement, 291 acre-feet. Crow  
23 Creek, 36 acres; the duty is 5.4 acre-feet per  
24 acre; annual requirement, 194 acre-feet. Willow  
25 stetson - direct - clear

1 Creek, 7 acres; 5.06 acre-feet duty per acre; annual  
2 requirement, 35 acre-feet. Wind River Main Stem, 487  
3 acres; annual duty, 5.77; acre-feet per acre; annual  
4 requirement, 2,810 acre-feet. So for the Wind River  
5 Basin we have 1,138 acres; annual requirement for  
6 diversion of 6,379 acre-feet.

7 In the Little Wind Basin, the North Fork of the  
8 Little Wind, 1,776 acres, with a duty of --

9 THE SPECIAL MASTER: What is the title on this  
10 again, I'm sorry?

11 THE WITNESS: This will be the Little Wind  
12 Basin. And the first one will be the North Fork on  
13 the Little Wind.

14 THE SPECIAL MASTER: Thank you.

15 A. One thousand seven hundred seventy-six acres with a  
16 duty of 5.14 acre-feet per acre, annual requirement  
17 of 9,129 acre-feet. South Fork Little Wind, 781  
18 acres, duty of 5.11 acre-feet per acre; annual  
19 requirement, 3,991 acre-feet. Main Stem Little  
20 Wind, 386 acres, duty of 5.94 acre-feet per acre;  
21 annual requirement, 2,293 acre-feet. Sage Creek,  
22 776 acres; the duty is 5.51 acre-feet per acre;  
23 annual requirement, 4,276 acre-feet. Crooked Creek,  
24 69 acres --

25 stetson - direct - clear

1 THE SPECIAL MASTER: Sixty-nine?

2 THE WITNESS: Sixty-nine, yes, sir.

3 THE SPECIAL MASTER: Uh-huh.

4 A Annual duty, 5.26 acre-feet per acre; annual require-  
5 ment, 363 acre-feet. Trout Creek, 228 acres, 5.46  
6 acre-feet per acre of duty; annual requirement,  
7 1,245 acre-feet. Spring Creek, 178 acres; annual  
8 duty, 4.97 acre-feet per acre; annual requirement,  
9 885 acre-feet. Big Horn Draw, 139 acres; duty, 4.94  
10 acre-feet per acre; annual requirement, 687 acre-  
11 feet. So for the Little Wind Unit, we have 4,333  
12 acres with an annual requirement of 22,869 acre-feet.

13 Then on the Big Horn River Basin we have on the  
14 Main Stem Big Horn, 2 acres, 5.94 acre-feet per acre;  
15 annual requirement, 12 acre-feet. Cottonwood Creek,  
16 320 acres; diversion duty, 5.89 acre-feet per acre;  
17 annual requirement, 1,885 acre-feet. Muddy Creek  
18 we have 1,194 acres; annual duty, 5.6 acre-feet per  
19 acre; annual requirement, 6,686 acre-feet. Five  
20 Mile Creek, 362 acres; the duty is 5.57 acre-feet  
21 per acre; annual requirement, 2,016 acre-feet. So  
22 for the Big Horn River Basin we have a total of  
23 1,878 acres and an annual requirement of 10,599  
24 acre-feet.

25 stetson - direct - clear

1 On the Popo Agie we have on the North Fork,  
2 112 acres; the duty is 5.43 acre-feet per acre;  
3 diversion requirement, 608 acre-feet per year.  
4 And the Main Stem of the Popo Agie, 74 acres; the  
5 duty is 5.74 acre-feet per acre; annual diversion  
6 requirement, 425 acre-feet. So the subtotal for  
7 the Popo Agie is 186 acres with an annual requirement  
8 of 1,033 acre-feet.

9 On Owl Creek Basin, South Fork Owl Creek, 84  
10 acres; annual duty, 5.51 acre-feet per acre; diver-  
11 sion requirements, 463 acre-feet per year. The Main  
12 Stem Owl we have 46 acres, a duty of 5.4 acre-feet  
13 per acre; annual diversion requirement of 248 acre-  
14 feet. Mudd Creek we have 185 acres, a duty of 5.29  
15 acre-feet per acre, an annual requirement of 979  
16 acre-feet for diversion.

17 The subtotal for Owl Creek Basin is 315 acres  
18 with an annual diversion requirement of 1,690 acre-  
19 feet. The subtotal for the nonproject lands under  
20 the unadjudicated but in-use status would be 7,850  
21 acres with an annual diversion requirement of  
22 42,570 acre-feet.

23 \* \* \* \* \*

24  
25

1 THE SPECIAL MASTER: In none of your calculations  
2 in this study, Mr. Stetson, did you make a determination  
3 or did you not, whether some of this land had ever passed  
4 from Indian status and trust status into non-Indian  
5 ownership and back in again, or your testimony has nothing  
6 to do with the legal status of the land; is that right?

7 A. That's correct.

8 THE SPECIAL MASTER: Thank you.

9 Q. (By Mr. Clear) You just gave us a subtotal on the  
10 non-adjudicated trust lands outside the project;  
11 is that right?

12 A. Yes.

13 Q. Outside the projects. Would you give us a total of the  
14 non-adjudicated trust lands inside the project and  
15 non-adjudicated trust lands outside the project.

16 A. The total unadjudicated in use?

17 Q. Right.

18 A. Combining the project land with the non-project lands,  
19 you have a total of 34,427 acres.

20 THE SPECIAL MASTER: 34,000 --

21 THE WITNESS: 34,427 acres with an annual diversion  
22 requirement of 222,915 acre-feet.

23 THE SPECIAL MASTER: Give me the caption of that  
24 again. That is the total --

25 stetson - direct, clear

1 THE WITNESS: That's the total requirements for the  
2 unadjudicated trust lands presently in use.

3 MR. CLEAR: Project and non-project.

4 THE SPECIAL MASTER: Project and non-project?

5 MR. CLEAR: Yes, sir.

6 THE SPECIAL MASTER: The unadjudicated trust lands  
7 presently in use, project and non-project?

8 THE WITNESS: Yes.

9 THE SPECIAL MASTER: 222,915?

10 THE WITNESS: Acre-feet per year, yes, sir.

11 MR. CLEAR: You want a glass of water?

12 THE SPECIAL MASTER: Let's take a break, it's been  
13 a good long session.

14 (Thereupon, a ten-minute recess  
15 was taken.)

16 THE SPECIAL MASTER: Mr. Clear.

17 MR. WHITE: Your Honor, before he continues, could  
18 I ask one question, that is, who is your next witness  
19 so we could get out experts lined up?

20 MR. CLEAR: Dr. Mesghinna is our next witness.

21 THE SPECIAL MASTER: Due back?

22 MR. CLEAR: On the --

23 THE SPECIAL MASTER: That's after the cross later  
24 today?

25 MR. CLEAR: He's flying in today, Your Honor. We  
stetson - direct - clear.

6-3-MR-vlb

1 got caught a little short.

2 THE SPECIAL MASTER: I'm making a joke, I'm trying  
3 to be facetious in speeding things up. It would be  
4 Dr. Mesghinna, okay. After, can you tell us after  
5 him too or do you need to know?

6 MR. CLEAR: After it's Mr. Dornbusch giving  
7 the economics on these historic lands.

8 MR. ECHOHAWK: Mr. Dornbusch or Mr. Merchant,

9 MR. CLEAR: Either Mr. Dornbusch or Mr. Merchant.  
10 In other words, we're repeating the process with  
11 historic lands that we did with future lands.

12 THE SPECIAL MASTER: All right. You ready at the  
13 United States' table?

14 MR. ECHOHAWK: Mr. Rodgers isn't here yet.

15 THE SPECIAL MASTER: All right. We'll wait a half  
16 a minute or so.

17 (Brief pause.

18 THE SPECIAL MASTER: All right. Are we ready to  
19 resume?

20 Okay. Proceed, Mr. Clear.

21 Q. (By Mr. Clear) Mr. Stetson, let's now turn to Type VII  
22 lands. Could you define again what Type VII lands are?

23 A. Type VII lands are trust lands which have had a history  
24 of irrigation, but are idle at the present time, they are  
25 stetson - direct - clear

6-4-MR-vlb

1 idle lands.

2 Q. What sort of study did you undertake with respect to  
3 the Type VII lands?

4 A. We were furnished maps and aerial photos of the areas  
5 in which those lands are located. In addition to making  
6 the office studies on them we have visited them in the  
7 field by helicopter, and we have examined them on the  
8 topo maps and on the aerial photos. We have analyzed  
9 them from the standpoint of water requirements, we have  
10 analyzed them from the standpoint of what it would  
11 cost to put those lands into production again. And we  
12 have submitted our cost data to the economists who have  
13 advised us in -- with respect to the present value of  
14 returns versus present value of costs on those lands.

15 Q. When you say costs, what costs do you exactly mean?

16 A. These would be the costs to put the lands back into  
17 production. Some of the lands require very little  
18 investment, perhaps a turnout, perhaps some additional  
19 ditch or perhaps --

20 Q. When you're talking about putting the lands back into  
21 production, you're talking about irrigation facilities?

22 A. For irrigation purposes.

23 THE SPECIAL MASTER: Could that include flooding too  
24 for those lands that just used to be pasture?

25 stetson - direct - clear

1 THE WITNESS: It could, yes, sir.

2 THE SPECIAL MASTER: Simple little floods once or  
3 twice a year as compared to five or six acre-feet of  
4 duty?

5 THE WITNESS: Well, we develop costs on the  
6 assumption they would be fully irrigated, that's what  
7 our costs are based upon.

8 Q. (By Mr. Clear) What items did you look at specifically  
9 with respect to costs?

10 A. We looked at such items as the headworks, the diversion  
11 head works, canal extensions or canal enlargements,  
12 turnouts, head ditch on the farm if that was required.  
13 If it was a pumping-type diversion, what type of pump,  
14 horsepower, what it would cost, the annual cost for  
15 all of these; maintenance, operation, energy and so  
16 forth.

17 Q. When you talk about -- Are you talking about the simple  
18 pump and pumping plant that Dr. Mesghinna testified to  
19 in the future lands? Is it the pumps to that extent?

20 A. Not the big pump stations, we're talking about relatively  
21 small pump stations for these lands because most of  
22 them are scattered and we're picking up a parcel here and  
23 a parcel there, so it's not a matter of pumping in a  
24 big pump station with several pumps. It's usually a  
25 statson - direct - clear

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1 case of putting in one pump, perhaps two pumps to serve  
2 these lands.

3 Q. Are these costs, were they assessed on a total  
4 overall per-acre basis or were they assessed per  
5 individual parcel?

6 A. The costs were developed on a per-acre basis for each  
7 parcel.

8 Q. For each parcel?

9 A. Yes, sir.

10 Q. And then you turned those costs over to Mr. Dornbusch;  
11 is that right?

12 A. We gave him the results of our estimates of the  
13 construction costs and the annual costs from our  
14 standpoint.

15 They then analyzed those from an economic standpoint  
16 and from the approach of whether or not certain  
17 amendments were required on some of the soils and the  
18 usual analysis they go through. And advised them of  
19 what the present value of the returns would be with  
20 respect to the present value of the costs.

21 Q. As a result of their information, were any Type VII lands,  
22 which Mr. Waples testified to, omitted from your  
23 eventual conclusions?

24 A. Yes, they were.

25 stetson - direct - clear

1 Q. How many acres was that, do you know, offhand, roughly?

2 A. Mr. Waples gave us figures for 10,440 acres of Type VII  
3 lands, and we had determined that 8,002 are irrigable  
4 as opposed to arable.

5 Q. Now, Mr. Stetson, are Type VII lands found in both the  
6 project areas and outside the project areas?

7 A. Yes, they are.

8 Q. In determining the water duty for the project areas,  
9 did you use the same method as determining the water duty  
10 for the project areas of adjudicated lands and non-  
11 adjudicated lands in each?

12 A. For the Type VII lands within the project areas?

13 Q. Yes.

14 A. Yes, we did.

15 Q. And similarly with the Type VII lands outside the project,  
16 did you use the same method that you used with the  
17 adjudicated and non-adjudicated lands in use outside the  
18 project?

19 A. Yes, we did.

20 Q. Could you give us the totals of the remaining acres and  
21 their water duty starting first with the project lands,  
22 please, the Type VII.

23 A. The Type VII irrigable lands in the Ray Unit there were  
24 1,775 acres, a duty of 5.32 acre-feet per acre, annual  
25 stetson - direct - clear

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diversion requirement of 9,443 acre-feet.

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1 A In the Coolidge Unit there was 1,161 acres of Type  
2 VII lands that qualified with a duty of 4.95 acre-  
3 feet per acre, an annual requirement of 5,747 acre-  
4 feet. In the Subagency Unit there were 200 acres  
5 with a duty of 5.26 acre-feet per acre and an annual  
6 diversion requirement of 1,052 acre-feet. In the  
7 Upper Wind Unit there were 99 acres in the Wind  
8 River A Canal service area where the duty is 12.06  
9 acre-feet per acre, which would result in a require-  
10 ment of 1,194 acre-feet per year. In the Dinwoody  
11 bench area there were 393 acres with a duty of 12.06  
12 acre-feet per acre, an annual requirement of 4,738  
13 acre-feet. In the Johnstown Unit there were 189  
14 acres with a duty of 6.94 acre-feet-per acre and an  
15 annual requirement of 1,312 acre-feet. In the Left-  
16 hand Unit there were 587 acres with a duty of 6.9  
17 acre-feet per acre, annual requirement of 4,050  
18 acre-feet. There were no Type VII lands in the  
19 Midvale Irrigation District. There was 100 acres  
20 in the LeClair Irrigation District with a duty of  
21 5.48 acre-feet per acre or an annual requirement  
22 of 548 acre-feet. So the total in the project  
23 areas would be 4,504 acres with an annual diversion  
24 requirement of 29,084 acre-feet.

25 stetson - direct - clear

1 Q All right, can you now give us your water duties for  
2 the Type VII irrigable lands outside the project?

3 A Okay, starting with the Wind River Basin: East Fork  
4 Wind River there were 41 acres with a duty of 5.06  
5 acre-feet per acre, annual requirement of 207 acre-  
6 feet. Dinwoody Creek, 27 acres, the duty is 5.57  
7 acre-feet per acre with an annual requirement of  
8 150 acre-feet. Sand Draw, 26 acres, duty of 5.06  
9 acre-feet per acre, an annual requirement of 132  
10 acre-feet. Dry Creek, 4 acres, duty of 5.57 acre-  
11 feet per acre, an annual requirement of 22 acre-  
12 feet. Bull Lake Creek, 37 acres, a duty of 5.37  
13 acre-feet per acre, and an annual requirement of  
14 199 acre-feet. Meadow Creek, 159 acres, duty of  
15 5.09 acre-feet per acre, an annual requirement of  
16 809 acre-feet. Dry (Pasup) Creek, 185 acres, duty  
17 of 5.06 acre-feet per acre, 936 acre-feet of  
18 annual requirement. Crow Creek, 159 acres, a duty  
19 of 5.29 acre-feet per acre, an annual requirement  
20 of 841 acre-feet. Wind River Main Stem, 213 acres,  
21 a duty of 5.51 acre-feet per acre, an annual re-  
22 quirement of 1,174 acre-feet. The subtotal for  
23 the Wind River Basin would be 851 acres with an  
24 annual requirement for diversion of 4,470 acre-feet.

25 stetson - direct - clear

1 For the total Little Wind River we have the North  
2 Fork Little Wind, 345 acres, a duty of 5.03 acre-  
3 feet per acre, annual requirement of 1,735 acre-  
4 feet. South Fork Little Wind, 44 acres, a duty of  
5 5.09 acre-feet per acre, an annual diversion require-  
6 ment of 224 acre-feet. Main Stem Little Wind, 805  
7 acres, an annual duty of 5.94 acre-feet per acre,  
8 an annual diversion requirement of 4,782 acre-feet.  
9 Mill Creek, 10 acres, duty of 5.57 acre-feet per  
10 acre; annual requirement, 56 acre-feet. Sage Creek,  
11 822 acres, duty of 5.57 acre-feet per acre, an  
12 annual requirement of 4,579 acre-feet. Crooked  
13 Creek, 3 acres, 5.57 acre-feet per acre duty, and  
14 an annual requirement of 17 acre-feet. Trout Creek,  
15 86 acres, a duty of 5.11 acre-feet per acre, an  
16 annual requirement of 439 acre-feet. The subtotal  
17 for the Little Wind River Basin would be 2,115 acres  
18 and an annual diversion requirement of 11,832 acre-  
19 feet.

20 For the Big Horn Basin we have for the Main Stem  
21 Big Horn, 24 acres, a duty of 5.94 acre-feet per  
22 acre, an annual diversion requirement of 143 acre-  
23 feet. Cottonwood Creek, 117 acres, a duty of 5.89  
24 acre-feet per acre and an annual requirement of 689

25 stetson - direct - clear

1 acre-feet. Muddy Creek, 186 acres, a duty of 5.63  
2 acre-feet per acre, an annual requirement of 1,047  
3 acre-feet. The subtotal for Big Horn River Basin  
4 would be 327 acres with an annual diversion require-  
5 ment of 1,879 acre-feet.

6 For the Popo Agie we have 14 acre-feet on the  
7 North Fork --

8 THE SPECIAL MASTER: How many on the North  
9 Fork?

10 THE WITNESS: Fourteen acre-feet.

11 THE SPECIAL MASTER: Thank you.

12 A With a duty of --

13 Q (By Mr. Clear) Fourteen acre-feet or 14 acres?

14 A I'm sorry, 14 acres. With a duty of 5.4 acre-feet  
15 per acre, an annual diversion requirement of 76  
16 acre-feet. And that is also the subtotal for Popo  
17 Agie. There's nothing on the Main Stem.

18 Then we have the last one is the Owl Creek Basin.  
19 On South Fork Owl Creek there's 64 acres with a duty  
20 of 5.57 acre-feet per acre, an annual requirement of  
21 356 acre-feet. Main Stem Owl Creek, 87 acres, a  
22 duty of 5.37 acre-feet per acre, an annual require-  
23 ment of 467 acre-feet. On Mud Creek we have 40 acres  
24 with a duty of 5.37 acre-feet per acre, an annual

25 stetson - direct - clear

1 diversion requirement of 251 acre-feet for a sub-  
2 total for Owl Creek of 191 acres and a diversion  
3 requirement of 1,038 acre-feet.

4 So the nonproject subtotal would be -- these  
5 are Type VII lands in the nonproject areas, 3,498  
6 acres with a diversion requirement of 19,296 acre-  
7 feet.

8 Q Do you have a total for the project and nonproject  
9 Type VII lands?

10 A Yes, that total for the project and nonproject Type  
11 VII lands would be 8,002 acres with an annual diver-  
12 sion requirement of 48,380 feet.

13 Q Mr. Stetson, do you have a total overall figure for  
14 the acreage adjudicated and nonadjudicated Type VII  
15 inside the project, outside the project, do you have  
16 the total number of acres and total water duty?

17 THE SPECIAL MASTER: For the entire Wind River  
18 Indian Reservation?

19 MR. CLEAR: For the historic lands other than  
20 Type VII, all totaled, all these sums he's testified  
21 together.

22 MR. WHITE: Objection, Your Honor. There's no  
23 foundation again. There's no evidence that the ad-  
24 judicated lands which he's talking about are, in

25 stetson - direct - clear

1 fact, trust lands.

2 THE SPECIAL MASTER: That may be true, but  
3 I'm going to overrule it only because if it is  
4 true, it will subtract certainly. For the purpose  
5 of moving along, I'll overrule it.

6 I'm still not too clear about the question  
7 though.

8 MR. CLEAR: Well, I'm just asking him to --

9 THE SPECIAL MASTER: To total what he's been  
10 testifying to?

11 MR. CLEAR: Right. Yes, sir.

12 THE SPECIAL MASTER: Is that about it?

13 MR. CLEAR: Yes, Your Honor, exactly.

14 A. The total would be comprised of all of the project  
15 lands and nonproject lands and the classification  
16 of adjudicated trust lands, unadjudicated trust  
17 lands now in use and the Type VII idle lands. That  
18 total would be 59,840 acres with an annual diversion  
19 requirement of 368,699 acre-feet.

20 THE SPECIAL MASTER: Let me ask a question or  
21 to to keep myself clear as we move along.

22 So if that 368,699 acre-feet you've just men-  
23 tioned, 222,000 of it is used by the unadjudicated  
24 trust lands presently in use, project and nonproject?

25 stetson - direct - clear

1 THE WITNESS: That's correct, 222,915 acre-  
2 feet.

3 THE SPECIAL MASTER: So the difference is about  
4 140,000 acre-feet, give or take some?

5 THE WITNESS: One hundred and forty-five  
6 thousand, something like that.

7 THE SPECIAL MASTER: And that you find is your  
8 evidence regarding the Type VII lands, both project  
9 and nonproject?

10 THE WITNESS: And the adjudicated lands.

11 THE SPECIAL MASTER: And the adjudicated lands  
12 presently in use?

13 THE WITNESS: Well, the adjudicated lands.

14 THE SPECIAL MASTER: Are lands on which there  
15 are certificates.

16 THE WITNESS: There are -- the category we've  
17 been given is the adjudicated lands within the pro-  
18 ject and outside the project, the total of 17,411  
19 acres.

20 THE SPECIAL MASTER: Just hold it there a half  
21 a minute.

22 THE WITNESS: What I'm saying is that these are  
23 the water requirements for those adjudicated lands.

24 THE SPECIAL MASTER: Those are the total of all  
25 project and nonproject adjudicated and unadjudicated

1 and Type VII, the 368,699?

2 THE WITNESS: That's right.

3 THE SPECIAL MASTER: Okay, thank you.

4 MR. CLEAR: Your Honor, we do have tables which  
5 set this out and there's more information on those  
6 tables than he's testified to, and we can submit  
7 these tables and the information he's not testified  
8 to, just what he's testified to, if you want.

9 THE SPECIAL MASTER: Okay. Thank you.

10 MR. CLEAR: I have no further questions, Your  
11 Honor.

12 THE SPECIAL MASTER: Do the Indians wish to con-  
13 tinue with direct?

14 MR. ROGERS: The Tribes have no cross.

15 THE SPECIAL MASTER: The Tribes? Any other  
16 United States counsel?

17 MR. ECHOHAWK: No.

18 THE SPECIAL MASTER: Okay. The State may  
19 cross-examine unless you want a little break now.

20 MR. WHITE: I'm going to ask for a break a  
21 little later on. We might as well go ahead now.

22 THE SPECIAL MASTER: All right.

23

24

25

CROSS-EXAMINATION

BY MR. WHITE:

Q Mr. Stetson, why did you develop separate cropping patterns for each climatic zone for the historic lands and yet your firm through Dr. Mesghinna for the future lands developed only two cropping patterns above and below 5900 feet?

A For the historic lands the cropping patterns were established more on the basis of what was grown historically; for the future lands Dr. Mesghinna, along with people from the -- the economists from Dornbusch, established what they call a future cropping pattern. A cropping pattern, for example, that might bring higher returns.

Q So it's possible then that you would have a historic parcel next to a future parcel for which you had developed cropping patterns?

A It's possible.

Q Do you know where, if at all, that possibility turned into an actuality and actually existed?

A I don't know offhand. Ours is the -- and, in fact, both of these cropping patterns are general cropping patterns for a large area. It doesn't mean that a specific crop is going to be grown on a specific

stetson - cross - white

1 acre.

2 Q Mr. Stetson, what was the cropping pattern which  
3 you developed for the Diversion Dam climatic zone?

4 A For Diversion Dam? It was 40 percent alfalfa, 5 per-  
5 cent corn, 5 percent beans, 15 percent small grains  
6 and 35 percent pasture.

7 Q Was Diversion Dam climatic zone above or below 5900  
8 feet? Or do you know?

9 A I would have to look at the map.

10 Q What was the cropping pattern which you developed  
11 for the Fort Washakie climatic zone?

12 A It was 40 percent alfalfa, 5 percent corn, no beans,  
13 20 percent small grains, and 35 percent pasture.

14 Q Do you know whether the Fort Washakie climatic zone  
15 is above or below 5900 feet?

16 A I would have to look at the map.

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8-1-MR-vlb

- 1 Q. (By Mr. White) What was the cropping pattern which you  
2 developed for the Riverton climatic zone?
- 3 A. Riverton is the same as for Diversion Dam. Generally,  
4 Diversion Dam, Fort Washakie, and as well as  
5 Pavillion and Lander are at the lower elevations. Whether  
6 all of those are below 5900 feet, I'd have to look at the  
7 map.
- 8 Q. What was the cropping pattern which you developed for  
9 the Pavillion climatic zone?
- 10 A. That was the same as for Riverton.
- 11 Q. For the Lander climatic zone?
- 12 A. Lander was the same as for Fort Washakie.
- 13 Q. For the Burris climatic zone?
- 14 A. Burris is the upper area and that would be forty-five  
15 percent alfalfa, five percent small grain and fifty  
16 percent pasture.
- 17 Q. And for the Dubois climatic zone?
- 18 A. Dubois would be the same as Burris.
- 19 Q. Would you describe with specificity how you establish  
20 a cropping pattern for Diversion Dam climatic zone  
21 of forty percent alfalfa, five percent corn, five  
22 percent bean, fifteen percent small grains and thirty-  
23 five percent pasture?
- 24 A. We derived that from the crop data available for the two  
25 stetson - cross - white

1 units, Fremont and Hot Springs, and for the BIA projects,  
2 and for the Midvale Irrigation District. We reviewed  
3 those where data were available for crops in those  
4 areas, and then applied our judgment for what we would  
5 call a historic crop pattern.

6 Q. What crop pattern did you find for Fremont County?

7 A. I'd have to dig it out.

8 (Brief pause.

9 A. Spring wheat, seven-tenths of a percent; barley,  
10 fifteen percent; oats, 3.3 percent; dry beans, 2 percent;  
11 corn, 2.8 percent; all hay, 76.2 percent.

12 Q. Would you run through those slowly again? Spring wheat  
13 is .7 percent, but you lost me after that.

14 A. Barley, 15; oats, 3,3; dry beans, 2; corn, 2.8; all  
15 hay, 76.2.

16 Q. By "all hay", do you include alfalfa and grass hays?

17 A. Alfalfa and pasture.

18 Q. And what was the cropping pattern which you established  
19 for the Hot Springs County?

20 A. These are summaries of what their data indicated for the  
21 period 1975 to 1978.

22 THE SPECIAL MASTER: For Fremont or for Hot Springs?

23 THE WITNESS: The one I just gave him was for  
24 Fremont.

25 stetson - cross - white

1 Hot Springs, spring wheat was five-tenths of a  
2 percent; barley, 10.3; oats, 4.5; dry beans, zero;  
3 corn, zero; all hay, 84 percent. And they had a  
4 category of other, of seven-tenths percent.

5 Q. (By Mr. White) And from what source were those  
6 cropping patterns by county developed?

7 A. From the Wyoming agricultural statistics for 1978.

8 Q. For Diversion Dam you show or you indicated that your  
9 cropping pattern, which you used, was 40 percent  
10 alfalfa and 35 percent pasture for a total of 75 percent  
11 of all hay; is that correct?

12 A. That's right.

13 Q. How did you derive the 75 percent all hay from the values  
14 which you gave for Fremont County, 76.2 percent and  
15 84 percent for Hot Springs County?

16 A. Well, we apply it by judgment because we also had some  
17 data for Midvale Irrigation District, and Wind River  
18 Indian projects.

19 Q. What data did you have for Midvale Irrigation District?

20 A. We had data from Midvale which is indicated to be  
21 1976, 1977, was 21 percent barley, 5 percent oats,  
22 2 percent dry beans, 2 and a half percent corn, 62 and  
23 a half percent all hay, seven percent silage.

24 THE SPECIAL MASTER: Is silage corn aftermath?

25 stetson - cross - white

1 THE WITNESS: Yes.

2 Q. (By Mr. White) Was that within -- Were those values  
3 for an area within the Diversion Dam climatic zone?

4 A. Again, I'd have to look at the climatic zone map.  
5 Is it an exhibit, I think it is?

6 MR. WHITE: I don't have it. Leo, do you have it?

7 THE SPECIAL MASTER: It's already -- I think it's  
8 in the record half a dozen times unless it would be a  
9 matter of testing credibility.

10 THE WITNESS: Would be at least partially in it.

11 Q. (By Mr. White) Do you know whether or not the cropping  
12 pattern that you've just described for Midvale was  
13 for the lands within Diversion Dam or all of the lands  
14 within the district?

15 A. The cropping pattern I described would be for all the  
16 lands within the district.

17 Q. Okay. Did you develop any other data upon which you  
18 relied in establishing your cropping pattern for  
19 Diversion Dam?

20 A. We have a third source, the Wind River Indian project,  
21 from 1975 to 1977. We have an allocation.

22 Q. Would you give me that, please.

23 A. Spring wheat, one-tenth; barley 20 percent; oats,  
24 four; dry beans, 1.5; corn, 2; all hay, 66; silage,  
25 statson - cross - white

1 . other, 1.4.

2 Q. I'm sorry, what was your all hay value again, please?

3 A. Sixty-six.

4 Q. And your "other"?

5 A. Silage.

6 Q. I'm sorry, silage.

7 A. Five. Other was 1.4.

8 Q. Did your values for the Wind River Indian project include  
9 cropping pattern for -- actual cropping pattern for  
10 lands outside the Diversion Dam climatic zone?

11 A. Oh, yes, I'm sure they would.

12 Q. How did you analyze the Midvale and the Wind River  
13 Indian project cropping patterns so as to arrive in  
14 conjunction with the Fremont County and Hot Springs  
15 County cropping patterns and the cropping pattern which  
16 you developed for Diversion Dam climatic zone?

17 A. We took -- By reviewing the data from all three of  
18 those sources, we then estimated a cropping pattern  
19 and we adjusted the cropping pattern for the different  
20 climatic stations based upon climatic conditions. That's  
21 why we have no corn and no beans in the upper area,  
22 we have corn in the lower area, but not in all of  
23 the lower area.

24 We took it out of Fort Washakie and Lander because  
25 stetson - cross - white

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- 1 both of those zones have some areas that are a little  
2 colder.
- 3 Q. Based on the data which you've described, would you  
4 please explain, specifically, how you came up with  
5 40 percent alfalfa in the Diversion Dam climatic zone?
- 6 A. Well, because 40 percent plus 35 pasture is 75 percent  
7 hay crops.
- 8 Q. Um-hum.
- 9 A. That was our judgment that that would be a reasonable  
10 crop pattern for the historic use of the lands.  
11 Small grains, we have it 15 percent, and then we split  
12 the corn and beans. We did not want to get down to  
13 details of tenths of percents or even to the nearest  
14 one percent. We kept them to the nearest five percent  
15 generally.
- 16 Q. Let me ask you, how did you break your all-hay value  
17 of the 75 percent into 40 percent alfalfa and 35 percent  
18 pasture?
- 19 A. Solely by judgment.
- 20 Q. And how did you determine that instead of using  
21 76 percent or 84 percent was the all-hay value for  
22 Fremont and Hot Springs County, that the value should  
23 be 75 percent for diversion?
- 24 A. Solely by our judgment based on the data available to us.  
25 stetson - cross - white

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1 Q. Did you use any other data other than that which you've  
2 already described?

3 A. No.

4 Q. What inspections on the ground, if any, did you make  
5 to verify the cropping pattern which you had established  
6 for the seven climatic zones?

7 A. Just our familiarity with the reservation during the  
8 two or three years we've been studying it. We did not  
9 go out and inventory the crops.

10 We also keep in mind we're using this to derive  
11 a unit value of corn consumptive use and alfalfa and  
12 pasture have a very similar unit value of consumptive  
13 use.

14 (Brief pause.

15 Q. Mr. Stetson, you testified that there were 347 acres  
16 of adjudicated trust lands within the Ray Unit; is that  
17 correct?

18 A. Yes.

19 Q. What were the permit numbers for those adjudicated  
20 certificates?

21 A. Permit numbers?

22 Q. Yes.

23 A. I'm not sure I know, but I'll take a look.

24 (Brief pause.

25 stetson - cross - white

1

THE SPECIAL MASTER: Three hundred and forty-seven

2

acres of adjudicated?

3

MR. WHITE: Yes, sir, I'm asking him --

4

THE SPECIAL MASTER: The certificate number?

5

MR. WHITE: What certificates go into the 347.

6

(Brief pause.

7

THE WITNESS: I have an indication here in some

8

backup data supplied by HKM Associates that give

9

permit numbers 6633-9080.

10

Q. (By Mr. White) 6633-9080?

11

A. That's what it says in this backup data. I know nothing

12

about it, about this permit.

13

Q. Okay. Keep going, please.

14

THE SPECIAL MASTER: Do you want the one on

15

Coolidge?

16

Q. (By Mr. White) That is the only one, only one certificate

17

for the 347 acres?

18

A. Well, there is a list of proof numbers, different

19

proof numbers.

20

Q. Individual proofs within that series of permit

21

number series?

22

A. Apparently.

23

Q. Could you give me those, please.

24

Well, we might make it easier, you're looking at

25

stetson - cross - white

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1 some sort of a document, are you not?

2 A. I'm looking at a document, yes, sir.

3 Q. May I see it, please?

4 A. Yes, sir.

5 THE SPECIAL MASTER: Mr. White, are these numbers  
6 on a State exhibit that we had introduced during the  
7 boundaries and dates portion of the lawsuit?

8 MR. WHITE: I don't know.

9 THE SPECIAL MASTER: With the little rectangular  
10 squares and proof numbers all the way up the river?

11 MR. WHITE: I don't know, and the reason I don't  
12 know is we were given tables summarizing Mr. Stetson's  
13 testimony, and only in the details to which he testified,  
14 yesterday afternoon, and we have no way of knowing what  
15 certificate numbers are included within those values  
16 or whether those certificates are the ones we talked  
17 about during the boundary trial.

18 THE SPECIAL MASTER: That are in evidence, all  
19 right.

20 (Brief pause.

21

22

23

24

25 stetson - cross - white

1 MR. WHITE: Your Honor, this might be an appropriate  
2 time to take a recess.

3 THE SPECIAL MASTER: All right.

4 MR. WHITE: Since we have not yet had a chance to  
5 analyze this.

6 THE SPECIAL MASTER: All right, we'll take a ten-  
7 minute break.

8 (Recess, 11:11 a.m. to 11:31 a.m.)

9 THE SPECIAL MASTER: We will please come to order.

10 Q (By Mr. White) Mr. Stetson, I return to you a document  
11 which you provided to me and ask you if you would examine  
12 what has been marked for identification as HS-1, which is  
13 a photostatic copy of that document?

14 THE SPECIAL MASTER: HS?

15 MR. WHITE: HS for Historic Stetson, Your Honor.

16 THE SPECIAL MASTER: I wanted to get that right.

17 MR. WHITE: I'd better get that in the record fast.

18 THE SPECIAL MASTER: HS-1. Just because we're  
19 historic, they put the word "historic" before a name.  
20 How about that?

21 THE WITNESS: That's the way I took that, but I'll get  
22 even with him.

23 MR. WHITE: He has all sorts of ways not available to  
24 me to get even, Your Honor.

25 stetson - cross - white



1 Q (By Mr. White) I think that you will find, Mr. Stetson,  
2 that there are penciled page numbers in the upper right-  
3 hand corner, for ease of reference, which do not appear  
4 in the original.

5 A Right. This appears to be a photostatic copy of the docu-  
6 ment that you borrowed.

7 Q Would you please describe again for the benefit of the  
8 record what HS-1 is?

9 A HS-1 is the adjudicated lands which it is entitled "Adjudi-  
10 cated Lands by Location" on the first typewritten page and  
11 by location on that page they apparently mean by river  
12 system and subsystem. And then following that are aerial  
13 photographs, views, and adjudicates acreage per aerial  
14 photograph. Again, the typewritten page -- two pages.  
15 The total acreages on that two-page tabulation matches the  
16 total acreage on the two-page tabulation which indicated it  
17 was located by location. And then attached to those four  
18 pages is a form which has been filled out by hand, adjudi-  
19 cated acreage claim, and there is a separate sheet or so  
20 for each of the river system location areas.

21 Q Did you rely on the facts and data contained within HS-1  
22 in arriving at your conclusions?

23 A Insofar as the acreages concerned, yes, sir.

24 Q Okay.

25 stetson - cross - white



1 A For adjudicated acreage.

2 Q I see on page --

3 A On its location. I'm sorry.

4 Q Okay. Anything else?

5 And you used only the trust acreage that's shown  
6 on 5 and 6, is that correct? Not the fee acreage that's  
7 shown there?

8 A Yes, sir. We used only the trust acreage.

9 Q Where did you get these facts and data, were they pro-  
10 vided to you by HKM?

11 A They were provided to us by HKM Associates.

12 Q Is it true then that you have no personal knowledge  
13 that on page 5, for example, Permit Number 8913 con-  
14 tains a total of 110 acres?

15 A I have no personal knowledge other than what is set  
16 forth on this page.

17 Q And is it true that you have no personal knowledge of  
18 the allocation of that 110 acres, 10 acres to fee  
19 and 100 acres to trust?

20 A That's correct.

21 Q You were talking about Permit Number 633-9080 with  
22 respect to the Ray Unit -- or the Ray Unit's 347  
23 acres. Could you indicate the page number upon  
24 which that appears?

25 stetson - cross - white



1 A That appears on page 30.

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stetson - cross - white

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1 Q (By Mr. White) On page 30, isn't true that the  
2 347 acres is found in six different parcels?

3 A Yes.

4 Q And the first parcel contains ten acres?

5 A Of trust land --

6 Q Yes.

7 A Yes, sir.

8 Q How did you determine for the ten acres or for that  
9 ten acres plus the other five parcels, that there  
10 was an annual diversion requirement of 5.32 acre  
11 feet per acre?

12 A Well, from these data, we went to the photo number  
13 and the maps and looked at the location of the  
14 lands with respect to the climatic zones, and totaled  
15 up the acreage within each climatic zone within each  
16 stream system or subarea. And from that we derived  
17 the unit net irrigation requirement if it was non-  
18 project. And using the efficiency, determined the  
19 diversion requirement.

20 Q Okay. Could you lead us through the calculations  
21 which you made with respect to that ten acre parcel?

22 (Brief pause.

23 A That ten acre parcel would combine with 7.9 acres.  
24 We have the 17.9 acres subtotal for that unit  
25 which we rounded to 18 acres, which appears on  
stetson-cross-white

1 photo 13-104, and it's in the Fort Washakie  
2 climatic zone. And we applied a unit net irri-  
3 gation requirement of 1.73 acre-feet per acre in  
4 that zone.

5 Then we determined the total net irrigation  
6 requirement for the year for that parcel and went  
7 down through that.

8 Q So you multiplied 1.73 times 18 to get your  
9 total irrigation requirement?

10 A No, that was the total net irrigation requirement.

11 Q Okay.

12 A We did this for each parcel of adjudicated land in  
13 the Ray Canal area.

14 Q Are you referring to a tabular presentation of  
15 those calculations?

16 A Yes.

17 Q May I see it, please?

18 THE SPECIAL MASTER: Is it part of the report  
19 that is intended to be offered into evidence?

20 MR. CLEAR: Your Honor, what we intend to do,  
21 as I said, Mr. Stetson's prepared a report, but he  
22 only testified today as to the -- those various  
23 tables, and we intend to, at lunch time --

24 THE SPECIAL MASTER: Is the report he now  
25 has on his table to which he just had in his hand  
stetson-cross-white

1 and is about to hand to Mr. White, a part of the  
2 same report you're alluding to?

3 MR. CLEAR: I don't know.

4 THE SPECIAL MASTER: Would you find out, Mr.  
5 Clear, please. I just want to avoid any duplication  
6 down the road, copying and --

7 MR. CLEAR: Yes, Your Honor.

8 THE SPECIAL MASTER: It is, thank you. Go  
9 ahead, Mr. White.

10 Q (By Mr. White) The document which you were about  
11 to hand me, that document which Mr. Clear has just  
12 examined, doesn't show, does it, the calculations  
13 which you made with respect to the 17.9 acres?

14 A It doesn't show that calculation.

15 Q But you have worksheets by your left elbow that  
16 do, do you not?

17 A That's correct.

18 Q May I see those?

19 A Oh, those are the ones you want.

20 This is a set of 14 sheets of --

21 MR. WHITE: Your Honor, could I just look  
22 over his shoulder while he describes it? It  
23 might save a little time.

24 THE SPECIAL MASTER: If the witness doesn't mind.  
25 stetson-cross-white

1 THE WITNESS: I don't mind, no.

2 THE SPECIAL MASTER: All right.

3 THE WITNESS: So long as he doesn't call me  
4 historic.

5 This is a series of 14 worksheets. Its  
6 Drainage Unit Water Requirements is the main  
7 heading, and we have column headings for photo  
8 number, climatic zone, adjudicated trust, unadjudi-  
9 cated trust in use, total acres.

10 Then we have some additional headings, net  
11 irrigation requirement with unadjudicated, we have  
12 unit requirement and we have an acre-feet per year  
13 requirement. And the same two headings under un-  
14 adjudicated. This set of sheets lists the acreage  
15 by aerial photograph, the drainage area it's in,  
16 the subdivision of that, the number of acres ad-  
17 judicated or unadjudicated, and the total acres,  
18 and then the extensions of the unit consumptive  
19 use and the annual consumptive use.

20 (Brief pause.

21 Q (By Mr. White) Mr. Stetson, have you prepared  
22 similar tabular representations of your calcu-  
23 lations for the Type VII lands?

24 A They're not in the exact same form, as I recall.

25 stetson-cross-white

1 Q What form do you have them in?

2 A We have them on a -- As far as the water requirements,  
3 I'd have to -- Maybe I could look at them during the  
4 noon break and get those. They're not in the same  
5 form as those. We may have put those together just  
6 by making the calculations off the map, and I have  
7 to check that out.

8 They are not -- That's why they're not included  
9 with that group there.

10 MR. WHITE: Your Honor, I would suggest at this  
11 time that we take our lunch break, and the reason  
12 I'd say that is as the Court is probably aware,  
13 there's been no discovery with respect to this  
14 particular area of evidence since the time that  
15 any finalized data is available.

16 THE SPECIAL MASTER: I'm not aware of that,  
17 and I don't want to be aware of it.

18 MR. WHITE: I thought you'd probably figure  
19 it out when I was getting all this.

20 THE SPECIAL MASTER: You had two depositions  
21 taken, I believe, and I'm hopeful that you can,  
22 you know, get at what you wish by examination of  
23 his workpapers, which you have a right to do, of  
24 course.

25 stetson-cross-white

1

MR. WHITE: If we could take a break --

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THE SPECIAL MASTER: Yeah, this is a good

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time to take a break and find what he's referring

4

to.

5

MR. WHITE: We could probably get some of this

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information.

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THE SPECIAL MASTER: We will resume at 1:30.

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(Thereupon a lunch recess was  
(taken at 11:50 a.m.

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