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## Trial Transcript, Vol. 11, Afternoon Session

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File 118  
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Case # 4993

File # 118

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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 WYO- )  
MING. )

Civil No. 4993

FILED \_\_\_\_\_  
2/25 1981  
*Margaret V. Hampton* CLERK  
DEPUTY

VOLUME 11

Afternoon Session

Monday, February 9, 1981

**ORIGINAL**

1 THE SPECIAL MASTER: We are on record. Will  
2 we please come to order. Thank you. Mr. Echohawk.

3 MR. ECHOHAWK: Mr. Master, there's a few  
4 additional items I'd like to cover before we move the  
5 exhibits into evidence.

6 Q (By Mr. Echohawk) Mr. Kersich, it seems as we've  
7 gone on this morning that I'm not sure that I  
8 have quite gotten out how your particular work  
9 programs that we've been discussing here today  
10 fits in to the whole overall claim that will  
11 result in a claim for a certain amount of water  
12 for the Wind River Indian Reservation. Could  
13 you please briefly describe that.

14 A Okay. There's really a three-step screening  
15 process. Ours is the first step, which involves  
16 determining an arable base, or lands which may poten-  
17 tially be irrigated on the Reservation. And  
18 what that involved was taking the entire Reser-  
19 vation, looking at it only from a land capability  
20 standpoint, screening it down to the study areas,  
21 taking the study areas and reviewing those in  
22 much more detail, and eventually establishing  
23 areas within those study areas which are capable  
24 of irrigation without any regard at this point

25 kersich-direct-echohawk

1 in time to either economics or agricultural  
2 engineering. This material then is given to the  
3 agricultural engineer and the economist. They  
4 further review it, design irrigation systems, do  
5 the returns that a person could normally expect  
6 from those lands and further then -- probably  
7 then it reduced that base to some other base  
8 which eventually will be the land base that will  
9 be utilized as part of the claim to determine  
10 the amount of water that the United States would  
11 be requesting for the Tribes.

12 Q So the acreage that will eventually be requested  
13 will be for the future lands will be less than  
14 the acreage depicted on your exhibits?

15 A Yes, I'm sure it will be.

16 Q Mr. Kersich, in your opinion is the work program  
17 that we've discussed here today of sufficient  
18 level to determine arability for the purposes  
19 that we are -- you're here for?

20 A For the determination of arability, yes.  
21 The program is comprehensive and covers the points  
22 that we need to know to make a reasonable deter-  
23 mination of arability.

24 Q Now, within the various study areas that are  
25 kersich-direct-echohawk

1 denoted on, say for instance Exhibit 41, six  
2 study areas, Owl Creek, North Crowheart, South  
3 Crowheart and so forth, were all the lands that are  
4 within those boundaries covered within your land  
5 classification program?

6 A In one shape or another they were. We, again  
7 let's go back just a moment, if we might. We  
8 took the entire Reservation first, we screened  
9 that down to the study area map that we talked  
10 about previously. Then --

11 THE SPECIAL MASTER: Go ahead, I'm sorry.

12 THE WITNESS: Then we screened that particular  
13 area down to study areas where we could afford,  
14 from a time and money standpoint, to develop more  
15 field information, more laboratory information  
16 and so on. Excuse me just a moment.

17 (Brief pause.)

18 THE WITNESS: And then we developed the basic  
19 study areas. We examined the lands in green in  
20 reasonable detail, initially, first to determine  
21 if there are any areas in there like Crowheart  
22 Butte or some area that we knew was absolutely im-  
23 possible to consider. Then we deducted that total,  
24 then we eventually went out on the ground, people

25 kersich-direct-echohawk

1 from our office were on the grounds and screened  
2 the bulk of the green areas, and from that we  
3 further dropped the potential land base from these  
4 green areas to those indicated on, for example,  
5 C-41 in the various colors.

6 So what happened, we started out with about  
7 a two and a half million acre Reservation, we  
8 dropped down to about 490,000 acres, that dropped  
9 down to about 300,000 or less through another  
10 screening process. And we got about 281,000  
11 acres that we basically classified under the semi-  
12 detailed level of effort, and from that we are  
13 down now to the 84,469 acres.

14 Q Now, take for example, on Exhibit C-41, the areas  
15 that are not colored but are found within the  
16 various study areas, the areas that are depicted  
17 in white. Now, were all of those lands determined  
18 to be non-arable?

19 A There are three classes of lands located within  
20 the white portion of the study areas. There are  
21 Class 6 lands or lands which we determined by our  
22 program to be non-arable under the standards that  
23 we used at that time. There are lands which  
24 are called adjudicated lands, and my understanding

25 kersich-direct-echohawk

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of those are that those are lands which received a right or permit from the State presently. We did not go on to those lands, and there are some fee lands which we did not include in the study, although I've got to be honest with you, there was a problem with boundaries at that time and we may have done some classification work.

Q On the fee lands?

A On the fee lands, but the lands that are fee lands, to the best of our knowledge, have all been removed from the study and none of those acres are involved in the total.

end 13

\* \* \* \* \*



1 THE SPECIAL MASTER: Of the acreage  
2 you mentioned in these last three or four answers,  
3 was 671 total holes drilled on the minimum net 89,000  
4 acres left, or was that number of holes probably  
5 in about 200,000 acres with some having been  
6 excluded from arable classification?

7 THE WITNESS: Well, in that 200,000  
8 acres there was some basic screening that occurred  
9 that after we got out on the land we didn't  
10 necessarily drill any holes because it was  
11 obvious from the surface, from greasewood or  
12 land cover, that those were areas that didn't  
13 really need any studies, so we threw them out.

14 On the other hand, there are acres that are  
15 not included within the 84,000 that we actually  
16 drilled the hole or logged the hole or made  
17 chemical tests or did all parts of the program  
18 and then a determination was made that those lands  
19 were not acceptable to irrigation under our  
20 standards, and those were then taken out.

21 THE SPECIAL MASTER: You have no idea  
22 how many acres were encompassed in this 671 holes  
23 drilled?

24 THE WITNESS: No, the only way I could

25 kersich-direct-echohawk

1 do that would be, you know, going back to the  
2 maps or something.

3 THE SPECIAL MASTER: Thank you.

4 MR. ECHOHAWK: Your Honor, at this time  
5 I would like to offer Mr. Kersich as an expert in  
6 the field of agricultural engineering.

7 THE SPECIAL MASTER: Without regard to  
8 Exhibit 34, are you going to keep that in the  
9 package?

10 MR. ECHOHAWK: We will keep that in the  
11 package.

12 THE SPECIAL MASTER: Mr. White?

13 MR. ECHOHAWK: For ease of convenience,  
14 I'm just about finished. Perhaps we could save  
15 any voir dire until I'm done.

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

17 THE SPECIAL MASTER: All right.

18 Q (Mr. Echohawk) Mr. Kersich, do you have an opinion  
19 as to the amount of arable acreage contained within  
20 the six study areas that we have been discussing?

21 MR. WHITE: I'll object to the question,  
22 Your Honor. The witness has not been qualified  
23 in the areas of soil science or land classification.  
24 He's only been offered as an agricultural engineer.

25 kersich-direct-echohawk

1           Until some qualification is shown in those areas  
2           that are traditionally associated with land  
3           classification such as Bureau of Reclamation  
4           would require, I don't think he's qualified to  
5           give an opinion as to arable lands.

6           He may be able to design a system, and he's  
7           testified he has done so or reviewed designs in  
8           Arizona vs. California, but he has not been  
9           qualified in soil science or land classification.

10           MR. ECHOHAWK: Your Honor, I believe  
11           that there's been sufficient development for the  
12           basis of Mr. Kersich as an agricultural engineer  
13           to be able to render an opinion as to arability  
14           due to the fact that he has had various inputs  
15           from the very beginning of this program all the  
16           way through until the final review of the opinions  
17           rendered to him by the land classification people  
18           employed by HKM, which an agricultural engineer  
19           is certainly able to rely on under Rule 703.

20           THE SPECIAL MASTER: I will overrule the  
21           objection, if he will confine his answers to  
22           arable lands only.

23           And you can ask your question again, if you  
24           please.

25           kersich-direct-echohawk

1 Q (By Mr. Echohawk) Do you have an opinion as to  
2 the amount of arable lands that were depicted or  
3 found by HKM within the six study areas that we  
4 have discussed here today?

5 A I do.

6 Q And what is that opinion?

7 A My opinion is that the 84,469 acres of total  
8 arable lands do meet the qualifications of arability.

9 THE SPECIAL MASTER: What classes?

10 Q (By Mr. Echohawk) And, Mr. Kersich, do you have a  
11 breakout by class?

12 MR. WHITE: Your Honor, I would object  
13 to the witness testifying from exhibits that are  
14 not in evidence.

15 THE SPECIAL MASTER: Well, he's  
16 shuffling papers right now. Maybe he just wants  
17 to refresh and recollect his memory, but I think  
18 we can have him answer the question.

19 Do you have a number by class?

20 MR. ECHOHAWK: That's correct.

21 THE SPECIAL MASTER: He's testifying  
22 from his memory now, I take it, and his profession-  
23 alism and not from an exhibit.

24 Q (By Mr. Echohawk) Can you tell us by classification?

25 kersich-direct-echohawk

1 A I have this open now --

2 THE SPECIAL MASTER: Well, he's referring  
3 to the same forms, and he described what they are.  
4 You may answer.

5 THE WITNESS: Okay.

6 A (Witness) Yes, I have an opinion predicated on the  
7 opinions of my land classifiers and my other  
8 people of Class 1 lands of 8,819 acres; Class 2  
9 lands of 36,611 acres; Class 3 lands, 38,339 acres;  
10 and Class 4 lands, 700 acres.

11 THE SPECIAL MASTER: 700 acres?

12 THE WITNESS: Yes, sir.

13 Q (By Mr Echohawk) Mr. Kersich, we have been through  
14 quite a few of these exhibit maps today, and I'm  
15 going to refer you to various maps, and then I'm  
16 going to ask you a question now.

17 In regards to Exhibit 35, which is the Study  
18 Area Land Base Map, and in regard to Exhibits 41  
19 and 42, which are the Arable Sprinkler Lands and  
20 Arable Gravity Lands, the large maps that are  
21 leaning against the wall, and in regard to  
22 individual unit maps that we have discussed here  
23 today -- those would be Exhibits 44 through 54 --  
24 were these maps prepared under your direction?

25 kersich-direct-echohawk

1 A Yes, they were.

2 Q And under your supervision?

3 A Yes, they were.

4 Q And are they accurate to the best of your  
5 knowlege?

6 A To the best of my knowledge, they are, yes.

7 Q Do they accurately depict the lands by classification?

8 A They do.

9 Q Mr. Kersich, I have been informed that I forgot  
10 to identify one exhibit.

11 Would you please identify what has been marked  
12 as United States Exhibit C-54?

13 A Yes, C-54 is the blowup of the Arapahoe study area,  
14 and it's the recording of the results of the  
15 sprinkler land classification study. It depicts  
16 the outline of the study area and the lands within  
17 that study area that are found to be arable under  
18 the sprinkler land classification system and the  
19 separate classes of that are identified by the  
20 same colors that were used on the other exhibits.

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kersich-direct-echohawk

1 Q (By Mr. Echohawk) Mr. Kersich, this morning we  
2 had a discussion with Mr. White about the land  
3 classifications standard that were used by HKM  
4 in the classifying of these lands; it would be  
5 Exhibit 36. He raised certain questions. Do you  
6 have any clarifications to any of your previous  
7 answers that you would like to give at this time?

8 A. Well, on page 1 there was some concern that -- on  
9 C-36, United States Exhibit C-36, the same sentence  
10 that was shown on SK-2 was not included. That  
11 sentence reads "there must be at least two inches  
12 per hour permeability in the top two feet when  
13 SAR exceeds 20." That sentence was removed prior  
14 to 3-79 and is not a factor in the lands that we  
15 classified.

16 And with regard to drainage there was a question  
17 of a footnote that was attached to SK-3 and that  
18 footnote reads, "no drainage requirement is necessary  
19 for these lands." I was confused this morning. That  
20 footnote is correct and on the undeveloped lands the  
21 700 acres of class 4 lands drainage was not considered.  
22 They were considered to be natural draining because  
23 they are low quality lands, potentially pasture lands,  
24 and drainage was not considered. They would still,

25 kersich - direct - echohawk

1 of course, have to meet all of the other tests.

2 MR. ECHOHAWK: Your Honor, if I could have  
3 one moment.

4 THE SPECIAL MASTER: Surely.

5 (Brief pause.

6 MR. ECHOHAWK: Your Honor, at this time I would  
7 like to reoffer the exhibit, it would be exhibit  
8 34, being the resume; Exhibit 35, being the maps  
9 study area land base; 37 would be the map symbol,  
10 38 would be the soil triangle, 39 would be the aerial  
11 photograph, 40 would be the soil log and 41 would be  
12 the large map, arable sprinkler lands selected study  
13 areas; Exhibit 42 would be the map arable gravity  
14 lands selected study areas of the report entitled  
15 Land Classification of North Crow Heart, South Crow  
16 Heart, Big Horn Flats, Riverton East, Owl Creek and  
17 Arapahoe Units; Exhibit 44 which is the map, North  
18 Crow Heart gravity lands; Exhibit 45 which would be  
19 the map, North Crow Heart sprinkler lands; Exhibit 46,  
20 which would be the maps, South Crow Heart gravity  
21 lands; Exhibit 47, which would be the map, South Crow  
22 Heart sprinkler lands; Exhibit 48 which would be  
23 the map, Big Horn Flats gravity land; Exhibit 49 which  
24 would be map, Big Horn Flats sprinkler lands; Exhibit .50

25 kersich - direct - echohawk



1 which would be the map, Riverton East gravity lands;  
 2 Exhibit 51 which would be the map, Riverton East  
 3 sprinkler land; Exhibit 52 which would be the map,  
 4 Owl Creek sprinkler land; Exhibit 53 would be the  
 5 map, Arapahoe gravity lands; Exhibit 54 would be the  
 6 map, Arapahoe sprinkler lands. At this time I would  
 7 like to move all these exhibits into evidence, Your  
 8 Honor.

9 THE SPECIAL MASTER: Voir dire, anyone?

10 MR. WHITE: The tribe is up first, Your Honor.

11 THE SPECIAL MASTER: Mr. Sachse?

12 MR. SACHSE: No, we have no voir dire.

13 THE SPECIAL MASTER: Mr. Rogers?

14 MR. ROGERS: None, Your Honor.

15 THE SPECIAL MASTER: Any counsel of the other  
 16 defendants? None responding.

17 Mr. White, for the State of Wyoming.

18 VOIR DIRE EXAMINATION

19 MR. WHITE: Your Honor, I would first like to  
 20 voir dire with respect to the offer of Mr. Kersich  
 21 as an expert in agricultural engineering.

22 BY MR. WHITE:

23 Q Mr. Kersich, on your resume and in your direct  
 24 examination you referred to work that you have done  
 25 kersich - voir dire - white

1 with respect to irrigation systems on other Indian  
2 reservations, do you recall that testimony?

3 A. No, I don't recall that testimony because on  
4 different reservations we did different things.

5 Q. Okay. Now let me refer you to the third page and  
6 the fourth page of Exhibit C-34 and ask you whether  
7 or not the recitation on the bottom of page 3 and  
8 the top of page 4 correctly summarizes and accurately  
9 portrays your work on other Indian reservations?

10 A. With regards to land classifications on the Crow  
11 Indian Reservation, that is correct. Our firm did  
12 work of this type there. With regards to the  
13 Northern Cheyenne Reservation, to the best of my  
14 knowledge, yes, that is correct, also.

15 On the Fort Berthold Reservation that is  
16 correct. On the Wind River Reservation, that's what  
17 I have -- at that point we also converted gravity  
18 systems and sprinkler systems on previously  
19 classified lands. We did part of that here but that  
20 was part of the problems with the study; we found  
21 that the gravity classifications system needed some  
22 review so we had to go back and reclassify all of  
23 those lands. But that was the intent to start out  
24 doing that, sir.

25 kersich - voir dire - white

- 1 Q Now, on the Jicarilla?
- 2 A Jicarilla, those studies are in process right now,
- 3 yes.
- 4 Q I believe you -- I'm sorry.
- 5 A They have not been completed.
- 6 Q I believe you told the master that no irrigation
- 7 project on an Indian reservation has been constructed
- 8 and is operating based on these works of yours that
- 9 are described on Divisions 3 and 4?
- 10 A Okay, on the land classifications study that were
- 11 either in the -- we are either in the process of
- 12 doing or have potentially completed to the best of
- 13 my knowledge there has not been one; no, sir.
- 14 Q Isn't it true that you have appeared in a number of
- 15 adjudications of Indian water rights as an expert?
- 16 A No, sir.
- 17 Q No? When have you before appeared as an expert in
- 18 Indian water rights adjudication cases?
- 19 A I think -- may I define one thing here at this time?
- 20 Q Sure.
- 21 A I'm assuming by your word appear that I have actually
- 22 testified --
- 23 Q Uh-huh.
- 24 A -- in behalf of the tribes in a matter. The only
- 25 kersich - voir dire - white

1 other case I can recall where I testified was the  
2 Arizona versus California litigation that I referred  
3 to earlier. I have not testified on any of these  
4 other matters.

5 Q. And on whose behalf did you testify in that case?

6 A. In that case I was hired by the United States.

7 Q. So you have never testified with respect to or in  
8 an Indian water rights case adjudication case except  
9 on behalf of either the tribes or the federal  
10 government, is that correct?

11 A. Well, it is one out of one as far as Indian cases.  
12 I have done private cases, of course, where I have  
13 testified on behalf of individuals, and energy  
14 companies, for example, in a litigation.

15 Q. Did you receive a copy of the request for proposal  
16 in South Dakota for the similar work there?

17 A. Yes, I did.

18 Q. And have you filed a proposal in response to that?

19 A. No, sir.

20 MR. WHITE: Good.

21 THE WITNESS: Excuse me just a minute.

22 Q. (By Mr. White) Mr. Kersich, when was the last time  
23 you did any soil mapping in the field?

24 A. Friday.

25 kersich - voir dire - white

1 Q You yourself?

2 A Yes, I was with Mr. Waples and we went out and toured  
3 some of the areas of the Reservation again.

4 Q And what area did you map?

5 A We didn't map, we checked the work that had been  
6 done.

7 Q I see. So when was the last time you yourself did  
8 any soil mapping?

9 A I don't do soils mapping as such.

10 Q I didn't think so.

11 When was the last time you personally logged  
12 a hole --

13 A Friday.

14 Q -- on boring?

15 You personally logged that hole?

16 A Yes, sir, I even drilled it.

17 Q How did you do it?

18 A How did I do it? Very simply, sir. I took a pick  
19 and got down through the frost, that was the first  
20 problem, then I took a soils auger and I drilled the  
21 hole, and every time I would fill up the auger with  
22 soils I would bring it up, I would make a little pile  
23 until I had the soil as deep as I could go at that  
24 particular time. And then with the help of Mr. Waples  
25 kersich - voir dire - white

1 we textured a particular matter and between the  
2 two of us we classified that hole.

3 Q Prior to the time --

4 A -- or logged it.

5 Q Prior to Friday, how many holes did you actually  
6 log on the Indian Reservation, the Wind River Indian  
7 Reservation?

8 A. Prior to Friday? Well, back in November there was  
9 about a dozen I suppose that I drilled the holes in,  
10 I didn't necessarily log them because for example, we  
11 had a question on Arapahoe Flats. I wondered why  
12 so much land was in class 6 and the opinion that I  
13 had from Mr. Waples and Mr. Smith is that the depth  
14 of barrier was less than six feet; in most instances  
15 less than six feet, considerably less. So we made  
16 a tour of the Reservation in -- as a matter of fact  
17 we were in a helicopter and I would ask the pilot,  
18 I want to land there, and we would land there and  
19 I would get out with a soils auger and at this time  
20 the soil was not frozen and so I drilled a hole and  
21 sure enough, they were right.

22 Q Okay. How did you complete the log, though?

23 The question was when did you log a hole?

24 A. Log them?

25 kersich - voir dire - white

- 1 Q Uh-huh.
- 2 A I don't recall that I logged any other holes on  
3 the Reservation other than the ones Friday.
- 4 Q Are you familiar with what's called the Seventh  
5 Approximation Scheme?
- 6 A No, sir, I am not.
- 7 Q Have you ever used the textbook entitled Soils  
8 Tax -- Taxonomy?
- 9 A Do you mean the big green book?
- 10 Q Uh-huh.
- 11 A Yeah, I've been involved in reading it and trying  
12 to review the portions of it that were applicable  
13 to work that I was concerned with.
- 14 Q And, yet, you're not familiar with the Seventh  
15 Approximation Scheme?
- 16 A No, because I think what you're referring to is  
17 soils survey work there, aren't you, or soil  
18 morphology.
- 19 Q Well, it is something that most soils scientists  
20 would understand, I suppose.
- 21 A Possibly soils scientists but not necessarily land  
22 classifiers, Mr. White.
- 23 MR. WHITE: I have no objection, Your Honor,  
24 to the Court receiving Mr. Kersich as an expert in  
25 kersich - voir dire - white

1 agricultural engineering. We, of course, would  
2 maintain our objections to any opinions having to  
3 do with those matters normally dealt with by soils  
4 scientists or land classifiers.

5 THE SPECIAL MASTER: All right. Thirty-four  
6 is admitted.

7 Q (By Mr. White) Now, I think Exhibit 35 is behind  
8 you; is that Exhibit 35, I can't see?

9 A. That's correct, sir, it is C-35.

10 THE SPECIAL MASTER: Do you want to go around --

11 MR. WHITE: That's all right as long as he  
12 can see it and the audience can see it, Your Honor.

13 Q (By Mr. White) As I recall your testimony, that  
14 really illustrates the first step in your work in  
15 determining the arable land base, is that correct?

16 A. That's part of the first step, yes.

17 Q Is there a difference between an arable land base  
18 and a cultivable land base?

19 THE SPECIAL MASTER: And a what, Mr. White?

20 MR. WHITE: Cultivable.

21 THE WITNESS: I guess I don't concern myself  
22 about a difference like that. Arability is what  
23 we are trying to determine and that's what we are  
24 looking for.

25 kersich - voir dire - white



1 Q (By Mr. White) To a person of your expertise in  
2 the agricultural engineering field, do you know  
3 what the term cultivable means?

4 A. It means many things to many people.

5 Q What does it mean to you?

6 A. Again, I don't use the term ordinarily but  
7 cultivation practices or agricultural procedures  
8 for the area are those usually associated with the  
9 ability to farm the lands and raise crops and harvest  
10 crops; yes, sir.

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kersich - voir dire - white

1 Q (By Mr. White) (continued) So that's akin,  
2 cultivable is akin to irrigable?

3 A No, you could have cultivable.

4 Q Dry land cultivable?

5 A I can't pronounce the word, but basically  
6 there's many types of ways to raise crops and  
7 harvest crops.

8 MR. WHITE: Your Honor, we have no objection  
9 to Exhibit 35.

10 THE SPECIAL MASTER: Thirty-five is admitted.

11 (United States Exhibit  
12 C-35 was received into  
evidence.)

13 MR. WHITE: Sir, 36 is already admitted,  
14 Your Honor. I wanted to inquire of the witness,  
15 however, whether he had annotated the Court's  
16 copy of 36 to reflect the footnote 4.

17 THE WITNESS: I don't understand the  
18 question.

19 Q (By Mr. White) Well, do you have the Court's  
20 copy of the Exhibit 36?

21 A I have a copy here in front of me. I don't  
22 know whether it's the Court's copy or not, sir.

23 Q We need to find one with the sticker.

24 MR. ECHOHAWK: Al, does it have the original

25 kersich-voir dire-white

1 THE WITNESS: Yes, it has an exhibit  
2 sticker with number 36 on it.

3 MR. ECHOHAWK: That's the original.

4 THE WITNESS: Okay.

5 Q (By Mr. White) Would you please examine the  
6 original of Exhibit 36 to determine whether or  
7 not footnote 4 appears on the third page.

8 A No, it does not, and all of a sudden I think I  
9 may have committed another sin. I've already  
10 marked the word "Arable" on this. If this is  
11 the original copy I've --

12 Q You mean in footnote 3, 2 rather?

13 A Yeah, footnote 2.

14 THE SPECIAL MASTER: Footnote 2.

15 Q (By Mr. White) What should that be, irrigable  
16 or arable?

17 A My understanding of it is that we're talking about  
18 arable lands that would be attached to potentially  
19 irrigable lands, and this is being a judgment that  
20 the land classifier would make in the field. And  
21 I've noted that, and I guess I've committed a sin  
22 because this is the original court exhibit.

23 Q We want it to be correct, and if you make it so  
24 that it is correct and correctly reflects those  
25 kersich-voir dire-white

1 standards you applied and as correct as it is,  
2 leave footnote 2 as you've annotated it and add  
3 footnote 4 if you wish to.

4 A Okay.

5 THE SPECIAL MASTER: Just write it in which  
6 you're proceeding to do.

7 (Brief pause.)

8 MR. EXHOHAWK: Your Honor, may I inquire  
9 one question of the witness that he seems to be  
10 somewhat confused about, I'm not sure whether  
11 footnote 4 is supposed to be in or not.

12 THE SPECIAL MASTER: I'm letting it come in  
13 in view of his explanation not more than five  
14 minutes ago regarding footnote 4. I think it's  
15 proper that it should be in.

16 Q (By Mr. White) Do you have footnote 4 in there?

17 A I'm getting it in.

18 MR. ROGERS: Your Honor, just to clarify the  
19 record, footnote 4 by now coming in and appearing  
20 on Exhibit C-36 should, in addition to the  
21 narrative, the footnote itself, we should insert  
22 the appropriate points above there where it goes.

23 MR. WHITE: That's an excellent suggestion.

24 Al, would you please do that?

25 kersich-voir dire-white

1 THE WITNESS: I've done it.

2 Q (By Mr. White) You've got it under the last two  
3 entries, under drainage, land Class 4?

4 A Shown under the last two entries under drainage,  
5 and then I've described the footnote underneath  
6 that.

7 THE SPECIAL MASTER: Under the last two  
8 entries under drainage on page 3 of the exhibit?

9 THE WITNESS: That's right, sir.

10 MR. WHITE: As modified, Your Honor, we  
11 have no objection to the exhibit.

12 THE SPECIAL MASTER: Very good. It's now in  
13 completely.

14 (United States Exhibit C-36  
15 was received into evidence.)

16 Q (By Mr. White) Mr. Kersich, would you please  
17 get Exhibit C-37 in front of you. Those are  
18 your map symbol codes?

19 A Okay.

20 THE SPECIAL MASTER: Thirty-seven is the map  
21 symbol code.

22 Q (By Mr. White) In the top half of the exhibit,  
23 you see that you list the drainage deficiency of  
24 the symbol of Y.

25 kersich-voir dire-white

- 1 A That's correct.
- 2 Q What does Y stand for?
- 3 A Y stands for correctable drainage. In other  
4 words, you note to the agricultural engineer  
5 that there may be a problem with drainage, with  
6 these lands. You bring it to his attention.  
7 However, in the opinion of the land classifier  
8 and H.K.M., the drainage -- the condition is not  
9 severe enough to warrant excluding the lands, so  
10 he would examine them and then his decision would  
11 control at that point.
- 12 Q Are all the symbols which he used as part of your  
13 symbol code listed on Exhibit 37?
- 14 A Under drainage symbols, the Y should have been  
15 listed as a correctable deficiency.
- 16 Q Anything else?
- 17 A Let me check very closely now.
- 18 Q Please do. I want you to be absolutely certain.  
19 (Brief pause.)
- 20 A I believe that's correct now.
- 21 Q Go ahead.
- 22 A Without doing any further -- going back to the  
23 files, but I believe it does contain all the  
24 symbols that we used.
- 25 kersich-voir dire-white

1 Q So in evaluating the arable land analysis that  
2 you've described in your direct examination,  
3 we should rely on the symbols which are included  
4 on C-37?

5 A Well, to the best of my knowledge at this time  
6 that's correct, yes.

7 Q Well, was C-37 the basis of the opinion that you  
8 expressed with respect to arable land or one of  
9 the bases?

10 A Just looking at it right now I see no symbol that  
11 we might have left off. The symbols that have  
12 to do with the predominate soil, in both the  
13 top 12 inches and the next three feet are all  
14 there. We've got the symbol for gravel where we  
15 encountered gravel. Where we encountered a bed-  
16 rock or drainage barrier, we have the symbol B,  
17 which was listed there. If there was a problem  
18 or concern with available moisture holding capacity,  
19 that symbol Q is listed. Salinity or alkalinity  
20 is listed as A; that is shown here.

21 Stone removal was R, leveling was U, slope  
22 or gradient is G, size and shape factor was J.  
23 If there's a problem with cobble, X would have  
24 been used. Cover was C, flooding is -- that's  
25 kersich-voir dire-white

1 surface flooding where surface drainage might  
2 be a problem, that was shown.

3 In the final analysis, yes, I believe we've  
4 got them all here.

5 Q Okay. You'd be the person that would know.

6 A For any changes they should have come to me,  
7 although I've got to admit sometimes they don't.  
8 But ordinarily I would say, yes, I would know.  
9 about it.

10 Q Where do you stand on it? Is this final and  
11 complete?

12 THE SPECIAL MASTER: He said it is.

13 Q (By Mr. White) Okay.

14 A Did you want me to add the Y?

15 Q If you'd like to add the Y, to make it accurate,  
16 that would be fine.

17 (Brief pause.)

18 A Okay.

19 Q If, in reviewing your mapping we ran into a  
20 capital U as opposed to a lower case U, that would  
21 mean leveling, wouldn't it?

22 A I don't recall running into a capital U. To me  
23 they all look like little U's, although there may  
24 have been some there. That may have been under --

25 kersich-voir dire-white



1 originally we did have another symbol on drainage  
2 where we may have tried to determine or distinguish  
3 the types of drainage problems that might be  
4 there, but in the final analysis, as I recall that  
5 was taken out.

6 Q So if there's a U there, capital or small case now,  
7 it deals with leveling; is that --

8 A That's correct, yes.

9 Q You list a symbol F for flooding. Do you have a  
10 land classification standard that's related to  
11 flooding?

12 A Surface drainage.

13 Q Could you show me on 36? Are you on page 3?

14 A Yes, sir.

15 Q Towards the top?

16 A Um-hum.

17 Q So when we find an F on your map symbols, that  
18 indicates that there's a surface drainage or  
19 flooding problem?

20 A Potential surface drainage problems.

21 Q In your work, the term surface drainage and  
22 flooding are synonymous?

23 A Can be used that way.

24 Q If you've got -- how is that?

25 kersich-voir dire-white

1 A The way I use it would be in the broader sense,  
2 I would be concerned if I have an F show up in  
3 a classification. I would try to see what kind  
4 of contribution I was getting from the areas  
5 adjacent to it. I would be concerned about how  
6 the water was going to pass through the tract I'm  
7 working on, things of this nature.

8 Q I'm sorry, I'm a little fuzzy this afternoon,  
9 I'm not sure I'm picking you up. Is it true then  
10 where the symbol F appears, that means surface  
11 drainage deficiency?

12 A It means some type of surface drainage deficiency,  
13 yes.

14 Q With respect to the symbol X, is gravel included  
15 within the cobble tillage problem that you listed  
16 there? This is back on 37.

17 A Okay. Cobble is defined somewhat differently  
18 than gravel. As I recall, we defined gravel from  
19 being about two-tenths of a millimeter to three  
20 inches. And cobbles are defined as being from  
21 three to ten inches, so cobbles are much more  
22 concerned than say the gravels.

23 Q Is it true then that you did not include a symbol  
24 with respect to topography that deals with gravel?

25 kersich-voir dire-white

- 1 You have a symbol for stone and cobble, but  
2 not for gravel?
- 3 A Gravel is defined as K, isn't it?
- 4 Q You're talking about the soil symbol there --
- 5 A Well, sure.
- 6 Q -- rather than a deficiency?
- 7 A Um-hum.
- 8 Q So you have no symbol other than K to indicate  
9 that you have a gravel removal problem or a  
10 gravel tillage problem?
- 11 A Well, the K, as far as I'm concerned, again in  
12 my review here could occur either in the soils  
13 profile, but remember the surface of the soil  
14 is defined as the top 12 inches, so you could  
15 have the gravel on top of the surface or within  
16 that top 12 inches.
- 17 Q Do the soils symbols in the left-hand column  
18 toward the bottom of Exhibit 37 also relate  
19 to the textural classes that are shown on  
20 Exhibit 38 which is the textural triangle?
- 21 A Somewhat, yes.
- 22 Q So if you found a symbol H in your map, you'd  
23 know that it is a clay and you'd go to Exhibit 38  
24 and you would be able to find that clay was made  
25 kersich-voir dire-white

1 up of a certain percentage of sandsilt, etcetra;  
2 is that right?

3 A Yes. In some instances the clay loam, in the  
4 determination of the land classifier, could be  
5 called a heavy texture. In other words, there's  
6 all sorts of clay loams as you can see, some with  
7 more clays, some with more sand. We didn't have  
8 every class that's shown on the soil textural  
9 triangle of concern in the field. For one thing,  
10 it's quite impossible to sit there and determine  
11 whether you got this percentage of clay or that  
12 percentage of clay, but you do know from what its  
13 reaction with water that it might have more clay,  
14 and you would be concerned about it, so you would  
15 probably put that under a heavy texture than say  
16 a medium texture.

17 On the other hand, you might examine a texture  
18 later on that you feel is a clay loam texture  
19 but you don't get the same feel of it during this  
20 feel test I have talked about, and you may call it  
21 a medium texture. So there's -- There is judgment  
22 that is used in the relationship of these  
23 particular textures, and the reporting on both  
24 the log form and aerial photographs. That's one  
25 kersich-voir dire-white

1 of the reasons, frankly, that you try to get  
2 people with a lot of experience in this type  
3 of work, where you can depend on their judgment.  
4 And you also check their judgment through, having  
5 them get samples of soil and you have them  
6 texturize it, make a texture test analysis and  
7 you check it with the mechanical analysis.

8 Q Could you explain to me how you would use the  
9 soil or textural triangle on Exhibit 38 if you  
10 had a soil particles analysis, 50 percent sand,  
11 35 percent silt and 15 percent clay?

12 A Okay. Let me read this back to make sure I got it.  
13 Fifty percent sand.

14 Q Right.

15 A Thirty-five percent silt and 15 percent clay.

16 Q Yes.

17 A What I would do, I would go here where it says  
18 sand on the bottom of the triangle and follow  
19 up that line until I intersected 35 percent silt  
20 and 15 percent clay. It appears to me that --  
21 I'm having trouble with my glasses on my exhibit.  
22 Could I have an exhibit -- never mind.

(Brief pause.)

24 A Well, you're going to be right inside loam.

25 kersich-voir dire-white

1 THE SPECIAL MASTER: Right inside what,  
2 Mr. Kersich?

3 THE WITNESS: The loam. There's an area  
4 there --

5 THE SPECIAL MASTER: I see that.

6 THE WITNESS: That's impounded right --

7 Q (By Mr. White) So that would be classified as  
8 a loam soil, is that correct?

9 A That's correct, yes.

10 Q Back on Exhibit 37 I see that you have a symbol L  
11 for fine sandy loam.

12 A Yes.

13 Q How would you determine what is fine sandy loam  
14 based on the textural descriptions in Exhibit 38?

15 A Fine sandy loams would basically -- When the  
16 person texturizes it in the field he'll make  
17 this test, he can feel the sand, he can feel that  
18 they're very fine, so what he's telling us in his  
19 estimation is that the sand particles, that the  
20 sand fraction contains a number of fine sands or  
21 smaller sands. If you'll notice, the sands are  
22 later broken down in different size, and there's  
23 a definition of fine, coarse and sand itself.

24 Q So you have no percentage breakdowns for those;  
25 kersich-voir dire-white

1 is that correct, fine sandy loams?

2 A Well, we know that we had a sandy loam where  
3 the sands appeared to be fine, on the finer  
4 side or the smaller side.

5 Q Have you given your soil scientists or land  
6 classifiers any direction with respect to the  
7 relative percentages, the types, composition of  
8 fine sandy loam?

9 A I would have to say that I would trust Chick  
10 Smith's, Reed Olsen's, -- or Lyle Olsen and Reed  
11 Hansen to determine a fine loam, which contain  
12 a large percentage of fine. I think that's a good  
13 warning to the Ag engineer because it tips them  
14 off that water holding capacity has to be looked  
15 at in a different sense, possibly even drainage  
16 in some instances.

17 THE WITNESS: Could we take a break in about  
18 five minutes?

19 MR. WHITE: Why don't we take a break now.

20 THE SPECIAL MASTER: Let's take a ten minute  
21 break.

22 (Thereupon a ten minute  
23 recess was taken.)

24 end 16

25 kersich - voir dire - white

1 THE SPECIAL MASTER: We will come to  
2 order, please, and I wanted to ask just two  
3 short questions on 37 when you are through, Mr.  
4 White.

5 MR. WHITE: I'm through with 37.

6 THE SPECIAL MASTER: The only thing I  
7 have on 37 is was there a particular reason why  
8 your symbols were not used in that exhibit in  
9 Class 1?

10 THE WITNESS: Technically, Class 1  
11 soils should not have any soils topographic or  
12 drainage deficiencies that are of concern to anyone.

13 THE SPECIAL MASTER: I see. Now, your  
14 capital H and capital M under soils symbols, is  
15 there some way to read those as distinct from what  
16 might be -- I see. The symbol stands for two  
17 things then, doesn't it?

18 THE WITNESS: Well, for example, as  
19 we talked about prior to the break, sir, if the  
20 classifier when he was profiling his hole got into  
21 a stratum or a horizon where he said this is clay  
22 and it's heavy, then he would use H.

23 Now, the clay loam could have been either  
24 heavy or light, depending on the texture of the  
25 kersich- voir dire-white



1 particular clay loam that he had, and the same goes  
2 for silty clay loams or silty loams. This is a  
3 determination that he makes.

4 The actual way -- if you want to find out  
5 what he found in the particular hole, you would  
6 have to look at the particular hole number and  
7 go back to the log book, and on that log book he  
8 put down the texture that he actually described  
9 in the field.

10 MR. WHITE: The State has no objection  
11 to 37, Your Honor.

12 THE SPECIAL MASTER: 37 is admitted.

13 (Thereupon United States Exhibit  
14 (WRIR C-37 was admitted into  
evidence.)

15 Q (By Mr. White) With respect to Exhibit 38.

16 A Yes.

17 Q You indicate the source is USDA.

18 A Yes, this particular soils triangle was Xeroxed  
19 from the Soil Drainage Manual, the drainage manual  
20 of the USBR, and the source given there was the  
21 United States Department of Agriculture.

22 Q That's for the triangle?

23 A That's correct, yes.

24 Q And how about the particle size classification?

25 kersich-voir dire-white

1 A Particle size classification was taken also out  
2 of that manual, and it approximates what we used  
3 in the field.

4 For example, I know we defined as cobbles,  
5 stones from three to ten inches in size, gravel from  
6 2.0 millimeters -- I may have said .2 before, but  
7 that was wrong -- but 2.0 millimeters to --

8 Q Two inches?

9 A Whatever the definitions are here. Those are the  
10 approximations of particle sizes.

11 Q You used three inches as a gravel parameter?

12 A That's the maximum size on the gravel, yes.

13 Q And it's your testimony that all of the information  
14 on Exhibit C-38 came out of the Soil Drainage  
15 Manual?

16 A Yes, I'm sure of that. Yes.

17 Q Could you explain quickly how your land classifiers,  
18 the soil scientists, actually used Exhibit 38?

19 A They used it to give us the basic textures that  
20 we talked about here. We use it also to check  
21 their textures when we run a mechanical analysis,  
22 and then I use it to determine what the texture  
23 is, knowing that it's going to fall within these  
24 parameters here that we have described within the  
25 kersich- voir dire-white

1 soils triangle.

2 MR. WHITE: Your Honor, the State has  
3 no objection to Exhibit 38.

4 THE SPECIAL MASTER: U.S.38 is admitted.

5 (Thereupon United States Exhibit  
6 (WRIR C-38 was admitted into  
7 evidence.)

8 THE WITNESS: May I ask a question?  
9 I have the originals here. What do you want me  
10 to do with those?

11 MR. WHITE: You should give those to the  
12 reporter.

13 THE WITNESS: Mr. White, do you want  
14 these two back here?

15 MR. WHITE: No, they should be given to  
16 the reporter too. They were identified but not  
17 admitted, but they become part of the record.

18 Q (By Mr. White) Mr. Kersich, I direct your attention  
19 to what was offered as C-39 and ask you whether or  
20 not all the symbols which you used in your aerial  
21 photograph annotations are described in the  
22 caption on the lower right-hand corner of Exhibit 39?

23 A May I take a look at that, please?

24 Q You bet.

25 A It appears that the one that we didn't add there  
kersich-voir dire-white

1 would be -- let's see. There's a log profile, a  
2 sample profile -- I can't tell without looking  
3 through each one individually, but sometimes for  
4 the USBR profile we might have had a smaller circle,  
5 a circle smaller than that that identifies HKM.

6 Q What would an eight-sided octagon symbol mean if  
7 it were located on the map? I don't see anything  
8 right off, but I have seen eight-sided symbols  
9 on another photograph, and that's why I ask.

10 A All right. Normally anything -- probably there  
11 were some octagons but basically anything that was  
12 a hexagon or potentially an octagon could have been  
13 either HKM or the States. What we tried to do  
14 is try to put the information that you have turned  
15 over to us on these township plats.

16 Q Would you make absolutely certain about the  
17 symbology for the USBR log profile?

18 A Yes. The only way I could do that would be to go  
19 back to the other plats that I have. On some of  
20 the sheets we did mark out the symbol.

21 Q You used another symbol aside from the caption on  
22 Exhibit 39?

23 A For the USBR, yes. There could have been a circle  
24 used on some of them.

25 kersich- voir dire-white

1 Q What would the relative size of the circle have  
2 been of the USBR holes as opposed to the HKM  
3 holes?

4 A Well, speaking from my memory, sir, and to the  
5 best of my recollection, the circle would have  
6 been smaller than any of the circles that would  
7 define an HKM hole, and it probably would not  
8 have a hole number in it, a log number, but I  
9 would have to check on that to be able to tell you.

10 Q What does it mean where there is an open circle  
11 with a number outside?

12 A You mean like -- would you show me what you mean?  
13 I'm sure you have something in mind.

14 Q I don't know if one is located on that photograph,  
15 but there are some on other photographs I have  
16 seen, and I'm just curious. Do you know what that  
17 means?

18 A It would normally mean either a logged hole or a  
19 sample profile, the problem being that the fellow  
20 didn't feel he could write the number inside the  
21 hole legibly, and I think you realize, especially  
22 when you start getting into something like forty  
23 or thirty or something of this nature, you might  
24 have a problem putting the number inside the circle.

25 kersich-voir dire-white

1 Q And again if you have a number associated with  
2 a circle, is that the number of the soil profile  
3 log?

4 A That's what it's intended to be, yes.

5 MR. WHITE: Your Honor, we have no  
6 objection to Exhibit 39.

7 THE SPECIAL MASTER: 39 is admitted.

8 (Thereupon United States Exhibit  
9 (WRIR C-39 was admitted into  
evidence.)

10 Q (By Mr. White) Now, would you please get Exhibit 40  
11 in front of you, please?

12 A Yes.

13 Q Is this Exhibit 40 a logged hole from the Bureau of  
14 Reclamation or HKM?

15 A No, sir. As the title here on the top says, the  
16 project is Wind River, the hole number, the  
17 location of the hole, and it was logged by LJO,  
18 which is one of our land classifiers, and the date  
19 he logged it, and above that is the particular  
20 photo number, the 12-by-12 photo he used in the  
21 field where he put this number on.

22 Q So this is an HKM logged hole?

23 A That's right, yes.

24 Q What does the little H after 4, the hole number, mean?

25 kersich-voir dire-white

1 A Well, that's just part of a designation that we  
2 were using to keep numerical track of these holes.  
3 What we wanted to do was eventually wind up with  
4 a series of holes numbered in consecutive order  
5 per township, okay? And the H is just a desig-  
6 nation that was used at that time. It has no  
7 particular designation from a land classification  
8 standpoint. It's a bookkeeping procedure.

9 Q / The numbers under the depth column, are those  
10 inches?

11 A Yes, sir.

12 Q On other soil logs where no unit is shown, as in  
13 Exhibit 40, would the assumption be that those  
14 are inches as well?

15 A Normally they are inches, yes. If they are feet,  
16 they are usually described as feet then.

17 Q Looking at the soil log, which is Exhibit 40, what's  
18 the soil texture, or how would you tell the soil  
19 texture for the depth 11 to 24 inches?

20 A I would look over here on the hole where he actually  
21 drew the log out. If you notice, he had -- this  
22 indicates depth. You see the little horizontal  
23 lines in the right-hand side of that rectangular  
24 enclosure?

25 kersich-voir dire-white

1 Q Yes.

2 A Okay, sir, Those usually are meant to indicate  
3 12 inches or one foot.

4 Q I see.

5 A Okay, so he had a horizontal line that he drew  
6 just above the little first horizontal indentation,  
7 Looking at that, in other words, from zero to  
8 eleven inches he was in loam. He showed loam in  
9 that particular block.

10 Now, eleven to twenty-four inches, if you'll  
11 notice the next horizontal line is right at the  
12 two-foot line or as close as you draw it in the  
13 field, that he defined as fine sandy loams, and  
14 that is the texture I would put under eleven to  
15 twenty-four here.

16

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kersich-voir dire-white



1 Q (By Mr. White) When you were describing Exhibit 40  
2 you mentioned something about the sodium absorption  
3 ratio being shown on there and I didn't understand  
4 where it was, could you describe that?

5 A Okay. On the right-hand side we have for the first  
6 horizon 0.1, 0.1 then in the third horizon or the  
7 third level that he texturized he has 0.1 to 0.8  
8 and underneath that the figure 2.6. Do you see  
9 that, sir?

10 Q Oh, yes, I see that.

11 A Okay, the 2.6 then is the result of the sodium  
12 absorption, or is the sodium absorption ratio for  
13 that particular horizon of soil.

14 Q Why didn't you make an SAR test for the area  
15 above 24 inches?

16 A Well, you see the figures 0.1?

17 Q Yeah.

18 A That is a very minimum amount of salt in the profile  
19 at that point and if you can see down here we had  
20 2.6 SAR which meant there wasn't any particular  
21 concerns, if you will check our standards.

22 Q Uh-huh.

23 A And so it is a matter of time and money. If things  
24 are going good and you know that there are very few  
25 kersich - voir dire - white

1 salts there you don't necessarily do the rest of  
2 the test.

3 Q The third column has the word color in it --

4 A Yes, sir.

5 Q -- and I can't read the first --

6 A Munsel, M-u-n-s-e-l.

7 Q Uh-huh. And what does that mean, Munsel column?

8 A Well, there is a book of standard colors that are  
9 put together. I don't know where the name comes  
10 from -- soils classifiers.

11 Lands classifiers use this as a matter of  
12 record and what they do, they take a look at the  
13 sample that they have and then locate a comparable  
14 color in this particular color manual that they  
15 have. And in this instance it came out to be 10YR5/2.  
16 And what's of interest to me in there is the fact  
17 there was a change in color and I would ask the guy  
18 why did it change in color, in his estimation was  
19 there a problem or not. You see that's the type  
20 of thing that gives you some idea of whether water  
21 affects things of that nature.

22 Q What's the name of the publication that the --

23 A Munsel color book.

24 Q Munsel color book?

25 kersich - voir dire - white

1 A I call it the Munsel Color Book but other people  
2 may call it different things. But it is a color  
3 code.

4 MR. WHITE: Your Honor, we have no objection  
5 to Exhibit 40.

6 THE SPECIAL MASTER: All right. In all of  
7 your work with these Exhibits I might mention  
8 this to you: I note with interest your minute  
9 logging and classification of various characteristics  
10 to which you have alluded. The reference is made,  
11 however, to a particular area of ground as to  
12 whether it requires leveling or not. And how much  
13 surface work would be necessary? Not in your  
14 province?

15 THE WITNESS: It is somewhat, sir. For example  
16 slope, 3 to 7 percent is listed here.

17 THE SPECIAL MASTER: Yes. That's what brought  
18 my question on.

19 THE WITNESS: Sir?

20 THE SPECIAL MASTER: That's what brought my  
21 question on.

22 THE WITNESS: Yeah. And the surface relief  
23 gives us some idea. In this instance the gentleman  
24 that was on the piece of ground said that it was  
25 kersich - voir dire - white

1 gently undulating to rolly so that would, you know,  
 2 wake you up. If we were to look at the particular  
 3 photo it might be that he put a symbol for surface  
 4 consideration there. It might be a topographic  
 5 symbol, for example, or the T would be in the top  
 6 of the symbol and then down underneath would be  
 7 TU for -- especially for gravity. This would  
 8 probably be Class 3 gravity land, I suspect.

9 THE SPECIAL MASTER: But this would have  
 10 been his visual observation, not any instrument  
 11 helping him make that decision?

12 THE WITNESS: No, sir. With this slope he  
 13 may have an Amney level or a hand level and he  
 14 takes a shot on the predominant grade and tries  
 15 to describe it as best he can to you.

16 THE SPECIAL MASTER: Okay.

17 Go ahead, Mr. White.

18 Q (By Mr. White) Behind you are Exhibits 41 and 42?

19 THE WITNESS: Can I put this over here?

20 MR. WHITE: You bet.

21 MR. ECHOHAWK: Is Exhibit 40 in?

22 THE SPECIAL MASTER: You bet, Exhibit 40 is  
 23 admitted.

24 Q (By Mr. White) Are those 41 and 42 behind you?

25 kersich - voir dire - white

1 A. Yes, they are.

2 THE SPECIAL MASTER: Do you want those up?

3 MR. WHITE: No, that's fine, Your Honor.

4 Thank you.

5 Q (By Mr. White) I believe you testified that those  
6 represent or accurately represent a consensus of  
7 opinion of the people that you had up in this  
8 arable lands study, is that correct?

9 MR. ECHOHAWK: Objection, Your Honor. I  
10 think Mr. White misstates Mr. Kersich's testimony.

11 MR. WHITE: Well, maybe we ought to let the  
12 witness testify instead of counsel answering the  
13 question.

14 THE SPECIAL MASTER: You can ask him and let  
15 the witness answer. It would be better.

16 Q (By Mr. White) Was this the result of a collective  
17 opinion or a consensus?

18 A. Well, the final opinion is the result of the final  
19 review.

20 Q Okay.

21 A. And the land classifier placed the classification  
22 upon a particular tract and then later when he got  
23 the result of chemical or any additional tests that  
24 might have been done on that particular tract then he

25 kersich - voir dire - white

1 would review his opinion and then finally it went  
2 through a review process in our office, and my  
3 opinion is that on the basis of arability that those  
4 tracts are arable.

5 Q So that's your opinion; it is not a collective  
6 opinion, it is your opinion?

7 A It is my opinion based upon the opinions of the  
8 people that work for me.

9 Q Is it true that Exhibits 41 through 54 represent  
10 your opinion based on the opinions of others?

11 A Yes, I believe that's just what I just stated,  
12 sir.

13 MR. WHITE: Your Honor, we would object to the  
14 admission of Exhibits 41 through 54 on the basis  
15 that they are of no probative value in that it  
16 represents one expert's opinions which are based  
17 on the opinions of another expert. And the opinions  
18 of another expert, under the case law, are not facts  
19 or data upon which an expert may base his opinion.

20 We have a brief on that and will submit it to  
21 the Court and give copies to counsel.

22 MR. ECHOHAWK: Your Honor, I would, just in  
23 response to that, I would just refer to rule 703  
24 which allows one expert to base his opinion on

25 kersich - voir dire - white

1 just what Mr. Kersich bases his opinion on.

2 THE SPECIAL MASTER: May we see Rule 703,  
3 please? Then I'll take five minutes to decide  
4 this. If you want to take a brief break --

5 MR. SACHSE: Your Honor, can I make a comment  
6 on that?

7 THE SPECIAL MASTER: Yeah, I'll hear any  
8 additional briefs or arguments. I'll hear them  
9 right now. Mr. Sachse.

10 MR. SACHSE: Experts under the Rule are allowed  
11 to base their opinions upon the kind of data that  
12 experts in their field customarily rely upon.  
13 Mr. Kersich, from what I have heard, has gone way  
14 beyond that. He's describedd the vast amount of work  
15 that's been done under his direction; people going  
16 out digging holes and first assembling all of that  
17 data that was already there, then going out and  
18 drilling different kinds of holes, having people  
19 feel the soil, him going out himself afterwards to  
20 check the holes when they didn't go out there. Now,  
21 what Mr. White has done is to ask Mr. Kersich to sum  
22 all this up in one sentence, you know. Are these  
23 maps based on your opinions based upon the opinion  
24 of others. Mr. Kersich has said yes, but that one  
25 kersich - voir dire - white

1 statement can only be understood in terms of his  
2 entire testimony which is that he has participated  
3 and people directly under his control have  
4 participated not only in just gathering information  
5 from USGS and so forth, as we have seen with some  
6 prior experts who weren't hired to go out in the  
7 field and dig holes and so forth, but they have  
8 spent two years doing the physical work themselves,  
9 and the admissibility of this evidence I submit is  
10 just unimpeachable, it is absolutely admissible  
11 evidence.

12 THE SPECIAL MASTER: Anybody else wish to  
13 argue?

14 Thank you. We'll take a five minute recess.

15 MR. WHITE: Your Honor, I was just going to  
16 say we don't need any further argument. We'll  
17 stand on the record and on our brief. Your Honor  
18 the law is pretty clear.

19 THE SPECIAL MASTER: All right.

20 (Brief recess, 2:52 p.m.  
21 (to 2:56 p.m.

22 THE SPECIAL MASTER: I'm ready to rule on  
23 this.

24 MR. WHITE: We need a reporter.

25 kersich - voir dire - white



1

THE SPECIAL MASTER: We have a reporter.

2

MR. WHITE: I thought you were another justice there.

3

4

THE SPECIAL MASTER: He's so quiet.

5

MR. WHITE: That's right.

6

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THE SPECIAL MASTER: Okay. We have read the rules and the brief in support of the State's

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position to exclude and that motion will be

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overruled. And I want to note these distinctions

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in the record; that facts and data upon which this

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witness relies are facts and data of which he was

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a part of in the field work which compiled those

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facts and data as distinguished from something that

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would have been foreign to him or based upon other

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opinions, which would indeed be a case of something

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shifting in sand. The other distinction I think

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that is clear is that he had and has testified to

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his personal knowledge of the nature and the extent

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of the studies conducted from which all of these

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parties met in a consensus in a review process to

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formulate conclusions to which he testified. So the

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evidence is -- so the exhibits -- you're not through

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yet, though, are you?

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Exhibit 42 to which objections have been made

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are hereby admitted --

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MR. WHITE: Your Honor, you might as well go ahead and admit them through 54 because I meant to make my objection on the basis of the brief.

THE SPECIAL MASTER: Through the whole group?

MR. WHITE: Through the whole group.

THE SPECIAL MASTER: All right then, all exhibits from the last one we admitted -- 37, was it not?

MS. SLEATER: Forty was the last one.

THE SPECIAL MASTER: The following exhibits: Forty-one, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53 and 54 are admitted in evidence.

Off the record, please.

\* \* \* \* \*

1 THE SPECIAL MASTER: Off the record, please.  
2 (Off-the-record discussion.)

3 THE SPECIAL MASTER: Okay, Mr. White.

4 MR. WHITE: I'm through, Your Honor. I  
5 believe we've covered everything they offered.

6 THE SPECIAL MASTER: Okay. Mr. Echohawk.  
7 (Brief pause.)

8 MR. ECHOHAWK: I have no further questions,  
9 Your Honor. That concludes the direct examination of  
10 the United States.

11 THE SPECIAL MASTER: Does anyone wish this  
12 witness to be on-hand through the balance of this  
13 week?

14 MR. SACHSE: We have cross-examination.

15 MR. WHITE: We have cross-examination yet.

16 THE SPECIAL MASTER: I beg your pardon. I  
17 thought we were through with cross-examination; I'm  
18 anticipating.

19 All right, proceed.

20 MR. SACHSE: The Tribes have just a few  
21 questions.

22 CROSS-EXAMINATION

23 BY MR. SACHSE:

24 Q Mr. Kersich, you defined arable lands as lands  
25 kersich-cross-sachse

- 1 which are capable of sustained irrigation; is  
2 that correct?
- 3 A That's correct.
- 4 Q Would this be a definition that some people in  
5 your field would apply to irrigable lands as  
6 opposed to lands that could just be farmed by  
7 dry land farming?
- 8 A Yes, sir. One has to be careful, the terms  
9 arable and irrigable are used interchangeably  
10 many times.
- 11 Q All right. Now, from your testimony, I understand  
12 that you've had, I don't remember exactly how  
13 many years, but maybe 18 or 20 years experience  
14 with arable or irrigable lands in this part of  
15 the country?
- 16 A Yes. I've been involved in irrigation for a  
17 number of years.
- 18 Q And that's for private parties and industries as  
19 well as for Indian Tribes?
- 20 A That's correct.
- 21 Q Have you seen lands such as these lands that you've  
22 testified as arable under irrigation?
- 23 A You mean lands that were originally in the State  
24 that we are talking about here?
- 25 kersich-cross-sachse

1 Q That's right.

2 A Yes, I have.

3 Q Is it at all unusual to see lands like that put  
4 into irrigation?

5 A No.

6 Q Now --

7 THE SPECIAL MASTER: I'm almost constrained  
8 to ask, Mr. Sachse, in observing your last  
9 question that the witness answered, the mere  
10 observation, all 84,000 acres of them. But no  
11 objections were made so I won't ask it.

12 MR. WHITE: I was going to ask it, Your  
13 Honor.

14 Q (By Mr. Sachse) Well, I'll ask it now. All  
15 84,000 acres of them?

16 A I can say this: I've looked at most of these  
17 lands. I've seen lands of better quality than  
18 this irrigated and I've seen lands of lesser  
19 quality than this irrigated.

20 Q Thank you. Do you have reason to believe that  
21 these are all the arable lands, using your  
22 definition of arable, on the Wind River Reservation?

23 MR. WHITE: Objection, Your Honor, foundation.

24 How would he know that lands other than those

25 kersich-cross-sachse

1 which he studied were not arable?

2 THE SPECIAL MASTER: That's a pretty good  
3 objection.

4 Q (By Mr. Sachse) I'll ask a slightly different  
5 question.

6 In your study of the Reservation on the  
7 large scale in which you brought it down to the  
8 study areas as shown on WRIR C-35, did you find  
9 indications that there are other arable lands  
10 on the Reservation but that you simply didn't  
11 study them because you didn't have the time or  
12 money to do it?

13 A Well, time and --

14 THE SPECIAL MASTER: Go ahead, answer the  
15 question.

16 THE WITNESS: Okay, sir. Well, we found  
17 other lands which merited further studies, depending  
18 if a different set of criteria were established  
19 for water availability and costs of returning  
20 the lands and things of this nature. There were  
21 lands that could have been involved in more  
22 studies.

23 Q (By Mr. Sachse) So our first effort, as I under-  
24 stand it then was to take a larger amount of

25 kersich-cross-sachse

1 possibly irrigable acreage on the Reservation  
2 than is found in the study areas, narrow that  
3 down to the study areas? You then took the  
4 study areas and as I recall your testimony, you  
5 had about 300,000 -- you can correct me -- acres?

6 A Okay. We originally came down about 490,000, as  
7 I recall, and we reduced that further to approxi-  
8 mately 300 plus, and I don't remember the exact  
9 figure. Then we reduced that further to about  
10 200, and I'm getting figured out, 281,000,  
11 roughly. And then from that we came down to the  
12 84,469 acres that we feel are arable.

13 Q Is it fair to say that in these exhibits that show  
14 the arable acreage within the study areas, that  
15 there is more land that you excluded than that  
16 you actually kept as arable?

17 A Okay. If I understand the question correctly,  
18 now you're saying that within -- Can we refer to  
19 a particular exhibit, it might be easier to answer  
20 the question if we might?

21 Q Let's look, just because it's --

22 A Arapahoe area?

23 Q Arapahoe area.

24 A Which is Exhibit C-54.

25 kersich-cross-sachse

1 Q Fifty-four.

2 A Well, there are -- There are lands -- There is  
3 more land within that study area boundary. Let  
4 me get the answer correct here if I might think  
5 a minute.

6 The question, as I understand it is that we  
7 actually, in our screening process, rejected more  
8 lands than we assigned an arability classification?

9 Q That was my question.

10 A Was that your question?

11 Well, the answer to that is, yes, we reviewed  
12 a large base of land and much of those lands were  
13 summarily dismissed as being non-arable, and that  
14 the arable classification was only given to the  
15 parcels that we denote in the colors. And from  
16 the information you can see we looked at much  
17 more land than we actually certified as arable.

18 Q So while there might just be a tiny bit of Class 4  
19 lands that you included as arable, there's a rather  
20 large amount of Class 6 and beyond that you've  
21 excluded totally in those maps?

22 A Yes, there's much more land that we excluded than  
23 we included.

24

25 kersich-cross-sachse



1 Q Now, I want to just ask one question or two  
2 questions about sprinkler irrigation. Just before  
3 lunch you testified that sprinkler irrigation is  
4 not necessarily from groundwater and that you've  
5 seen many center pivot sprinklers running from  
6 surface water sources. Aren't there other kinds of  
7 sprinkler irrigation than center pivot sprinkler?

8 A Yes, there are many types of sprinkler irrigation.  
9 There is intermittent move or wheel moves, lateral  
10 moves or continuous moves, so -- There are hand  
11 moved for that matter, that you use, so the type  
12 of system used really isn't dependent on the water  
13 source. You try to match the land and the system  
14 together and then take what water source you have.  
15 If you're close to a surface supply or if you're  
16 close to a ditch or whatever, you know, it's just  
17 a matter of bringing water to the land and then  
18 putting it into the system, whether it's an  
19 intermittent move, wheel roll or whether it's  
20 continuous roll like a center pivot.

21 Q Now, in this difference between a sprinkler  
22 irrigation and gravity irrigation, if someone  
23 had looked at the irrigability of this reservation  
24 forty years ago, I suppose they would have thought

25 kersich-cross-sachse

1 only in terms of gravity irrigation?

2 MR. WHITE: Objection, Your Honor, calls  
3 for speculation, no foundation.

4 THE SPECIAL MASTER: I'm going to  
5 overrule the objection.

6 THE WITNESS: Well, forty years ago,  
7 that's right, we -- the things that we're talking  
8 about today, the method of irrigation we're talking  
9 about today are a result of forty years experience  
10 in the field.

11 Q (By Mr. Sachse) And with sprinkler irrigation you  
12 can irrigate more lands, but you tend to use less  
13 water per acre of land; is that correct?

14 MR. WHITE: Objection, foundation, Your  
15 Honor.

16 THE SPECIAL MASTER: May I hear the  
17 question again, please.

18 (Thereupon the last question  
19 (was read back as follows: "Q  
20 (And with sprinkler irrigation  
21 (you can irrigate more lands,  
22 (but you tend to use less water  
23 (per acre of land; is that  
24 (correct?"

22 THE SPECIAL MASTER: You may answer.

23 THE WITNESS: If you properly design the  
24 system, you can normally design a more efficient

25 kersich-cross-sachse

1 system using mechanical application than you can  
2 in gravity application. I say that, normally.

3 MR. SACHSE: I have no other questions.  
4 Thank you.

5 THE SPECIAL MASTER: Do you, in fact,  
6 irrigate more land and use less water or do you  
7 just get a horrific increase in yield from the  
8 same lands and water?

9 THE WITNESS: Well, there are many  
10 instances here, sir, where you can irrigate  
11 lands that wouldn't be practical to irrigate with  
12 a gravity system, lands with a high content of  
13 sand, but by applying the water frequently in  
14 light applications, you can many times take those  
15 sands that have other good characteristics like  
16 aeration, good aeration, things of this nature,  
17 and you can develop some outstanding yields. If  
18 you try to irrigate those lands with gravity systems,  
19 then you'd be in a situation where you have to  
20 put so much water on them. They become highly  
21 inefficient, you waste your water, and many times  
22 you can't get back on it soon enough and you  
23 drought out your crops. So what it really amounts  
24 to is you try to match the type of soil you have,  
25 kersich-cross-sachse

1 the characteristics of the soil with the system  
2 that would do the job best.

3 THE SPECIAL MASTER: Thank you.

4 Mr. Rogers.

5 MR. ROGERS: One brief sequence of  
6 questions, Your Honor.

7 CROSS-EXAMINATION

8 BY MR. ROGERS:

9 Q Mr. Kersich, on the narrowing down of the original  
10 land base to the study areas, I believe you  
11 testified, and it's been reviewed here that certain  
12 constraints on your own firm's budget and so forth  
13 caused some of the reduction of area of study;  
14 is that correct?

15 A Yes.

16 Q Is it fair to say that in making that inter-firm  
17 budget determination that you tended to focus  
18 on larger areas of land, contiguous areas of land  
19 that would make your work more economic and  
20 efficient?

21 A What we tried to do is work on large blocks of  
22 land that had the potential capability of arability,  
23 and that could eventually be assembled into a  
24 project by someone else. In this case, it would

25 kersich-cross-rogers

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be the agricultural engineer, Mr. Stetson, and the economist, Mr. Dornbusch; the idea being just from a practical standpoint, if you have a large mass of land relatively close to a water supply, if the land can meet the tests, then the potential of that land passing the other two tests, the design and the economic test, would be much higher, and that's the reason that was used here.

\* \* \* \* \*

kersich-cross-rogers

1 Q (Continued) Is it fair to say then it was to  
2 make a manageable planning tool for the purpose  
3 of the case for the other experts, Mr. Stetson  
4 and Mr. Dornbusch?

5 A Again, yes, that's what we are trying to do is  
6 develop a project type of land base here, sir.

7 Q And by that process we got down to the areas  
8 that are on WRIR Exhibit C-35, those lands that  
9 are within the red borders?

10 A Those lands within the red borders then, yes,  
11 were the ones that we wanted to focus our efforts  
12 on.

13 Q Are any of the lands that lie outside those  
14 red borders that are colored in green on Exhibit  
15 C-35 potentially arable lands under your  
16 definition?

17 A The lands in green outside the red borders from  
18 a land standpoint would, could be studied further  
19 for determination of arability.

20 Q But your studies, you did not go into water  
21 availability for those lands or certain other  
22 considerations?

23 THE SPECIAL MASTER: May I ask, on that  
24 question you did not go into water availability

25 kersich-cross-rogers

1 anywhere, did you? You said that several times  
2 times this morning.

3 THE WITNESS: Well, only in the sense that  
4 we looked at the lands that might be contiguous  
5 to a potential supply of water.

6 THE SPECIAL MASTER: No, but your expertise  
7 you said this morning was limited, and it excluded  
8 from consideration any consideration of water  
9 availability. Now, is that still the case this  
10 afternoon?

11 THE WITNESS: Yes, it's still the case this  
12 afternoon.

13 THE SPECIAL MASTER: All right. That's all  
14 I wanted to know, and that answers Mr. Rogers'  
15 question.

16 THE WITNESS: May I explain that answer one  
17 more time, sir, please. What we did after we got --  
18 Forget about the red lines, if we might on Exhibit  
19 35 for just a moment. We had a map basically with  
20 all these lands that were colored in green. Now,  
21 for example, I'm sure most of you are familiar  
22 with the Reservation, the country begins to rise  
23 up where there's mountains here.

24 THE SPECIAL MASTER: Right.

25 kersich-cross-rogers

1 THE WITNESS: It gets away from firm sources  
2 of supply of water. These are -- some of these  
3 streams are continuous streams, but they have  
4 a high degree of flow at a certain time of year,  
5 and the rest of the year there's very little  
6 water. So the chances of, first of all having  
7 water there without a massive storage project or  
8 something of this nature are something very  
9 minimal.

10 The second thing is as you begin to rise in  
11 elevation, you've got the climate problem, your  
12 cropping pattern begins to diminish.

13 THE SPECIAL MASTER: I appreciate that now.  
14 That is true. You did mention that was one  
15 consideration, whether the land was not considered.

16 THE WITNESS: Yes. So when you look at the  
17 Crowheart Unit, there was an attempt to look at  
18 potential gravity supply from a firm source. There  
19 is no question there's quite a bit of water in  
20 the Wind River yet, so we looked at the idea of  
21 being able to tie to a source, and in this instance  
22 the Wind River. And there should be some water  
23 there for development. I can't tell you at this  
24 instant how much water there is and how many acres

25 kersich-cross-rogers



1 are going to come out of this, but the point is  
2 if we had to confine ourself to reasonable time  
3 efforts, a reasonable budget to look at lands,  
4 it would be more practical to look at those  
5 lands which had the potential, highest potential  
6 from an observation here of becoming irrigable --

7 THE SPECIAL MASTER: Yes.

8 THE WITNESS: -- than trying to examine  
9 every acre on the Reservation.

10 Q (By Mr. Rogers) But there were lands outside the  
11 red bounded areas colored in green that with a  
12 water supply could become arable under your  
13 definition, physically arable under --

14 THE SPECIAL MASTER: I'll sustain that  
15 objection. He's already answered a question and  
16 said that the lands outside the acres could  
17 warrant further studies toward their arability,  
18 and I'm going to take his first answer.

19 MR. ROGERS: I'm asking the question beyond  
20 that. Does he have an opinion as to whether or  
21 not some of the green lands outside of the red  
22 bounded areas are arable as you have studied them,  
23 as you define that term.

24 THE SPECIAL MASTER: Have you not already

25 kersich-cross-rogers

1 answered the question?

2 THE WITNESS: I've answered the question,  
3 but I say those lands warrant further study.  
4 And in certain studies the land might show to be  
5 arable and in certain studies non-arable.

6 Q (By Mr. Rogers) The delineation of the green  
7 areas throughout the Reservation on C-35, those  
8 were made based upon your view and your firm's  
9 view of previous studies; is that correct?

10 A The basic study that was used in terms of green  
11 areas, as I testified this morning, was a  
12 document entitled The Range in Soils Inventory,  
13 and I believe it was done about 1962 by the  
14 BIA. Additionally, some information was gathered  
15 from a geological survey, maps of the area give  
16 us some idea of apparent material and those were  
17 the two basic documents used to develop the green  
18 areas within the Reservation boundaries.

19 Q So is there a possibility from your professional  
20 experience in studying land areas of this size  
21 in the same manner that there are even lands  
22 beyond those delineated in green on Exhibit C-35  
23 that might be arable under your definition?

24 MR. WHITE: Objection.

25 kersich-cross-rogers

1 THE SPECIAL MASTER: I'm going to object  
2 to the question because I think you're attempting  
3 to get into the record what you've already got  
4 in once. One shot at a time is sufficient.

5 I think he's answered that by saying there  
6 may very well be additional land in the green if  
7 study was warranted, and there may not. A  
8 question comes to my mind, Mr. Rogers --

9 MR. ROGERS: My question goes beyond the  
10 green, Your Honor.

11 THE SPECIAL MASTER: All right. But if in  
12 the latter studies of land use planning of our  
13 society it is determined that a huge beautiful  
14 swath is cut across the northern one-third of this  
15 Reservation and called pristine lands, would you  
16 put a plow to that pristine lands, Mr. Kersich?

17 THE WITNESS: I'm not a recreational planner,  
18 sir, I'm not going to answer that question.

19 THE SPECIAL MASTER: But I appreciate what  
20 Mr. Rogers is saying, and I think you got it in  
21 the record that this isn't a maximum, that's what  
22 you're trying to say.

23 MR. ROGERS: I would like to establish at  
24 least, Your Honor -- Let me ask the question.

25 kersich-cross-rogers

1 Q (By Mr. Rogers) You, your firm and you have done  
2 no review of the land other than that colored  
3 green on the map?

4 MR. WHITE: Objection, Your Honor, the  
5 question is misleading.

6 THE SPECIAL MASTER: No, he may answer that.  
7 His firm, and other than what's in green, go ahead  
8 and answer that.

9 THE WITNESS: Within the study areas we looked  
10 at lands which may not have been colored green  
11 because the study that we used to determine the  
12 green area was a very low intensive study, and as  
13 a consequence, the data was incomplete, it didn't  
14 represent an awful lot of field work, for example,  
15 drilling to barrier, things of this nature. So  
16 we may very well -- well, not "May", let me change  
17 that right now. We did look at the basic area  
18 within the red. After we established the red line,  
19 we didn't care about the green as much as what was  
20 actually there because we were going to do more  
21 intensive study that what the green was predicated  
22 on, okay, sir?

23 Q (By Mr. Rogers) Fine, I understand that answer.  
24 Now, let me ask my last question then. Did you --  
25 kersich-cross-rogers

1 did your firm study the areas outside the red  
2 bounded areas that are not colored green?

3 A As a matter of fact, our firm did not actually  
4 study the green areas outside the red study areas.

5 Q Let me define study.

6 THE SPECIAL MASTER: Let him finish, please.

7 THE WITNESS: We, let's go back to what we  
8 use this for. We -- Again, we're back to a  
9 process of trying to delineate a study area. Once  
10 the study area was delineated, we didn't have the  
11 time, the budget to go out and study all the  
12 individual green areas outside of there.

13 It may well be that those green areas could  
14 be larger, smaller because, again they're based  
15 on a very low intensity reconnaissance level type  
16 study, and so they were just a guide to let us  
17 develop the areas where "Green areas" were massed  
18 into the best, where we could determine the  
19 potential for getting water was fairly reasonable,  
20 and so that's how we got the red. The areas out-  
21 side those green areas has not been studied by  
22 H.K.M. other than in an office level study of this  
23 reconnaissance study.

\* \* \* \* \*

END 19

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kersich-cross-rogers

1 Q (By Mr. Rogers) Is your answer then that you did  
2 study through the reconnaissance -- that's what  
3 I meant to define by study, Your Honor.

4 You did study as a reconnaissance some of  
5 the areas outside the red bounded areas that  
6 aren't colored green?

7 A We made an office study of the reconnaissance  
8 study that was made and selected those areas  
9 which could meet our screening criteria, irrespective  
10 of where they are located and colored in green  
11 on that, Your Honor.

12 MR. ROGERS: Thank you.

13 THE SPECIAL MASTER: Did your study  
14 include the area in red that has been described  
15 as after-acquired land that I'm pointing too,  
16 sometimes described as the Arapahoe Ranch?

17 Did you follow that question all right?

18 THE WITNESS: Yes, I believe I followed  
19 the question, and you are concerned about the  
20 portion north of the boundary indicated on that  
21 map?

22 THE SPECIAL MASTER: Yes. I'm not  
23 concerned about it, but it's one of the things  
24 I want to ask about.

25 kersich-cross-rogers

1 THE WITNESS: We looked at that area  
2 in the sense that we looked at what was there.  
3 There was quite a bit of irrigation, some historic  
4 and some adjudicated -- frankly, at this time I  
5 couldn't tell you whether it was historic or  
6 adjudicated -- and at that point it didn't  
7 appear there was much more we could do with it,  
8 so we didn't give it an in-depth field study.

9 THE SPECIAL MASTER: You earlier said  
10 there were about 617 holes that were augered --

11 THE WITNESS: 671.

12 THE SPECIAL MASTER: I'm sorry. 671.  
13 I have a transposition.

14 Were all of those holes done inside the red-  
15 bordered areas on that exhibit?

16 THE WITNESS: Primarily, yes. Again,  
17 when we got into the field, we sometimes found  
18 ourselves just outside the border or something of  
19 this nature.

20 A hole might have been placed in that parcel,  
21 because he might have been examining a parcel  
22 that wasn't in the area or outside the area.

23 THE SPECIAL MASTER: But primarily yes?  
24 Or substantially?

25 kersich-cross-rogers

1 THE WITNESS: Substantially they were  
2 all within the area, yes.

3 THE SPECIAL MASTER: Mr. Rogers?

4 MR. ROGERS: That's all I have.

5 THE SPECIAL MASTER: I'm glad to see  
6 Mr. Merrill up.

7 MR. MERRILL: Thank you, Your Honor.  
8 I apologize for my absence this morning.

9 THE SPECIAL MASTER: I guess we had better  
10 add him to the appearances.

11 MR. WHITE: I can't help but ask a  
12 couple of follow-up questions to your previous  
13 cross-examination.

14 CROSS-EXAMINATION

15 BY MR. WHITE:

16 Q Are you saying that or did you mean to say during  
17 Mr. Sachse's cross-examination that consumptive  
18 use of water is greater -- excuse me -- is less  
19 with sprinkler irrigation?

20 A No, we were talking about the amount of water used  
21 in the irrigation systems. Consumptive use is  
22 another matter entirely, but when we get into  
23 talking about the method of irrigation, we add on  
24 one more factor, which is the efficiencies, and

25 kersich-cross-white



1 normally if we do a well-designed mechanical  
2 system, match it to the soils -- and I said  
3 normally -- we should be able to maintain a  
4 more efficient rate and, therefore, require less  
5 diversion, have less deep percolation, have less  
6 losses, you know, so that the total effect is  
7 that we use less water, yes.

8 Q So you divert --

9 A But the plant still is using the same amount of  
10 water.

11 Q The same amount of water is used, but less may be  
12 diverted; is that correct?

13 A What do you mean by "use" now? You know, the point  
14 is -- if you are talking about consumptive use,  
15 that's the -- the evapo-transpiration occurs  
16 in the normal crop pattern. That's what the  
17 crop is using, the plant.

18 Q So the consumptive use --

19 A The consumptive use is not a function of the system.

20 Q Naturally?

21 A Yes, but there are other losses associated with  
22 irrigation, such as deep percolation, conveyance  
23 losses. I bring that in because we are many times  
24 talking about pipe systems. Those normally have

25 kersich-cross-white

1 a higher efficiency than a canal or a ditch,  
2 so those losses would be minimized, and the total  
3 amount that would have to be diverted to satisfy  
4 the crop requirement of all the losses should  
5 normally be less.

6 Q If you did not use a sprinkler system, you would  
7 have to divert more water to get to the same  
8 consumptive use?

9 MR. ECHOHAWK: This is pretty far afield  
10 for his direct.

11 MR. WHITE: It's not far afield from the  
12 cross-examination.

13 MR. ECHOHAWK: I believe direct is what  
14 we are concerned about.

15 MR. WHITE: No, when you have a  
16 friendly cross, that's included in cross.

17 MR. ECHOHAWK: We are all separate  
18 parties.

19 THE SPECIAL MASTER: Go ahead and  
20 answer it.

21 A (Witness) Remember I used the word normally?  
22 Okay. There are certain times in gravity systems  
23 when you talk about a level basin that's used  
24 essentially in the Southwest, where it's been my

25 kersich-cross-white

1 experience, where they are, with the proper soil  
2 and proper design -- in other words, keeping  
3 their runs to certain levels and one thing and  
4 another -- they can achieve some efficiency.  
5 Studies of the Soil Conservation Service and the  
6 Bureau of Reclamation have shown that they are  
7 capable of turning a large head of water into  
8 a basically level field or a slight grade so the  
9 water can get across the field, and the soil  
10 has a high infiltration rate and the water could  
11 be utilized very efficiently by the crop, so I  
12 guess the point I'm trying to say is that if you  
13 use good design methods, you can get some pretty  
14 high efficiencies, depending on the type of  
15 systems you use on certain soils.

16 Q What happens to the water that's diverted in a  
17 nonsprinkler irrigation system that is not  
18 consumed by evapotranspiration?

19 MR. ECHOHAWK: Same objection, Your  
20 Honor.

21 THE SPECIAL MASTER: I would like to  
22 hear him answer. I think it adds some possible  
23 understanding of the irrigation.

24 A (By Witness) In a typical irrigation project you  
25 kersich-cross-white

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are going to have some conveyance losses through the ditch getting it to the land. You are going to have some losses through deep percolation, which occur depending on the method you use to irrigate.

You are going to have some waste that's involved. In other words, depending on how the system is, you get hit with a rain or something or, for example, that the farmer couldn't use the water, we get into a situation where there isn't a demand for the water. The water may go right through the system and be wasted back to the original drainage, depending on the location or the system. Those are some of the losses that you have.

Q (By Mr. White) But those losses aren't losses forever, are they? That water is returned and is available for use by somebody else, isn't it?

A Well, you are giving me specific criteria to a question here. You tell me where the ditch is, where the people are located on the ditch, you know.

Q I would like to ask about the same level of generality as you were asked by Mr. Sachse, but I will be glad to make it more specific.

kersich-cross-white

1 Say you are going to divert water out of the  
2 Wind River into the North Crowheart area here.  
3 (indicating) You cross no hydrologic divide,  
4 and you use nonsprinkler irrigation, and you have  
5 an efficiency of fifty-five percent or forty-five  
6 percent loss before you get to the farm gate.

7 What happens to that forty-five percent of the  
8 water that's diverted? Does it go away and is  
9 it never available for anybody else to use?

10 A Many times that water is available for others to  
11 use, but there are some irrecoverable losses.

12 Q That's right.

13 A And that varies, of course, from system to system,  
14 but, yes, I'm not sure about Wyoming, but, for  
15 example, in Montana, you could have a wasteway  
16 or a drain out of your canal, for example. Someone  
17 files on that, and they are allowed to use that  
18 water, and they do use it many times.

19 Q Mr. Rogers in his cross-examination of you indicated  
20 there were some budgetary constraints that limited  
21 the scope and intensity of your examination; is  
22 that correct?

23 A Within reason, yes. We had two things. We had  
24 the time of trial. That was of concern to

25 kersich-cross-white

1 everyone to try and develop some information that  
2 would accurately reflect what we found there and  
3 have it ready for trial.

4 Q And you have done the best you could in the time  
5 available; is that correct?

6 A We have worked very hard within the time available  
7 to come to where we are today, yes.

8 THE SPECIAL MASTER: Did the extra two  
9 months help you?

10 THE WITNESS: Oh, yes, sir. I would like  
11 to thank you on the record because I almost died  
12 before Christmas when I didn't know whether we  
13 were going to get it or not.

14 MR. WHITE: There's another side to that  
15 coin, Your Honor.

16 Q (By Mr. White) Well, the other factor then was  
17 budget in addition to time; is that correct?

18 A Well, there isn't any project that I don't work  
19 on where there isn't some budget constraints, sir.

20 Q But you indicated there were budget constraints  
21 that limited your irrigable land investigation;  
22 is that correct?

23 A Well, they get the time first and then you know  
24 how much you can spend within that time, and that's

25 kersich-cross-white

1 it, I guess. You know, the two of them are  
2 concurrent things.

3 You couldn't afford to study every acre of  
4 the reservation to the same depth that we  
5 studied these limited acres. On the other hand,  
6 one of the things we do know, predicated on our  
7 experience in this type of work and also with  
8 experience with the people I have working for me  
9 in the Bureau of Reclamation, is the level of  
10 detail you pick up in these investigations sometimes  
11 is very little, even though you put a much more  
12 intense field effort into it, and as a consequence,  
13 I think if you look at the specifications that the  
14 Bureau of Reclamation has for detailed land  
15 classification studies versus semi-detailed land  
16 classification studies, you will find that the  
17 record of accuracy -- and I'm going to quote  
18 these from memory, so I might be one or two  
19 percent off -- I believe on the semi-detailed  
20 they say that, first of all, the level of accuracy  
21 is about ninety percent so, in other words, their  
22 delineation of irrigable versus nonirrigable is  
23 fairly high. Their delineation of the classes and  
24 subclasses is not quite as high.

25 kersich-cross-white

1 Under detailed land classification studies,  
2 they talk about a ninety-seven percent accuracy  
3 level, but if you have had the opportunity to  
4 see what it costs to do a detailed study versus  
5 a semi-detailed study, there's a tremendous  
6 expansion of the money without that much more  
7 increase in accuracy.

8 Q But the detailed study is what is required for  
9 authorization of construction, isn't it?

10 A That's what it used to be, but I wouldn't testify  
11 that that's what it is now, but it's my understanding  
12 that many times the Bureau is using semi-detailed  
13 or they are at least in the process of switching,  
14 so I'm not sure of that, and I'm not going to  
15 testify as an expert in that area.

16 Q Well, we will get to that later in the cross-examin-  
17 ation then.

18 A All right.

19 Q So was budget a limiting factor or not, or was  
20 time the only problem?

21 A Time was of a limiting factor, primarily. Budget  
22 determined the level of study somewhat, yes.

23 Q What was your budget?

24 A I don't remember the exact figures now.

25 kersich-cross-white



1 Q You don't?

2 A No, I don't.

3 Q How much more money would it have taken for you  
4 to do a complete study such as those --

5 THE SPECIAL MASTER: I will object to  
6 that. I have no business knowing what the cost  
7 of these studies is. That's not relevant to  
8 the Special Master, I don't think.

9 MR. WHITE: I think the law is to the  
10 contrary, but you won't let me ask the question,  
11 so I won't. I just want to make a record on that  
12 basis. Okay.

13 THE SPECIAL MASTER: Well, if I'm  
14 wrong, give me some law and show it to me.

15 MR. WHITE: We'll get back to it. I  
16 have a brief floating around.

17 THE SPECIAL MASTER: But generally I  
18 don't feel those are matters that I have a proper  
19 duty to inquire into.

20 MR. WHITE: I think the amount of the  
21 budget, Your Honor, is appropriate for inquiry,  
22 and I'll give you a brief on it simply because it  
23 shows in a way that is often understandable to all  
24 the level of intensity of the study vis-a-vis

25 kersich-cross-white

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the other studies of the same area.

2

For example, if there was another study that was at a low budget, it might not be nearly as probative in its nature as a high budget.

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THE SPECIAL MASTER: I agree with you, Mr. White, but if we go that far, then we have a duty to continue to say what are the benefit cost ratios? What projects will be formed? What will the market analysis be? And it gets into a quagmire after a while.

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MR. WHITE: We are in the quagmire already.

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kersich-cross-white

1 Q This arable land figure which you gave in your  
2 opinion, Mr. Kersich, are gross figures, are they  
3 not?

4 A Yes.

5 Q They are not net figures?

6 A Well, okay. Let's stop right now. What do you  
7 mean by gross and net? You know, I really want to  
8 know because there are different definitions of  
9 gross and net to different members of the team.

10 MR. WHITE: Let me ask the questions.

11 THE SPECIAL MASTER: Do you want that 15  
12 minute break I promised you in the afternoon around  
13 three o'clock or don't you?

14 MS. LUNDBERG: It doesn't matter.

15 THE SPECIAL MASTER: All right. Let's take  
16 a 10 minute break right now because I forgot.

17 (10 minute recess,  
18 (3:36 p.m. to 3:50 p.m.)

19 THE SPECIAL MASTER: Okay. We are on the  
20 record. All right, Mr. White.

21 Q (By Mr. White) Mr. Kersich, if you know, what is  
22 the relationship between the arable acres identified  
23 by you in your opinion and the practicably  
24 irrigated acreage set forth in the statement of claim?

25 kersich - cross - white

1 A About all I can tell you there is that I assumed  
2 that our arable acreage was used as the base for  
3 the practicably irrigable acreage in the statement  
4 of claims, but I personally didn't make that  
5 transposition.

6 Q So you don't know that there is a relationship,  
7 is that correct?

8 A All I can do --

9 THE SPECIAL MASTER: In this lawsuit.

10 MR. WHITE: In this lawsuit, yes.

11 A All I can assume is that the arable base was used  
12 as a portion of the practicably --

13 Q (By Mr. White) Practicably.

14 A -- practicably irrigable acreage that was made in  
15 the statement of claims. That's the best I can do  
16 at this time.

17 Q Isn't it true that based on your experience and  
18 expertise you know of no engineering meaning for  
19 the term practicably irrigable acres?

20 A That is correct, that is a legal term that's been  
21 defined to me by a number of attorneys as only being  
22 legal in nature and having nothing to do with  
23 engineering.

24 Q Okay. Do you know, Mr. Kersich, in which of your  
25 kersich - cross - white

1 arable land study areas the 62,606 practicably  
2 irrigable acres set forth in the statement of claim  
3 occur that are irrigated out of the Wind River?

4 A. No, I'm going back to the answer I gave you before.  
5 I didn't have the responsibility of making up the  
6 statement of claims and I don't know how our figures  
7 were used in arriving at the figures that eventually  
8 appeared in the statement of claims, sir.

9 MR. WHITE: Your Honor, on the basis of the  
10 witness' response we would move to strike his  
11 testimony on the grounds of relevancy. Because it's  
12 not been demonstrated during his direct examination  
13 as well as any of his cross examination that there is  
14 a relationship between the arable acres which he's  
15 identified which are shown on Exhibits 41 through 54  
16 and the practicably irrigable acres set forth in  
17 the statement of claim.

18 THE SPECIAL MASTER: The objection will be  
19 overruled. This witness -- this expert,  
20 in his field of expertise, professes to have  
21 knowledge of those matters to which he's testified  
22 dealing with the arable acreage. I'm not aware  
23 that he had anything to do with the preparation of  
24 the statement of claims and therefore I'll keep them

25 kersich - cross - white

1 separate, Mr. White.

2 Q (By Mr. White) Mr. Kersich, I believe your  
3 definition of arable land was that land that can  
4 sustain long-term irrigation?

5 A Yes, from the soil, or physical and chemical  
6 characteristics.

7 Q And in your report glossary, that's Exhibit 43,  
8 I believe, page 28, you say, you define arable land  
9 as those lands which are capable of sustained  
10 irrigation?

11 A Yes.

12 Q Are those synonymous meanings?

13 A To me they are, yes; long-term and sustained I think  
14 I would have to say they are both the same.

15 Q Isn't it true that your definition of arable land  
16 is markedly different, substantially different from  
17 that used by the Bureau of Reclamation?

18 A I don't think I could testify to that right now.

19 Q You don't know?

20 A The Bureau has an irrigable determination that  
21 is used in many instances.

22 Q Let me direct your attention to what has been marked  
23 for identification as Plaintiff's Exhibit WRIR SK-4  
24 which is a certified copy -- no, I guess it is not

25 kersich - cross - white

1 certified but it's a copy signed by an officer  
2 of WAPRS a portion from the Bureau of Reclamation  
3 manual. Would you please examine SK-4 and tell me  
4 whether or not you recognize that?

5 THE SPECIAL MASTER: What page?

6 MR. WHITE: I was just asking him to take a  
7 look at it, Your Honor.

8 THE WITNESS: Yes, I have looked at this in  
9 past.

10 Q (By Mr. White) Would you turn to page 2.1.1?

11 A 2.1.1?

12 Q Yes, sir. It ought to be the one, two, three,  
13 fourth page in that. Have I got it right?

14 THE SPECIAL MASTER: 2.1.1?

15 MR. WHITE: Yes.

16 THE WITNESS: Yes.

17 Q (By Mr. White) About a third of the way down  
18 the page there is a definition of arable land.  
19 Would you please read that?

20 A "Arable land is land which, in adequate sized  
21 units and if properly provided with the essential  
22 improvements of leveling, drainage, irrigation  
23 facilities, and the like, would have a productive  
24 capacity, under sustained irrigation, sufficient

25 kersich - cross - white

1 to: meet all production expenses, including  
2 irrigation operation and maintenance costs and a  
3 reasonable return on the farm investment to repay  
4 a reasonable amount of the cost of the project  
5 facilities; and to provide a satisfactory level of  
6 living for the farm family. The arable area comprises  
7 all lands delineated in the land classification which  
8 have sufficient potential payment capacity to warrant  
9 consideration for irrigation development."

10 Q Are you familiar with the 1980 additions to the  
11 Bureau or rather WAPRS manual?

12 A No, I don't think I am.

13 THE SPECIAL MASTER: Speaking as a good Italian  
14 I take exception to that acronym -- terrible.

15 (Laughter.

16 MR. WHITE: You know, Your Honor, I always  
17 seem to be in trouble. Now I've figured out why.

18 THE SPECIAL MASTER: You're all right. Keep  
19 using it.

20 MR. WHITE: I don't think I will. I think  
21 I'll talk to Mr. Kersich --

22 THE SPECIAL MASTER: Back we go to the Bureau.

23 MR. WHITE: Yeah.

24 THE WITNESS: Well it is awful hard for me not

25 kersich - cross - white



1 to call it the Bureau.

2 THE SPECIAL MASTER: Well, to me it's been  
3 Bureau all my life.

4 Do you want me to put this away?

5 MR. WHITE: Keep it out. We're going to work  
6 with both of them.

7 Q (By Mr. White) In Exhibit SK-5, would you turn to  
8 page 15.2.3g.

9 A G?

10 Q Uh-huh.

11 THE SPECIAL MASTER: 115.2?

12 MR. WHITE: Yes, sir, Your Honor. I'm sorry.  
13 115.2.3g, I'm sorry. I didn't invent the page  
14 numbers.

15 Q (By Mr. White) Do you find a definition of arable  
16 lands there?

17 A Yes, sir, I do.

18 Q Would you please read that definition?

19 A Okay. "Arable land is land which when farmed in  
20 adequate sized units for the prevailing climatic  
21 and economic setting and provided with the essential  
22 on-farm improvements of removing vegetation, leveling,  
23 soil reclamation, drainage, and irrigation related  
24 facilities will generate sufficient income under

25 kersich - cross - white

1 irrigation to pay all farm production expenses;  
2 provide a reasonable return of farm family's labor,  
3 management and capital; and at least pay the  
4 operation, maintenance and replacement costs of  
5 associated project irrigation and drainage facilities.  
6 The arable area comprises all land delineated in the  
7 land classification that will provide sufficient  
8 income to warrant consideration for irrigation  
9 development."

10 Q Let's stay with the last passage that you just read.

11 Isn't it true that the Bureau definition of  
12 arable lands includes lands that are farmed in  
13 adequate sized units for the prevailing climatic  
14 and economic setting?

15 A That's what it says here, yes, in the definition  
16 that they are using.

17 Q What investigations, if any, did you make with  
18 respect to adequate sized units for the prevailing  
19 climatic an economic setting?

20 A Very fine. What we did, frankly, is, as I stated  
21 before today, is try to develop project type  
22 lands. The Bureau, referring especially to the  
23 smaller units, as I recall, and I'm sure there are  
24 people here who could testify to more knowledge

25 kersich - cross - white

1 than I do, they are still limited to 160 acre units  
2 and as a consequence there is a little different  
3 situation than we're looking at, an arable base  
4 in this instance here. So it is not quite the same  
5 sense.

6 Now, climate is coming into this thing through  
7 productivity.

8 Q Let's start from the beginning. Where in 115.2.3g  
9 is the definition of arability -- where in the  
10 arability investigation that's described in there is it  
11 limited to 160 acres?

12 A In adequate sized units. What law does the Bureau  
13 operate under?

14 Q Wait, wait --

15 A They operate under specific --

16 Q Mr. Kersich, I'm asking the questions.

17 Tell me where in that Exhibit SK-5 a 160 acre  
18 limitation applies to that definition?

19 A A hundred and sixty acres is not in this -- not  
20 listed here.

21 Q That's right.

22 What investigations did you make with respect  
23 to minimum size or adequate size in terms of the units  
24 which you identified, of arable lands within each of  
25 kersich - cross - white

21-10

- 1 your study areas?
- 2 A. Are you talking about individual units?
- 3 Q. Yes.
- 4 A. As I stated before, we at no time looked at an  
5 individual unit basis here. This was to be a  
6 project type development. We had no idea of the  
7 size of the units, if any. This could be developed  
8 by the tribe, it could be developed by the United  
9 States for the tribe. The determination of economic  
10 sized units at this point in time would have been  
11 premature.
- 12 Q. What necessary improvements did you assume would need  
13 to be made to the land before it could be classified  
14 as arable?
- 15 A. Many improvements such as leveling, things of this  
16 nature, are noted in the land classifications. And  
17 those improvements will be covered in studies that  
18 are being accomplished by the agricultural engineer  
19 and the economists.
- 20 Q. But isn't it true, Mr. Kersich, that the Bureau  
21 requires those economic considerations to be dealt  
22 with in the very definition of arable land?
- 23 MR. SACHSE: I object to the use of the term  
24 "the Bureau" because we're dealing here with the  
25 kersich - cross - white

1 Bureau of Indian Affairs and the Bureau of  
2 Reclamation and that's -- unless the attorneys  
3 make that clear we'll have a very confusing  
4 record.

5 MR. WHITE: I've got no problems stipulating  
6 that when I say Bureau why I mean Bureau of  
7 Reclamation or the Water and Power Resources  
8 Services, whatever it is called.

9 THE SPECIAL MASTER: You want that as an on-going  
10 understanding? You may have a different understanding  
11 today when you're talking about the Bureau of  
12 Reclamation --

13 MR. WHITE: Today, yes, sir. I think it has  
14 been clear from the context of the questions what  
15 I mean.

16 THE SPECIAL MASTER: Good.

17 MR. WHITE: Go ahead.

18 THE WITNESS: Can I have the question read  
19 back now? After all of that I'm confused.

20 MR. WHITE: It was designed to give you a little  
21 breather so --

22 THE WITNESS: Obviously.

23 (The above question was  
24 (read back by the reporter  
25 (as follows: "Q But isn't  
(it true, Mr. Kersich, that  
(the Bureau requires those

1 (economic considerations  
2 (to be dealt with in the  
3 (very definition of arable  
4 (land?"

4 A. As they define arable land for their purposes  
5 it is true. But I might point out that their studies  
6 are very similar to this that you first have to  
7 have a land base so that you can begin to do  
8 engineering and economic studies to develop the  
9 costs and develop the returns and determine which  
10 lands are going to meet their definition of arable.

11 Q (By Mr. White) Are you saying that your definition  
12 of arable is different than the definition used  
13 by the Bureau?

14 A. I think it is obvious that it is different and I  
15 think during my testimony I have pointed out that  
16 we are talking about the arable land base that will  
17 be -- that exhibits the physical and chemical  
18 characteristics to sustain irrigation and that that  
19 base will further be studied by agricultural engineers  
20 and by an economist to determine in this instance  
21 irrigable lands.

22 Q Isn't that the same process that the Bureau goes  
23 through?

24 A. It goes through it in many ways and what the Bureau  
25 kersich - cross - white

1 does is not what we're doing here.

2 Q Okay.

3 A We have outlined the study that gives us an  
4 answer, it may or may not meet what the Bureau is  
5 doing at that particular time.

6 Q So your methodology or procedure is unique then,  
7 it is not one that is shared with the Bureau?

8 A I don't think it is unique, I think it is the  
9 normal process that one follows trying to determine  
10 whether the lands are irrigable. In this sense  
11 it is -- it follows exactly what was done in say,  
12 Arizona versus California, at least, the portion  
13 that I'm knowledgeable about. I'm not going to  
14 talk about the original litigation.

15 Q But it is not the Bureau's process --

16 A Not complete, no.

17 Q And it is not the Bureau process. The economic  
18 considerations were not included in your arability  
19 investigation --

20 THE SPECIAL MASTER: I'll almost object to  
21 the question because he's answered that almost  
22 twice now, Mr. White.

23 Q (By Mr. White) Isn't it true that the Bureau  
24 also uses a two-step analysis in determining what

25 kersich - cross - white

1 lands may be irrigable?

2 A. Exactly what do you mean by two-step, Mr. White?

3 Q. Well, SK-5, why don't you turn to page 115.1.1a.

4 THE WITNESS: Repeat that number, please.

5 MR. WHITE: 115.1.1a.

6 THE WITNESS: Okay. I have 115.1.1 but I  
7 don't have "a". I've got 1.3a.

8 THE SPECIAL MASTER: Same with me.

9 MR. WHITE: Well, maybe they have dropped  
10 something out in the copying.

11 We'll come back to that tomorrow.

12 THE SPECIAL MASTER: Oh, I beg your pardon  
13 115.1.3a? It is the next page after that.

14 THE WITNESS: Oh. I thought it was 1a.

15 MR. WHITE: I'm sorry, I misstated. It should  
16 be --

17 THE WITNESS: Okay. I have it here.

18 MR. ECHOHAWK: Wait. What are we on now?

19 MR. WHITE: We are on 1.3.1a.

20 THE WITNESS: Oh, wait a minute. I'm really  
21 off then.

22 THE SPECIAL MASTER: I have 115.1.3a and it  
23 has the commissioner's office, engineering regional  
24 office --

25 kersich - cross - white



1 MR. WHITE: No.

2 THE SPECIAL MASTER: Is it a short half page?

3 MR. WHITE: I'm referring to 115.3.1a, Your  
4 Honor, which must be 10 or 12 pages into the  
5 document.

6 THE SPECIAL MASTER: All right, let's see if  
7 I can't find it.

8 There you are. Have you got it?

9 THE WITNESS: Yes, I've got it.

10 THE SPECIAL MASTER: Okay.

11 Q (By Mr. White) Down at the bottom of the page is  
12 a (4):

13 A Yes.

14 Q Isn't the two-step process that is described there  
15 virtually identical to the process which you have  
16 described, an arable investigation first then an  
17 irrigable investigation?

18 A May I just take the time to read this, please?

19 MR. WHITE: You bet.

20 A It appears that they have.

21 MS. SLEATER: Your Honor, could I note in the  
22 record that this paragraph extends to the next page?

23 THE SPECIAL MASTER: All right. Thank you for  
24 telling us.

25 kersich - cross - white

1 Q. (By Mr. White) While you're on the next page would  
2 you -- I'm sorry. You didn't answer that question,  
3 did you?

4 THE WITNESS: Let's see. Let's go back to the  
5 question again. Would you --

6 MR. WHITE: Okay, Lamont.

7 THE SPECIAL MASTER: It is essentially a  
8 two-stage process.

9 MR. WHITE: Yeah.

10 A. That's what it says here, right.

11 Q. (By Mr. White) And while you're on 115.3.1b would  
12 you look at paragraph B, general application,  
13 particularly the first two sentences?

14 A. I'm over on the third page now. Was that --

15 Q. No, I was just wanting you to read the two sentences.  
16 If you want to read anything else go ahead and read  
17 it.

18 THE SPECIAL MASTER: No, he wanted your  
19 observations I think on the first two sentences.

20 THE WITNESS: Okay.

21 Q. (By Mr. White) Isn't it true that those two  
22 sentences provide that the most important phase  
23 of the Bureau's land classification work is the  
24 arability determination?

25 kersich - cross - white

1 A. If I understand the question correctly, yes.

2 Q. So you have in fact participated in what appears  
3 to be the Bureau process, the two-step process,  
4 but you have not used the same definition for  
5 arable lands, is that correct?

6 A. Well, going back to my experience in the Bureau  
7 and as I testified a couple of times today these  
8 questions -- or development of arable and irrigable  
9 are all inclusive. I know what it says here, but I  
10 know that you get into trouble if you talk about a  
11 land classification program when you go out and  
12 determine the physical and chemical characteristics  
13 of the soil and say you are doing an irrigable  
14 classification. So for purposes of trying to keep  
15 it clean, and trying to keep it understandable or  
16 simplify it we made a definition of arability  
17 which we put in our report which that can sustain  
18 irrigation, and it is meant that those lands which  
19 can meet the physical and chemical characteristics  
20 which -- which exhibit the physical and chemical  
21 characteristics which allow them to be irrigated.  
22 Further understanding that that land base then will  
23 be refined through more severe tests or -- not  
24 severe tests, but different tests to determine their  
25 irrigability.

kersich - cross - white

1 Q (By Mr. White) (Continued) Let's turn for a moment  
2 to the land classes to which you've assigned the  
3 arable lands that you determined.

4 Let me ask you whether or not page 8 in your  
5 report, which is Exhibit 43, I believe, correctly  
6 sets forth the definition of land classes which  
7 you used in this claim.

8 THE SPECIAL MASTER: The middle of page 8?

9 MR. WHITE: Bottom of page 8 and I think it  
10 carries over on 9 as well, Your Honor.

11 THE WITNESS: May I just take a moment to  
12 put these things back on a clip?

13 MR. WHITE: You might as well keep it  
14 together because we'll be looking at it fairly  
15 frequently for the next day or so.

16 (Brief pause.

17 THE WITNESS: Okay, I got them put together.

18 Q (By Mr. White) Are those -- Do those classifications  
19 definitions correctly set forth the definitions  
20 which you used in your study?

21 A That's correct.

22 Q You haven't always used those definitions with  
23 respect to the Wind River Indian Reservation, have  
24 you?

25 kersich - cross - white

1 A. I can't recall.

2 Q. I hand you a document which is entitled preliminary  
3 draft inventory water resources, Wind River  
4 Indian Reservation, page 2, needs and uses.

5 THE SPECIAL MASTER: By whom, Mr. White?

6 MR. WHITE: By Hobert, Kersich and McCulloch  
7 Consulting Engineers, Billings, Montana.

8 Q. (By Mr. White) And ask you if you remember that  
9 document?

10 A. Yes, I remember the document.

11 Q. Now, I hand you excerpts from that document which  
12 have been marked as SK-8, which contains the  
13 first two pages as well as page V.7. Would you  
14 please determine whether or not the page V.7,  
15 that appears in SK-8 is in fact the page V.7 that  
16 appears in the study itself?

17 A. Yes, sir. Yes, it appears to be, right.

18 Q. In Exhibit 43 you indicate that Class 3 consists  
19 of fair quality land; is that correct?

20 A. Just a moment.

21 Yes.

22 Q. Yet in Exhibit SK-8 you indicated that Class 3 lands  
23 considered marginal; isn't that correct?

24 A. Right, but we ought -- maybe I can explain one thing.

25 kersich - cross - white

1 Q You bet.

2 A These land classification information that's given  
3 here in the needs and uses was given to us directly  
4 as what BIA was doing. We had no input in them,  
5 we had no foundation for them. In other words, we  
6 didn't make any of these definitions.

7 This was supposedly what BIA was using. As  
8 a matter of fact, in this whole, in this whole  
9 study the land portion was given to us basically  
10 by BIA.

11 MR. ROGERS: Your Honor, could he clarify for  
12 the record which Exhibit he was referring to in that  
13 past answer? I don't think it was clear whether he  
14 was talking about SK-8 --

15 THE WITNESS: There isn't an Exhibit number  
16 on this.

17 MR. WHITE: Well, if you refer to SK-8, which  
18 was an excerpt from that larger volume.

19 THE WITNESS: Okay, SK-8 is the exhibit I was  
20 referring to when I made this statement.

21 Q (By Mr. White) Do you know why BIA provided a land  
22 classification for the Class 3, land classification  
23 definition for land Class 3 which provides that Class  
24 3 lands are marginal?

25 kersich - cross - white

1 A Because they may have had the Bureau doing the  
2 entire study for them at that time. And they  
3 utilized the standards and the definitions of these  
4 classes that the Bureau might have been using.

5 And when I refer to the Bureau here, I'm  
6 talking of the Reclamation, WPRS.

7 Q You're talking about the Bureau of Reclamation.

8 A Yes.

9 Q It may be easier, when we mean the Bureau of  
10 Indian Affairs, call it BIA, would that be all right?

11 A Okay.

12 Q And you feel at the time this report, which is  
13 extracted in SK-8 was published, the Bureau  
14 considered Class 3 lands to be marginal?

15 A Well, this is what it says in here.

16 Q Okay.

17 A But they also say in the last paragraph, which I  
18 think is important, they say: Under proper management,  
19 however, this class is expected to have adequate  
20 payment capacity.

21 So, what they're saying is that it contains  
22 more deficiencies than Class 1 but if you know  
23 what you're doing from the farming stand point, you  
24 can still make a return on Class 3 lands.

25 kersich - cross - white

1 Q What management did you assume for Class 3 lands?

2 MR. ECHOHAWK: Your Honor, I'd just like to  
3 clarify whether he is referring to Classification  
4 standards used by Mr. Kersich and United States  
5 Exhibit, I believe it's 37, or in the phase 2  
6 report?

7 MR. WHITE: It only appears in the phase 2  
8 report, SK-8.

9 THE WITNESS: Well, you're talking now when  
10 you refer to management --

11 THE SPECIAL MASTER: He's referring to the  
12 definition using Exhibit C-43.

13 MR. WHITE: I meant to refer to SK-8, Your  
14 Honor. I thought that was what the witness referred  
15 to when he spoke about proper management.

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kersich - cross - white



1 THE SPECIAL MASTER: Oh, all right, we're  
2 on with the 2.

3 THE WITNESS: As I said, we took this infor-  
4 mation predicated on the source. We didn't  
5 develop any of it, we didn't get involved in the  
6 development. This is what BIA gave us to put in  
7 this report, in this particular --

8 THE SPECIAL MASTER: What Mr. White is  
9 saying, and interested me too, is this has to  
10 some accurate and definite, certain definitions  
11 to justify the classification of so many thousands  
12 of acres of different areas. And this is a very  
13 important point, we've come up with a very  
14 distinct definition of Class 3 under one definition  
15 that the Reservation had a few years ago, Class 3,  
16 it now hits your acreage, that's why this is  
17 important.

18 THE WITNESS: Not quite yet. I think we have  
19 to understand what we're doing. There's a level  
20 of management that would be provided for in an  
21 economic study, and a methodology that the  
22 agricultural engineer uses on his irrigation  
23 designs. That's all involved here.

24 We pick out the lands that can physically

25 kersich-cross-white

1 and chemically sustain irrigation. He still got  
2 to meet the problems that are inherent in  
3 Class 3 lands. For example, normally on a  
4 Class 3 land in our study you would very likely  
5 have soils and topography deficiencies. So that  
6 means he's got to concern himself with leveling,  
7 he has to concern himself with the slopes that  
8 might be inherent on that piece of land, all  
9 these things. These would necessarily require  
10 more costs for development. If the soils are  
11 thin or they don't have as much water holding  
12 capacity, he has to increase the cost to manage  
13 or to provide that additional water to manage  
14 those lands. Those are all parts of the manage-  
15 ment scheme, but it's beyond here. We're telling  
16 them what there is and what he should be aware  
17 of, and for him to take care of.

18 THE SPECIAL MASTER: Right, but in the  
19 definitions under the Class 3 in which you've  
20 put many of these lands that would have the short-  
21 comings or requirements you mentioned, up until  
22 recently if there were marginal lands they would  
23 have been put there, but under your definition that  
24 you have to go to Class 4 to be marginal, and that  
25 kersich-cross-white

1 makes a difference of about 40,000 acres in  
2 this definition. And that's what I found myself  
3 faced with.

4 THE WITNESS: Well, there are certain lands  
5 in Class 3 which have only one deficiency under  
6 our standard which would have sage topography.

7 THE SPECIAL MASTER: But they're in Class 3  
8 now.

9 THE WITNESS: Yes, but under gravity, remember  
10 this is land classification. Under sprinkler  
11 those might be Class 1 or 2 if they had sufficient  
12 soil depth, if they had all the characteristics,  
13 and therefore management can be achieved by  
14 matching the system to the land. For example, if  
15 you have a, let's say a nine percent slope --  
16 let's make it eight percent slope, that's the top  
17 limit for Class 3, okay. From a gravity stand-  
18 point that's a serious deficiency because the  
19 widths of the runs.

20 THE SPECIAL MASTER: Washout.

21 THE WITNESS: That's right, sir, but from  
22 a sprinkler, if you irrigate that with sprinklers  
23 and you have the same depths of soil that you might  
24 have under Class 1, for example, 36 inches or greater

25 kersich-cross-white

1 of good free-working soil, the lands have a  
2 productive capacity the lands can meet, can be  
3 easily managed by the matching of the system to  
4 the land, and therefore the returns to the owner  
5 or manager could be much higher than a Class 3,  
6 you see it from that standpoint? I'm trying to  
7 make this very clear.

8 We set up our classes to alert the person as  
9 to the number of deficiencies that may be present.  
10 Under Class 1 he could assume they were normally  
11 almost level or within two percent slope, let's  
12 say. They didn't have any drainage problems, they  
13 didn't have any texture problems, good water  
14 holding capacity, good soil. But still someone  
15 has to design a system to fit that with the  
16 attendant costs. Someone has to determine the  
17 yields of those lands, that being done by other  
18 people.

19 So our classification system does not follow  
20 exactly what the Bureau does, and I've been trying  
21 to make that very clear here because we considered  
22 the soil and physical and chemical characteristics  
23 only, understanding that these lands would warrant  
24 further investigation and very likely the amount

25 kersich-cross-white

1 of lands that will be warranted as irrigable  
2 would be less than that which we may certify  
3 as arable.

4 THE SPECIAL MASTER: I understand. Thank  
5 you.

6 Q (By Mr. White) On Page 8 of Exhibit 43 -- excuse  
7 me, let me back up just a minute, please.

8 Isn't it true that Class 3 lands constitute  
9 just a little less than half of the arable lands  
10 which you have identified?

11 A On Page 8, did you say?

12 Q No, no.

13 THE SPECIAL MASTER: He struck that.

14 MR. WHITE: I struck that.

15 THE WITNESS: Are you talking about Table 8,  
16 sir?

17 THE SPECIAL MASTER: He's talking about totals.

18 MR. WHITE: Yes.

19 THE SPECIAL MASTER: Does Class 3 constitute  
20 about what percentage of the total if you put  
21 in Class 3 of all of your arable lands?

22 THE WITNESS: It would be something less  
23 than half. It's about 38,000 over 85,000,  
24 roughly.

25 kersich-cross-white

1 Q (By Mr. White) About 45 percent, isn't it?

2 A Yes, whatever, you put the pencil to it, what-  
3 ever the figure comes out.

4 Q Let's go to Page 8 then since we're starting from  
5 that direction. Your definition of Class 1 is  
6 that it's land which will yield higher returns  
7 with minimum production and management costs;  
8 is that correct?

9 A Yes.

10 Q What do you mean by returns?

11 A Based on the type of crops we find in that area,  
12 based on the location of the lands, those should  
13 be able to get the highest yields with the least  
14 amount of soil amendments, with the least amount  
15 of management, many times with the cheapest system  
16 you can put on it.

17 I guess you might say they're a piece of  
18 land I could farm when I'm working hard at it.  
19 They have the potential, all the things are there  
20 for being able to return maximum amount to the  
21 farmer and minimize the amount of costs involved  
22 in putting it under production and keeping it  
23 under production.

24 Q Does return mean profit?

25 kersich-cross-white

1 A Returns in this instance could mean either  
2 profit or total returns to be balanced against  
3 the costs involved with production and manage-  
4 ment costs.

5 Q With respect to your Class 1 lands, what investi-  
6 gations did you make to determine that these  
7 lands would yield high returns?

8 A We made no economic studies. That's being done  
9 now.

10 Q But that's part of your definition, isn't it?

11 A Again, this is --

12 THE SPECIAL MASTER: I'm going to say that's  
13 clever, but argumentative. He already said, he  
14 gave his definition to the word return as used  
15 in Class 1 and it's in the record now. It could  
16 be gross or it could be net, he said.

17 MR. WHITE: I'd like to follow your obser-  
18 vation up with one question, Your Honor.

19 Q (By Mr. White) Did you make any determination  
20 of either gross or net returns for Class 1 lands?

21 A Not that I can recall.

22

23

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25

END eeA

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1 Q (By Mr. White) If you made no determination  
2 as to returns, how did you determine what lands  
3 should be Class 1?

4 A As I said, Class 1 lands, the determination was  
5 made on the characteristics that we found in  
6 our field office and laboratory work, and those  
7 lands which would, from a developmental stand-  
8 point, require the least amount of effort. For  
9 example, there were level areas, had very little  
10 slope. They had good waterholding characteristics,  
11 things of this nature.

12 Q What investigations did you make with respect to  
13 production and management costs associated with  
14 Class 1 lands?

15 A No direct. Those are being done now.

16 Q Isn't it true, Mr. Kersich, that until you make  
17 a determination of returns and until you make a  
18 determination of production and management costs,  
19 there's no way to know whether or not any particular  
20 parcel of land meets your definition of Class 1  
21 lands?

22 A Not particularly. I disagree with that. That is  
23 not true, no.

24 THE SPECIAL MASTER: That's understandable.

25 kersich-cross-white



1 Q (By Mr. White) I understand that you disagree  
2 with me, but if part of your definition deals with  
3 returns and part of your definition deals with  
4 costs and those determinations of costs and  
5 returns haven't been made, how do you know it  
6 meets your definition?

7 A Some of those are within the purview of the  
8 person that's there. That's why he said this  
9 piece of land is going to require very little  
10 work to put it in irrigation, other than maybe  
11 bring the water to it. It's good and deep. I  
12 don't have any problems with it. I don't have  
13 any slant to contend with. I don't have any  
14 particular leaching or amendments that I have to  
15 apply to it. This is good land, and he's alerting  
16 the people that are doing the other parts of this  
17 design that, hey, this is land that requires  
18 very little work. Take note of it and of all of  
19 the lands that I have observed here, these are  
20 the best lands.

21 Q Is it fair to say then that while you made no  
22 economic determination, economics is very much  
23 a part of your definition?

24 A Economics is not a part of the definition in the  
25 kersich-cross-white

1 sense that we are alerting the person that is the  
2 economist that these are, from a soils standpoint,  
3 from the location of the lands and that -- these  
4 are the best lands we are finding.

5 Q In SK-5, would you please turn to Page -- let me  
6 check and make sure I have the right page -- 115.4.2B-1.

7 A 2B?

8 Q 115.4.2B-1. It looks like it's about a third of the  
9 way through the package.

10 (Off-the-record discussion.)

11 Q (By Mr. White) Take a look at paren A, Mr. Kersich.  
12 Isn't it true that the Bureau definition, Class 1  
13 arable lands, is significantly different than your  
14 definition of Class 1 arable lands?

15 A There's no question about that.

16 Q And that's because the Bureau's definition of  
17 Class 1 lands builds into it --

18 THE SPECIAL MASTER: Go ahead. I'm  
19 just anticipating the balance of your --

20 Q (By Mr. White) -- net income?

21 A At the end of their study it does. I think an  
22 important thing to point out here is that you  
23 are bringing up the final analysis of the study,  
24 and we are talking about my work at the beginning

25 kersich-cross-white

1 of the study, the land base, but we're again  
2 pointing out to the people to be doing the rest  
3 of the study that the limitations of the lands  
4 are minimal for Class 1 and that the efficiencies  
5 are the least or they least met -- they are not  
6 over what we have put down for the parameters  
7 of Class 1 lands and you can't -- you can't be  
8 comparing apples and oranges.

9 Q That's right because your definition of Class 1  
10 is different than the Bureau's; is that correct?

11 A No, sir, that's not the point. The definition of  
12 Class 1 for the study we are doing meets it. Now,  
13 later on there will be another test put to that  
14 land.

15 Q Well, we will get into that in a little more  
16 detail tomorrow, but let me make sure I understand  
17 your position. Is it your position that even the  
18 Bureau doesn't consider the economic determinations  
19 in its determination --

20 A I didn't say that, but they still do separate land  
21 out as to the potential deficiencies that they  
22 have established in a screening process.

23 Q And that screening process has nothing to do  
24 with economics?

25 kersich-cross-white

1 A No, it has a lot to do with it, but you have got  
2 to find a piece of ground to work on first before  
3 you can start applying economics and entering  
4 into it, and I guess that's what I'm having a  
5 difficult time explaining to you, and that's  
6 what I think is what we did.

7 THE SPECIAL MASTER: This is precisely  
8 all right. There is no problem with these  
9 questions and there's no problem with the answers.  
10 You carry right on.

11 Mr. White has a right to make an analysis  
12 as to your procedure and your thinking, and you  
13 have a right to stick to these things that  
14 went into your definition of this. There is  
15 nothing wrong with this.

16 THE WITNESS: Thank you.

17 THE SPECIAL MASTER: If you think you  
18 are being badgered, let me know, but I don't  
19 think you are.

20 MR. WHITE: I'm the guy being badgered,  
21 Your Honor.

22 THE SPECIAL MASTER: You are not either.

23 Q (By Mr. White) Well, let's get into some specifics  
24 for the rest of the afternoon and come back a  
25 kersich-cross-white

1 little later tomorrow and talk about the Bureau's  
2 approach again.

3 As I understand, the land you classified,  
4 Mr. Kersich, did not include those lands which  
5 were not trust lands and it did not include those  
6 lands which were either presently or historically  
7 irrigated; is that correct?

8 A I believe I said adjudicated lands using the term  
9 that they have already got a permit, and I also  
10 stated, I think, that while we did classify some  
11 of those other lands, we did inadvertently end  
12 up doing some work on them.

13 Q But your totals in terms of your arable land base,  
14 did that include any land that is not trust land?

15 A That's not trust land?

16 Q Is anything besides trust land in your arable  
17 totals?

18 A In the arable totals, that is supposed to be  
19 undeveloped trust lands.

20 Q Isn't it true that you gave an arable land  
21 classification of 2 to the SE 1/4 of the NW 1/4  
22 of Section 35? Do you want to write this down?  
23 SE 1/4 of the NW 1/4 of Section 35, 4 North, 1  
24 East, in the North Crowheart --

25 kersich-cross-white

1 THE SPECIAL MASTER: Is that on this --

2 THE WITNESS: No. The only way I could

3 tell you would be by looking at --

4 Q (By Mr. White) Let's take a look at the map and

5 show you how --

6 A And you say that was Class 2?

7 MR. ECHOHAWK: North Crowheart would

8 be the back one.

9 THE WITNESS: May I use my field notes?

10 THE SPECIAL MASTER: Oh, sure.

11 THE WITNESS: This is called Kersich's

12 Notebook here, sir.

13 4 North, 1 East; is that correct?

14 Q (By Mr. White) Well, let's take a look at --

15 THE SPECIAL MASTER: 4 North, 1 West

16 of the 6th Principal Meridian --

17 MR. WHITE: Of the Wind River Meridian.

18 Q (By Mr. White) 4 North, 1 West, Section 35.

19 A Section 35, the SE 1/4 of the SW 1/4 --

20 THE SPECIAL MASTER: No, the SE 1/4 of

21 the -- I think Mr. White that's right, SE of the

22 NW.

23 A (By Witness) SE of the NW. That would be this

24 quarter down here (indicating).

25 kersich-cross-white

1           It appears from what I have here that that  
2 was classified as -- which are my field  
3 notes -- that that was classified as 3 gravity  
4 and 2 sprinkler.

5           Now, let me look at the map.

6           THE SPECIAL MASTER: Is that what you  
7 wanted?

8           MR. WHITE: We will have a bunch more.

9           THE SPECIAL MASTER: I will quit whenever  
10 you want. Regina wanted to be off by five.

11          MS. SLEATER: No, Your Honor, I don't  
12 particularly care one way or the other.

13          THE SPECIAL MASTER: Okay. Let's go  
14 ahead and finish it up.

15          A    (By Witness) On the Exhibit 45, the SE 1/4 of the  
16 NW 1/4 appears to be classified as Class 2,  
17 sprinkler, yes.

18          Q    (By Mr. White) Would you now check in the same  
19 unit,           North Crowheart area in Section  
20 27, Range 5 North, Township 2 East -- 5 North,  
21 2 East?

22          A    Okay. Section 27. This is 30, 29, 28 -- 5 North?

23          Q    5 North, 2 East.

24          A    Okay, 5 North, 2 East.

25          kersich-cross-white

1 A 27, yes.

2 Q NW of the NW.

3 A NW of the NW.

4 THE SPECIAL MASTER: Up in the very  
5 corner.

6 Q (By Mr. White) Did you classify that?

7 A That's fee land and it shouldn't be appearing on  
8 our maps.

9 Q I direct your attention to Exhibit 45, C-45, and  
10 ask you whether or not the NW of the NW of  
11 Section 27 in 5 North, 2 East, is not, in fact,  
12 colored in as Class 2 lands?

13 A Yes, it appears to be.

14 Q But it's not on your field notes?

15 A On my notes that particular corner here shows  
16 as fee lands with the Class 2 being outside that  
17 particular area.

18 Q What are you looking at here, A1?

19 A These are some township plats that I had made up  
20 so I could do my review work, Mr. White.

21 Q And, specifically, are these aerial photographs?

22 A Yes, these are composites of the field photographs  
23 shot down to quad size scale.

24 Q And this is for 5 North, 2 East?

25 kersich-cross-white



1 A Yes, sir. See, it's 5 North, 2 East.

2 Q And how do you know which is Section 27?

3 A Well, it's the normal layout of a township, so  
4 this would be Section 30, so I just counted  
5 back 30, 29, 28, 27.

6 Q So Exhibit 45 is in error with respect to the --

7 THE SPECIAL MASTER: The Class 2 --

8 A (By Witness) It's slid down a little bit, yeah.

9 THE SPECIAL MASTER: Let's be totally  
10 candid about that. There's a mighty small portion  
11 of the 5 North, 2 East in green. Ninety-five  
12 percent of it, Mr. White, is that correct --

13 MR. WHITE: That's correct, Your Honor.  
14 I'm just trying to find out what land he classified  
15 and test these exhibits against his field notes.

16 THE SPECIAL MASTER: All right.

17 Q (By Mr. White) Would you go to the South Crowheart  
18 area, Township 1 South, 3 East?

19 A I've got the plat, sir.

20 Q Okay. Section 10.

21 A Yes, sir. I'm in Section 10.

22 Q Would you look at the NW 1/4 of the SE 1/4 and  
23 see if there's any Class 2 land in that?

24 A There's none indicated in here. Which are you  
25 kersich-cross-white

1 talking about? Sprinkler or gravity?

2 Q I'm talking about sprinkler.

3 A Okay.

4 Q South Crowheart sprinkler is --

5 THE WITNESS: Could you put that out  
6 in front? Thank you.

7 Now, we are in Township 1 South -- did you  
8 give me -- or 1 North?

9 Q (By Mr. White) No, we are in Township 1 South,  
10 3 East.

11 A Okay. That's way over to your right then. 1 South  
12 would be at the bottom of the photo.

13 Q Let me get out of your way.

14 A 1 South, 3 East.

15 Q I'm talking about the NW of the SE.

16 A Okay. Section 10 would be the third section over  
17 from that. On my map it shows a boundary line  
18 which may have indicated fee, but on that one  
19 that's not brought in. I would have to check  
20 relative to the two maps here very closely if  
21 I might. There may have been a change in mine.

22 Q Go ahead and do it because isn't it true that  
23 on Exhibit 47 the NW of the SE 1/4 is colored  
24 green Class 2?

25 kersich-cross-white

1 A Which is for sprinkler, yes.

2 Q For sprinkler?

3 A Yes.

4 Q What does your base map show?

5 A This base map shows it as 2 for sprinkler.

6 Q And that's the classification?

7 A Yes.

8 Q Now, would you turn to still in the South

9 Crowheart --

10 THE SPECIAL MASTER: Wait. I have got  
11 a problem with that if I may, gentlemen. I just  
12 thought your notes showed that was fee land?

13 A That's what I'm checking right here. I asked  
14 time to check, sir.

15 THE SPECIAL MASTER: And you just said  
16 that's Class 2 for sprinkler.

17 THE WITNESS: Yes, I pointed out that  
18 there were some areas in here where test boundaries  
19 that we have had problems with them and this is  
20 one that it appears may have been a piece of fee  
21 land that was inadvertently classified, but I  
22 have got to check that if the total came in in the  
23 final total.

24 THE SPECIAL MASTER: All right.

25 kersich-cross-white

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THE WITNESS: Let me write that down,

2

will you?

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MR. WHITE: All right.

4

(Pause.

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THE WITNESS: Okay.

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1 Q (By Mr. White) Next let's go to South Crowheart,  
2 sprinkler again, 1 South, 3 East, Section 18.

3 A Okay.

4 Q The Northeast Quarter of the Northeast Quarter,  
5 which I believe -- is it not shown as Class 1  
6 land on Exhibit C-47? Can you see Exhibit C-47  
7 from there?

8 A Yes, and it shows as Class 1 land sprinkler here  
9 on my particular photo.

10 Q Okay. Now let's go to Township 1 North, 2 East.

11 A One North, 2 East?

12 THE SPECIAL MASTER: Section?

13 THE WITNESS: One North or 2 --

14 Q (By Mr. White) One North, 2 East, Section 5, the  
15 NW quarter of the NW quarter.

16 A The NW quarter of the --

17 THE SPECIAL MASTER: Of the NW 1 quarter.

18 THE WITNESS: Okay.

19 Q (By Mr. White) And I direct your attention to  
20 Exhibit C-47 and ask you if that is not classified  
21 as Class 2 land on that exhibit?

22 A That's difficult for me to read off this photo,  
23 but it appears to be.

24 THE SPECIAL MASTER: He's asking you about  
25 kersich-cross-white

1 that photo.

2 THE WITNESS: Oh, yes.

3 THE SPECIAL MASTER: How about your field  
4 notes?

5 THE WITNESS: My field notes here show it  
6 as Class 2 sprinkler, yes.

7 Q (By Mr. White) Would you turn to Township 2  
8 North, 1 East?

9 THE WITNESS: Wait a minute.

10 Q (By Mr. White) Section 23.  
11 A Township 17

12 THE SPECIAL MASTER: Township 2 North, 1 East.

13 THE WITNESS: Okay.

14 Q (By Mr. White) Section 23.  
15 A Two North, 1 East, Section 23.

16 Q (By Mr. White) Norhtwest to the Northwest. I  
17 direct your attention to Exhibit C-47 and  
18 ask you whether or not lands in that quarter  
19 section are not classified as Class 1 arable?

20 A Okay. What section again, please?

21 Q Section 23.  
22 A Okay.

23 THE SPECIAL MASTER: Northwest quarter,  
24 Northwest quarter. He asked you a question about  
25 kersich-cross-white

- 1 what that exhibit shows.
- 2 A (By The Witness) On our map the NW one quarter  
3 of the NW one quarter of --
- 4 Q (By Mr. White) Of Section 23, 2 North, 1 East.
- 5 A Section 23 of 2 North, 1 East, on shown as Class 1,  
6 yes.
- 7 Q What is it shown on your field notes?
- 8 A I'm trying to find it. Just a minute, please.
- 9 Well, the NW 1 quarter we have 2 and a 1  
10 for sprinkler.
- 11 Q So it's 1 for sprinkler and 2 for gravity?
- 12 A Yes, a portion of it, and a portion that looks  
13 like it was 2 original and then changed to 1 here,  
14 so it looks like the entire quarter corner was  
15 supposed to be Class 1 sprinkler.
- 16 Q Let's go to Township 1 North, 5 East, please.
- 17 THE SPECIAL MASTER: Do you want to knock off?
- 18 MR. WHITE: I'm sorry.
- 19 THE SPECIAL MASTER: Do you want to knock  
20 off?
- 21 MR. WHITE: I would like to get through this.
- 22 THE SPECIAL MASTER: Well, you look pretty  
23 beat.
- 24 Q (By Mr. White) One North, 5 East. Do you have  
25 kersich-cross-white

1 that?

2 A Yes.

3 Q Section 4.

4 A Yes.

5 Q Southeast of the Northeast?

6 A Yes.

7 Q I direct your attention to Exhibit C-51 and ask

8 you whether or not that is -- ask you whether

9 this is classified as Class 3 lands?

10 A A portion of that is indicated on that exhibit

11 as Class 3 lands.

12 Q And what do your field notes show?

13 A On that particular one I can't tell right here.

14 There are some heavy black lines. I would have

15 to check that again, but I can't tell reading

16 it off here directly.

17 Q How would you check that?

18 A Probably go back to the original photo.

19 Q Do you have the original photo with you?

20 A Not here in Cheyenne, no, sir.

21 Q Please turn to Township 1 South, 3 East --

22 A Let me write that down, will you, so I can

23 remember all the questions I'm being asked?

24 And that was Section --

25 kersich-cross-white



1 Q That was Section 4 in Township 1 North, 5 East,  
2 the Southeast quarter of the Norhteast corner.

3 A What was that again, Sandy?

4 Q Township 1 North, 5 East, Section 4, Southeast  
5 to the Northeast.

6 A Southeast to the Northeast. The Southeast to  
7 the Northeast. Okay.

8 THE SPECIAL MASTER: Section 4.

9 THE WITNESS: Yes, I'm there.

10 Q (By Mr. White) Now, that was what I thought you  
11 were writing down.

12 A Oh, I got that down.

13 Q All right. Let's go to 1 South, 3 East.

14 THE SPECIAL MASTER: One South, 3 East.

15 THE WITNESS: Okay.

16 Q (By Mr. White) Section 25.

17 A Okay.

18 Q Southeast quarter of the Northeast quarter.

19 And just stay in that section, the Northeast  
20 quarter of the Southeast quarter.

21 A Okay.

22 Q And the Southeast of the Southeast, all in  
23 Section 25, 1 South, 3 East.

24 I direct your attention to what's been marked

25 kersich-cross-white

1 or admitted as U.S. Exhibit C-51 and ask you  
2 whether or not those lands which I described in  
3 Section 25 are classified as Class 2 lands?  
4 A You are looking at 1, 3 --  
5 Q One South, 3 East.  
6 A Okay. Just a second. Now, I'm looking. There  
7 are some lands indicated here as Class 2 lands  
8 sprinkler.  
9 Q Okay. That's indicated on Exhibit C-51 as well;  
10 is that correct?  
11 A That's right, yes.  
12 Q And by lands indicated here --  
13 A I was referring to my --  
14 Q Your field notes?  
15 A Right.  
16 Q Okay. Would you get out your field notes for  
17 Township 2 North, 5 East?  
18 A Okay.  
19 Q And I direct your attention to Section 26.  
20 A Okay.  
21 Q Specifically the Southwest of the Southeast.  
22 And I ask you whether or not there isn't a small  
23 portion of that quarter section that's classified  
24 as Class 2, perhaps Class 3 gravity?  
25 kersich-cross-white

1 A I can read the gravity classification here from  
2 my map. It was Class 3 gravity, yes.  
3 Q How about in the lower portion of that quarter  
4 corner section? Does that upgrade to Class 2?  
5 A I can't read the sprinkler classification on  
6 the map I have here.  
7 Q No, I mean the gravity, in the lower portion  
8 of that quarter corner. You have different  
9 classifications, don't you, for different portions  
10 of that quarter corner?  
11 A The Southeast quarter of Section 26 -- wait a  
12 minute. We have some Class 6 in the Southeast  
13 1 quarter of Section 25 or 26. Let me get that  
14 straight.  
15 Q Twenty-six we are talking about. We are talking  
16 about the Southwest of the Southeast --  
17 A And we show Class 6 there for --  
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END 23

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1 Q You've got some Class 3 then gravity, is that cor-  
2 rect there?

3 A Well, point to it, will you?

4 Q In this area. It picks up a little on Exhibit --

5 A Yeah, there may be a little fringe of 3 that comes  
6 in here, correct, uh-huh. And there is a little  
7 fringe of 2 that comes into there also on my work  
8 notes here.

9 MR. WHITE: Okay. Your Honor, with the  
10 Court's permission, I would like to stop for the  
11 day. I have three more legal descriptions. Per-  
12 haps I could just give them to Mr. Kersich and ask  
13 him to take a look at them over the evening. We  
14 may come up with some more because these were done  
15 pretty quickly.

16 1 South, 3 East, Section 18.

17 THE WITNESS: Okay.

18 MR. WHITE: NE of the NE, that's in the South  
19 Crowheart.

20 THE WITNESS: Okay.

21 MR. WHITE: And I would like you to confirm  
22 it was classified 2 for gravity.

23 2 North, 1 East.

24 THE WITNESS: Just a minute, please.

25 THE SPECIAL MASTER: 2 North, 1 East.

kersich - cross - white

1 MR. WHITE: Section 23.  
2 THE SPECIAL MASTER: 23.  
3 THE WITNESS: Uh-huh.  
4 MR. WHITE: NW of the NE.  
5 THE WITNESS: NW of the 1/4?  
6 MR. WHITE: NW, NE, right.  
7 THE WITNESS: Uh-huh.  
8 MR. WHITE: That's also in South Crowheart,  
9 and I would like you to confirm that that was  
10 classified 3 for gravity.  
11 THE SPECIAL MASTER: Okay.  
12 THE WITNESS: Okay.  
13 MR. WHITE: And finally Township 5 North, 2  
14 East, the NE of the NE.  
15 THE SPECIAL MASTER: Of what section?  
16 MR. WHITE: I'm sorry, Section 27, 5 North,  
17 2 East, Section 27, NE, NE. That's in the North  
18 Crowheart. I would like you to confirm that was  
19 classified 2 for gravity.  
20 THE SPECIAL MASTER: Okay, those three for  
21 tomorrow and we will stand in recess until 9:15  
22 tomorrow morning.  
23 MR. ECHOHAWK: Your Honor, before we dismiss,  
24 if I could, if possible, get from Mr. White what  
25 direction he's going so the witness could also

1 prepare and maybe move things along.

2 THE SPECIAL MASTER: Do you wish to discuss  
3 that off the record?

4 MR. ECHOHAWK: No, I would rather discuss it  
5 on the record, if we could.

6 MR. WHITE: Well, Your Honor, that's part of  
7 the cross-examination strategy. We'll find out  
8 when we get there. I'll ask him a lot of other  
9 questions about this as well.

10 THE SPECIAL MASTER: Okay.

11 MR. WHITE: Your Honor, I say that simply  
12 because counsel for the United States are very  
13 good at explaining the applicable law and where  
14 they ought to be going to their witnesses. I want  
15 the witness to answer the question for himself  
16 without the aid of counsel.

17 MR. ECHOHAWK: Well --

18 MS. SLEATER: Your Honor --

19 THE SPECIAL MASTER: Ladies first this time  
20 of night.

21 MS. SLEATER: I was just -- There was an  
22 issue that Mr. Merrill raised at the end of the  
23 session a week ago about some information that  
24 was requested by his people, and I've got a pre-  
25 liminary report, and since Your Honor had ordered

1 us to the extent possible to try to provide public  
2 information, where it was, I would like to give Mr.  
3 Merrill a report that was filed as a house document  
4 with the 92nd Congress, Second Session, which he  
5 seemed to be having trouble getting. I would like  
6 to give him that, and I would like to point out  
7 that other information that he requested on the  
8 Shoshone River, like net flow charts, are available  
9 through the Wyoming Engineer as the backup informa-  
10 tion for water in the Shoshone were done in connec-  
11 tion with the Wyoming State Engineer and that, as  
12 a matter of fact, for the Big Horn River such data  
13 has not been assembled and is not available.

14 MR. WHITE: Your Honor, I would like the record  
15 to point out that it's been since the middle of  
16 December that we asked for that material from the  
17 Bureau of Reclamation. It has not been forthcoming  
18 and it was not forthcoming under the guise of a  
19 determination of whether public information --  
20 that was included within the concept of public  
21 information. A month and a half later we find out  
22 that it is and that it is published, and I would  
23 expect tomorrow we'll ask for some similar orders  
24 on other matters which we have asked for at the  
25 same time and I have not yet received.

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THE SPECIAL MASTER: Okay, Mr. Sachse.

MR. SACHSE: Yes. There was another loose end left open Friday of the last week which had to do with the so-called ten-day rule. And my interpretation of this ten-day rule as it stands now is that the Tribes have the duty ten days before they present a witness to provide the State and I suppose other parties with copies of the exhibits they intend to use, but I understand this whole thing is under consideration, and I would like it clarified because I know Mr. White takes the position that under the Pre-trial Order, as it stands now, the Tribe had the duty ten days before the 26th of January to present all exhibits.

THE SPECIAL MASTER: All right.

MR. SACHSE: I want to say one other thing on it. Any party can handle his case without exhibits. You can just have the witness stand up and testify and give all the figures and write them on a blackboard and so on and so forth. Exhibits really are a convenience to other parties and to the Master. On the other hand, the other parties ought to have a fair chance to look at exhibits before they come in. So we think a ten-day rule or a five-day rule, either before the



1 witness testifies or before the session where the  
2 witness is going to testify, is fair. And I should  
3 say that the idea of a ten-day rule ten days before  
4 the beginning of the whole trial, and in a trial  
5 that's going to be spread out over months, is very  
6 unusual. Usually the idea that all exhibits are to  
7 be cleared before the trial anticipates a three or  
8 four-day or a two-week trial.

9 THE SPECIAL MASTER: That's right. Let me say --

10 MR. WHITE: Your Honor, could I say something?

11 THE SPECIAL MASTER: Yes, you may.

12 MR. WHITE: Your Honor, I would very much op-  
13 pose the suggestion of the Tribes. The Pre-trial  
14 Order which was agreed to upon by all of the parties  
15 indicated that the ten days ran prior to the time of  
16 trial.

17 THE SPECIAL MASTER: Yes. But nothing in  
18 there can be inferred that a trial is going to go  
19 five or six or seven months. All exhibits had to  
20 be on record before the first day of the first  
21 week of the first session of that trial.

22 MR. WHITE: Let me explain to the Master what  
23 that means.

24 THE SPECIAL MASTER: Yes.

25 MR. WHITE: What it means is that the Tribes

1 have the tremendous luxury of having four years to  
2 get together their exhibits and then ten days prior  
3 to the time that they intend to use them, I guess,  
4 according to Mr. Sachse's approach, they deliver  
5 them to the State. And the State has ten days to  
6 review exhibits for which they have four years to  
7 prepare.

8 Now, the State has provided several thousand  
9 exhibits in reliance of the ten-day rule as specified  
10 in the Pre-trial Order. Just as we sent our experts  
11 home when it was moved for them to be excused under  
12 Rule 615, we have also complied with the rule in the  
13 Pre-trial Order and submitted our exhibits to the  
14 Tribes and to the United States. I think it would  
15 be unfair at this time for the rule to be changed,  
16 just as I thought it was unfair at the time for  
17 the rule on the exclusion of witnesses to be changed.  
18 I think it is unfair at this time for the rule on  
19 endorsement -- or the delivery of exhibits to be  
20 changed. Wyoming is willing to live with the rule.  
21 We have lived with the rule and we -- it makes the  
22 burden put on the State virtually insurmountable  
23 when four years of exhibit preparation can be  
24 dumped in our laps ten days prior to the time of  
25 use.

1 MR. ROGERS: Your Honor, I have one thing to  
2 add to this.

3 THE SPECIAL MASTER: I would like to rule on  
4 this, if I may, and I don't think any further dis-  
5 cussion is going to make much difference. And I'm  
6 going to rule. May I proceed, ladies and gentlemen?

7 I do not perceive that any of my activities or  
8 rules herein will cast an undue burden on any of the  
9 parties. I believe that by and large we have been  
10 through the water rights hearings at Worland, the  
11 massive amounts of depositions and re-depositions  
12 taking place and the activity for production of evi-  
13 dence and of exhibits so far, and I don't believe  
14 anyone has been treated unfairly, unjustly.

15 And I notice that last week the Tribes did  
16 make an oral motion on January 30th for an amend-  
17 ment or a clarification of the ten-day rule. That  
18 was Paragraph 7 of it regarding the Pre-trial Con-  
19 ference that was dated November 10, 1980, and the  
20 United States joined in this motion, and we heard  
21 your arguments and we have heard some more today,  
22 and I want to state and find that the intent of  
23 Paragraph 7 of the November 10th Order certainly  
24 was to require parties to submit copies of their  
25 exhibits to other counsel at least ten days before

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trial in which that exhibit is to be used, or certainly before the date of that sequence of that week's trial in which that exhibit is intended to be used.

Number two, the State, the United States and the Tribes will all be expected to put on a case in chief in the present hearings.

Number three, an adequate notice will be accomplished and sufficient preparation time allowed if a party receives a copy of an exhibit within ten days of the date on which that exhibit shall be used in trial.

And I order that that November 10, 1980 Order on Pre-trial Conference have its Paragraph 7 thereof modified to read as follows: 7-Exhibits: The parties will submit copies of their exhibits to counsel for major parties at least ten days before the date of trial in which said exhibit is to be used unless otherwise agreed or persuasive reasons are shown for an inability to present the exhibits within that ten-day rule.

Okay, we'll meet again at 9:15 tomorrow morning.

(Proceedings concluded.)

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25

INDEX TO EXAMINATION

PAGE

Direct Examination	By Mr. Echohawk	1097
Voir Dire Examination	By Mr. White	1138
Direct Examination	By Mr. Echohawk	1151
Cross-Examination	By Mr. Sachse	1260
Cross-Examination	By Mr. Rogers	1261
Cross-Examination	By Mr. White	1285

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

INDEX TO EXHIBITS

IDENTIFIED

RECEIVED

U.S. Exhibit WRIR C-34	1114	1225
U.S. Exhibit WRIR C-35		1227
U.S. Exhibit WRIR C-36	1133	1149 & 1230
U.S. Exhibit WRIR C-37	1152	1242
U.S. Exhibit WRIR C-38	1159	1244
U.S. Exhibit WRIR C-39	1160	1247
U.S. Exhibit WRIR C-40	1160	1259
U.S. Exhibit WRIR C-41	1176	1259
U.S. Exhibit WRIR C-42	1177	1259
U.S. Exhibit WRIR C-43	1180	1259
U.S. Exhibit WRIR C-44	1185	1259
U.S. Exhibit WRIR C-45	1193	1259
U.S. Exhibit WRIR C-46	1194	1259
U.S. Exhibit WRIR C-47	1195	1259
U.S. Exhibit C-48, C-49, C-50	1196	1259
U.S. Exhibit C-51, C-52	1197	1259
U.S. Exhibit C-53, C-54	1198	1259


REPORTERS' CERTIFICATE


1  
2 State of Wyoming )  
3 County of Laramie ) : SS


4 We, Lamont Miller, Merissa Racine and Viola J.  
5 Lundberg, Registered Professional Reporters and  
6 Notary Publics, hereby certify that the facts as  
7 stated in the caption hereof are true; that we did  
8 at the time, date and place, as set forth, report  
9 the proceedings had before the Honorable Teno Roncalio,  
10 Special Master, in stenotype; that the foregoing pages,  
11 numbered 1094-1349, inclusive, constitute a true, cor-  
12 rect and complete transcript of our stenographic notes  
13 as reduced to typewritten form under our direction.

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

17 Dated this 9th day of February, 1981.

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