2-10-1978

Transcript of proceedings Volume IV, Pages 637-864

Wayne C. Lenhart
Court Reporter

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE EASTERN DISTRICT OF WASHINGTON

COLVILLE CONFEDERATED TRIBES, Plaintiff,	)	
v.	)	No. 3421
BOYD WALTON, JR., et ux., et al., STATE OF WASHINGTON, Interv. Deft., Defendants	)	
Combined with		
UNITED STATES OF AMERICA, Plaintiff,	)	
v.	)	No. 3831
WILLIAM BOYD WALTON, et al., Defendants.	)	

TRANSCRIPT OF PROCEEDINGS

VOLUME IV

Pages 637-864, inc.

February 10, 1978

Spokane Calendar February 7, 1978 Neill, J.

Morning Session

February 10, 1978 9:00 a.m.

THE COURT: Good morning.

COUNSEL IN UNISON: Good morning, Your Honor.

MR. PRICE: Your Honor, before we commence, I would like to make a motion.

THE COURT: Step forward.

MR. PRICE: I hope the Court and Mr. Veeder will extend to me the same courtesy that we tried to extend to him yesterday. This is not in a retort to Mr. Veeder's comments at the beginning of Court yesterday, but rather what I think a very pertinent and legitimate point for this Court to consider while all parties are still here before we depart.

The lengthy testimony and the dearth of exhibits yesterday that we got into, pinpointed and focused for me a problem that we are facing in the Court and I think brings it sharply into focus that we have been verging on and are now exceeding this Court's jurisdiction.

On behalf of the Waltons I filed a motion some time ago which is before this Court seeking a dismissal of this action. This action is two-pronged -- this motion is two-pronged, Your Honor, and it is, as you know, based on United States v. Powers and Alexander v.

United States. In Powers the highest court of this land in affirming the 9th Circuit, determined that after a lengthy, protracted litigation that the case was to be dismissed because the necessary parties were not before that court -- one of the reasons.

And I think, secondly, that case, as well as the Alexander case and other cases have dismissed similar types of actions based on the fact that until the Secretary of Interior acts, the court cannot act to try and allocate or adjudicate water which has been dictated by congressional policy and is a policy matter, not a judicial matter.

It seems to me that we are heading in the very same direction and we are heading for the same disastrous result, to go to a lot of work and have the Court tell us exactly what it told us in Powers, because I believe this case is on all fours, as the Powers case.

The late Honorable Judge Powell, in one of the early pre-trial confrences, at the initiation of this litigation, commented that he was concerned that the necessary parties would have to be before this Court before he would try it, and, specifically, he made reference to the allottees and raised the question, who is representing the allottees.

I ask this Court this morning, who is representing the allottees? I expect Mr. Sweeney to respond to that, but I contend that there is no representation of the allottees, Your Honor. The Alexander case, the Powers case, and the other cases that we have cited have stated quite boldly and quite forcefully that the Tribe may not litigate and may not take a water right in derogation of an allottee's water right, nor may an allottee take a water right in derogation of a Tribal water right, and yet what we have done, what we are seeing happening in this case, is the Tribe putting together a litigation package -- I use those terms carefully -- by leasing allotments. Some of the leases -- that is going to go into evidence -- ran out in 1977, some have been continued, and irrespective of whether they are continued for five years or ten years is not the point. The point is, can this Court legitimately consider adjudicating a water right to a Tribe that removes water from one allotment, attempts to deliver it to another allotment, when that is totally in derogation of the appurtenance of that water right to that allotment. What happens at the end of that lease period or if the allottees terminate the lease because of the very nature of taking that water? These leases give no right to the lessee to

deliver water away from those allotments. They are pasture and farming leases, not delivery of water leases.

There are a lot of people in 892 and 901 and 903 who have interest and will have interest in this case in the future. If this Court is to try and adjudicate a water right to the Tribe now, it will have no bearing; it will be a futile action, because it cannot be in derogation of those allottees water interests, and the Supreme Court has indicated that. There is no dispute about that.

The other part of my argument is the Section 7, the powers of the Secretary of Interior to first provide rules and regulations for the equal distribution of water on this reservation.

If this Court is to consider a Tribal Water Code that, in effect, gives the Tribe the right to determine what water will go where and to whom, that is directly in derogation of the allottees' interest which the highest court in this land has said cannot be done.

Is it not an act in futility to sit here and concern ourselves about a water code that has not been approved by the Secretary of Interior for that very reason, or that our courts have said can't be considered until the Secretary of Interior acts.

I am suggesting, Your Honor, that this litigation package has taken us far beyond the scope of what this Court can do, of what the Tribe can do. The Tribe can think up all sorts of purposes for water that can dry up not only No Name Creek basin, but Omak Creek and any other creek they want to put their mind to, but it isn't the Tribe's right that we are litigating. We are litigating water appurtenant to lands, be they Tribal property, be they allotments, and whether allotments are owned by Indians in trust or successors in fee.

I think we have been stampeded, Your Honor, into a situation, artificially created crisis situation, that is pushing this Court into deciding questions that cannot be decided without the necessary parties, and that cannot be decided until the Secretary of Interior acts.

I suggest that the Tribe has chosen to litigate with the United States government and they have chosen Waltons -- and I don't say this in an insulting manner-- as the whipping boy. They had to choose somebody, Your Honor. And I cite in my brief, Your Honor, at page 30, Lone Wolf v. Hitchcock, where the Court specifically -- and I would like to quote that very briefly:

"But in none of these cases was there involved a controversy between the Indians

and the Government respecting the power of Congress to administer the property of the Indians.

"The questions considered and the cases referred to which either directly or indirectly have relation to the nature of the property rights of the Indians concern the character and extent of such rights as respect the states or individuals.

"Be that as it may, the propriety or justice of their (United States government) action to the Indians with respect to their lands is a question of governmental policy and is not a matter open to discussion in a controversy between third parties neither of whom derives title from the Indians."

Lone Wolf v. Hitchcock further goes on to state that the Tribe, individual Indian Tribe and the United States government may not litigate their problems through a third party, to wit, Wolf.

I suggest, Your Honor, that this would be a good time to confront this question before we continue what I consider to be a backslide into a morass of material that is not going to assist this Court.

Thank you for your consideration.

THE COURT: Well, Counsel, before I ask for responses, assuming that everything in the position you take is all true, and I think there may be some merit to it, I'm not sure that that eliminates all of the issues that are inherent in these consolidated cases.

Basically, it seems to me the problem that has engendered these two cases is the problem of whether or not water can be allocated by the State of Washington, which water is generated from within their reservation, or whether somebody, whether it is the Tribe or the Secretary of the Interior which is a separate problem, but can the Tribe's potential right to water be deprived by the State giving a water right to a non-Indian on previously allotted ground. It seems to me, basically, that is what this case is about.

MR. PRICE: Your Honor, we get back to the same question though, the Tribe's defining what are the Tribe's rights. Does the Tribe have the right to divert water and take it from one allotment and use it for purposes that are not appurtenant to their land?

THE COURT: Maybe I don't have to decide that issue, but decide the basic issue of who has the right to allocate what might be Indian water.

MR. PRICE: I guess my only response to that, Your Honor, is that I consider that one of the very least pertinent questions in that the Waltons are asserting their water right as a successor to an Indian allottee. We will argue because of the State water right also, but we are not depending on that as the main thrust of our argument.

The State doesn't want to be in this action. They are willing to get out, and I don't think this case really revolves around the fact that the State may or may not issue any water permits. That has nothing to do with what the Tribe is trying to accomplish in litigating, through Walton, against the United States government. They are trying to litigate their right to have the authority to adjudicate water and to allocate water on that reservation. If they want to do that, let them bring a mandamus against the Secretary of Interior and force him to bring this -- to eliminate this void. That's where it should be; that's how it should be brought, not through an intermediate third party. The State water permits just don't have any relevance in that regard. Once he acts to fill that void and if the Tribe is satisfied, they can seek to enforce that, and if they are not satisfied, they can seek to have it overturned or seek some compensation

as a result of it.

THE COURT: Well, Counsel, how do you explain away, then, the 9th Circuit Ahtanum case which I don't think has been overruled, at least I'm not aware of any overruling of it.

MR. VEEDER: No.

MR. PRICE: I don't think it has been overruled either, Your Honor, and as third class defendants in that case being the same as the Waltons, being successors to allottees on the reservation, it's my understanding they were allowed to participate with the Indians in water that was allocated to the Indians in that adjudication.

THE COURT: But one of the issues in that case, and I think it's still the law, I thought it was an issue in this case, is that they said you first have to determine there is so-called surplus or excess waters. After you have taken care of the treaty rights of the Tribes, then there is a right to allocate the surplus water, and as I recall, in that case they let the State do it. I don't remember that aspect of it too well.

MR. PRICE: But, Your Honor, what I'm suggesting is that the Tribe has put together a litigation package that creates an artificial water

shortage that doesn't even get us to the point of having to worry about whether there are surplus waters. We won't ever know that because the Tribe is using waters beyond the scope which they themselves can use. It is a potential derogation of the individual allottee's interest, and if you can't get past those two points, you never get to the question of whether there are surplus waters or not.

THE COURT: Well, I must have missed the point or the first part of that last statement. You say they are doing something in excess of their rights?

MR. PRICE: Yes, Your Honor. I'm contending that here we are being presented with evidence that the Tribe is pumping water from their own land. They are pumping water off of Allotment 892 which is not Tribal property, which is an individual ownership, an individual Indian ownership. There is nothing that gives the Tribe the right to exceed their own right to do what they can with the water that is appurtenant to their own tract by combining it with other tracts.

THE COURT: Well, but isn't that the allottee's right? I don't hear an allottee in here objecting to the Tribe's use of water on his land.

MR. PRICE: But that is the point. I think that's the point I'm trying to make, Your Honor. This

is pursuant to a lease arrangement, some of which run out this year, some of which run out next year, some of which run out in five years. You would be attempting to adjudicate the right of the Tribe to use an allottee's water which that allottee in five years when the lease runs out, says we don't want -- we don't -- Allotment 892, if you adjudicate the Tribe the right to use that water and run it down to 901, subjugates Allotment 892 to the uses of 901.

Now, Powers says you can't derogate one allottee's water rights in favor of another.

THE COURT: Well, assuming that's true, how do you have standing to raise the question whether that allottee -- He may be perfectly happy with this arrangement.

MR. PRICE: I think I have standing to raise that question, Your Honor, because it is an attempt to artificially create a situation that gives the Tribe greater rights than they would have individually and that they have as an individual allottee. I don't think they can combine these rights that are appurtenant to the land and start trucking the water to various other allotments or properties around the reservation. I think by doing this they have put themselves in a position of creating -- being able to argue more of a

water right than the courts say that they are entitled to as an appurtenance for irrigable acres appurtenant to the land.

THE COURT: Well, that is an interesting point. Does anybody want to respond to it?

MR. PRICE: Thank you, Your Honor.

MR. VEEDER: Your Honor, of course, he has raised a point that we all knew was here. May I just briefly respond to it.

I tried Ahtanum. I tried, I think, 134 days of trial of the thing, so I'm quite familiar with the situation, and the situation is what Your Honor raised. There certainly is standing in the court. The day may come in Ahtanum when they allow what we call a lawsuit inter sese to see what each man has out of a block of water, but at the time, the presiding judge when this came forward and we have what we call the third party defendants and I was in the Department of Justice in those years, and we never got to the issue of the inter sese rights because the Court said -- the issue was raised -- and we simply said all we want now is to determine there is a block of water and if these people are unhappy as to the division of water, then we would have a trial inter sese. In other words, it is just exactly like an estate bringing a lawsuit against

somebody who owed a debt. Now, how much each of the heirs would receive is a matter to be determined independent of the right and the standing in the court.

I would like to brief this matter for Your Honor. I would like to get at it and have the indispensable part in that issue resolved, but I do submit, Your Honor, that because time is short we would like to proceed with the facts in this matter and my familiarity with Ahtanum is as good as anyone's because we went all the way through it and that issue was there. That issue has never come up, though, in the twenty years since that decree was entered, and I don't see how it can come up here in regard to the length of the period of the leases here, Your Honor. I believe 901 and 903 are under ten-year leases and I assume that is going to take place in the others, but I would like to progress with the lawsuit unless Mr. Sweeney has got something to say.

MR. SWEENEY: Mr. Burchette will respond for the Government, Your Honor.

THE COURT: All right. Mr. Burchette.

MR. BURCHETTE: Your Honor, if I understand Mr. Price correctly, he saying that the allottees are indispensable parties to this action. The United States being involved in this lawsuit, we are representing the

Tribe and its members including the allottees. We have that responsibility. We are the trustee, and I think the Supreme Court, although I hate to cite this case, United States v. Aiken, I think acknowledged the fact that we had a trust responsibility to the Indians in their water rights.

So, what I'm saying is that the Secretary of the Interior under his powers of 25 U.S.C. 381 we have the responsibility to allocate these waters. We are involved in this lawsuit, therefore we are representing the allottees. They are being represented by the United States today. We would contend that there is no indispensability question.

THE COURT: Counsel, as long as you are here, lurking in the background of this whole case is the problem of why the Secretary has not exercised what apparently is a statutory duty to do something about the water rights on the reservation. So far, the testimony in this case indicates the Tribe said, somebody has got to fill this void, so we adopt our own water code and they had to go ahead because somebody had to do something. What is really happening there, if you know?

MR. BURCHETTE: Well, that's a good question, Your Honor.

If you're asking me whether or not the United States would say that the Tribe does not have the sovereign authority to promulgate its own water code, I think the Secretary of the Interior would say that, based on the organic instruments of the Colville Tribe, that the Secretary could not preclude the Tribe from issuing its own water rights code. However, as a result of his authority under 25 U.S.C. 381 and as a result of his trust responsibility, he certainly does have an interest in the water rights on the reservation, and, as you probably know, the Secretary has at one time promulgated some regulations which have been commented on, which have since been withdrawn, but that is not to say that he is not continuing to work to draft regulations which would manage and control the waters on particular Indian reservations in the West.

So, what I'm saying is that the Secretary would say that if he has not promulgated the regulations, he in essence, at that point would not be pre-empting the Tribe from passing a code or regulation, but in the event the Secretary were to promulgate his regulations, I think the very nature of that promulgation would be to pre-empt the field to whatever the Secretary decided to regulate, and I think Congress has certainly spoken

to that in the passage of 25 U.S.C. 381. Now, that's not the Government's comment, per se, on the Colville Code, Your Honor. That's just, I think, a general statement as to where the Secretary of the Interior is today with respect to his powers under 25 U.S.C. 381.

MR. VEEDER: One last thought, Your Honor, on the parties. I understand the Yakima -- well, I know the Yakimas have brought their lawsuit over there and I think it is before Your Honor, and, once again, I represented the United States when that decree was entered in the Yakima River, and I was thinking while Mr. Price was speaking that if Your Honor was to call in every single individual in that lawsuit and say Sunnyside, and Wapato, and Kittitas, and --

THE COURT: Counsel, I think that is happening. I'm informed by the Clerk's office that the Yakima Tribe has asked that 5,000 summons be issued.

MR. VEEDER: Well, I'm not just sure what it is going to take, Your Honor, but it's quite a thought when you -- I have been in those cases. I have been in similar cases in Colorado where somebody would get up and say this is an indispensable party, and we say it's a little difficult. We have got the City and County of Denver; we've got Colorado Springs; we've got

the entire western slope of Colorado. Do you really mean you want everybody in there? I do think there can be representation.

Well, I'll get off this subject so we may proceed.

THE COURT: Well, you raise some interesting and maybe some valid points, but I can't resolve it today and we just as well get all of the evidence we can in the case today, because we know there is going to be a recess, although I think that during that period of recess of the trial I'm going to ask counsel to submit any further briefs they want on the parties in question, and I will rule on it before we come back for the rest of the trial.

MR. VEEDER: Thank you.

THE COURT: He has raised some interesting questions. Mr. Burchette?

MR. BURCHETTE: Excuse me, go ahead.

MR. MACK: Your Honor, I was wondering if the State could just be heard.

THE COURT: Yes.

MR. MACK: Realizing you are not going to rule on it.

THE COURT: Go ahead. Anything you can do to educate me might be helpful.

MR. MACK: Well, I'm not sure. You can judge

that after I finish, I suppose.

If I understand the motion by Mr. Price, at least part of it I would say that the State is in agreement with. That has to do with the rights of all individuals and entities which may be affected by an order and decree requested from this Court by various of the parties.

I think Your Honor is totally aware and I won't go into any great detail here of the State's concern that what is asked for in this case by some of the parties is a determination by this Court that would affect the rights to the use of water on the Colville reservation and not only of the types of parties represented here today, but of other types of parties, individuals, who are not represented here today. They may have heard of this case by newspaper but they certainly haven't been notified of it in any legal sense. The concern comes because we are dealing partly with both surface and ground waters which is an unusual matter.

The State has not contested in this case, although it could, that the question of the reserved rights goes only to the surface waters. We have not questioned that it includes groundwaters. And once groundwaters are included, of course, the question of the area that the Court should look at with regard to the evidence

presented is a crucial one. We have watershed boundaries and some parties are asking that determination be made as to the extent of reserved rights on the reservation, for the entire reservation, not just for this area, and it has always been the State's position that if the court considers all of the claims made in this and the claims for relief in this action, that the legitimate thing to do may be just what the Yakimas have, in fact, done which is to initiate in effect with Your Honor a general water rights adjudication.

Your Honor is absolutely correct that the Yakima Tribe intends to serve 5,000 people, whether they have done it yet or not is another question. And I remind Your Honor in respect to this of the State's motion to strike an issue, I believe number twelve, and realize it has not been ruled on yet and may not be ruled on until the end of the trial, but this relates, I think, to what Mr. Price has said.

I would just finish with this: Mr. Price's motion raises the question of whether all of the possible claimants to existing rights in at least the No Name Creek basin or watershed or valley or whatever you want to call it, are fully represented here. In the State's framework of law, the one we look from -- I

guess we have blinders on to that extent -- the question is whether -- not entirely-- the question whether the State had the authority to issue water rights depends not simply on -- Let me put it this way.

The State always issues its water rights pursuant to existing rights, and the State has always acknowledged the existence of reserved rights under the Winters doctrine on the reservation, at least it has through the litigation here. The State has never taken the position that it issues water rights on the reservation contrary to that or that it has issued its right to Mr. Walton contrary to that, and so the question can become, in dry years, how you allocate the rights that would normally exist in normal years.

I just bring that up because I think it has some relevance to the question of whether all of the parties are represented, but, generally speaking, the State would join in Mr. Price's motion.

THE COURT: Mr. Burchette, do you have a further comment?

MR. BURCHETTE: I just wanted to be clear, Your Honor, with respect to briefing this issue, we are only to be briefing the indispensable party issue as far as the allottees are concerned in No Name Creek, 901, 903 and 892, those allotments; is that what you

would request that we do?

THE COURT: Well, that was what I had in mind. Now, maybe I am overlooking something more basic than that.

MR. BURCHETTE: Well, the reason I ask the question, and I don't want to get into something that we don't have to or necessarily want to brief, but we have talked about a lot of different things and a lot of different issues, and Mr. Price in discussing his initial motion has talked about a lot of different things, and I just wanted to be clear in my own mind as to really what you wanted us to focus in on when we prepare a brief for you.

THE COURT: Well, that's what came through to me. Now, Mr. Price, you may think there is something beyond that.

MR. PRICE: Yes, Your Honor, I intended it to be a two-pronged argument, one on the indispensable parties, and, secondly, whether this Court can act without the Secretary of Interior acting which I think is very pertinent.

I think Mr. Burchette was not totally correct in respect to the Secretary of Interior's stance. The Secretary did attempt to promulgate rules and not only withdrew them, but then specifically issued a directive

that the Tribes were not to adopt a water code. That goes beyond inaction. That is affirmative action.

How is this Court going to resolve trying to adjudicate water on that reservation when Congress has delegated that responsibility to the Secretary of the Interior and the Secretary of the Interior has specifically and affirmatively acted in that regard?

I think, again, it is up to the Tribe to bring an action of mandamus against the Secretary of the Interior to get on with it, and until he does we are exercising -- we are committing an exercise in futility because what can the appellate court say except what they have already said in Powers and in U. S. v. Alexander, that until he acts, we can't usurp his authority. That is, I think, a pertinent point for this Court to consider.

Now, I'm not attempting to argue that the Court is lessened because it doesn't have jurisdiction in any respect. I'm just stating that we're getting into a Congressional policy-making area where the Supreme Court has said that the court should stay away from it until the Congress carries forth its policy.

THE COURT: Well, I think my previous comment was intended to point out at least that it seems to me there are issues in this case which this Court can

decide without having to get to that problem; I don't know, but --

MR. PRICE: I understand Your Honor's position and I will attempt to focus in more directly on that to try and see if I can't convince Your Honor the other way.

THE COURT: Well, in order to dispose of this so we can get on, since you have made the motion, you are going to have the right to make the opening brief on the two points then.

MR. PRICE: All right.

THE COURT: To which, then, the other parties can respond. We ought to set a time -- Well, we'll do that when we find out whether we are going to recess this case. So, we'll come back to that.

MR. PRICE: Thank you, Your Honor.

THE COURT: Anybody else before we leave this matter?

Let's proceed, then, with the taking of testimony.

MR. VEEDER: Thank you, Your Honor.

THOMAS M. WATSON, called as a witness on behalf of Colville Confederated Tribes, having been previously sworn on oath, was questioned and testified as follows:

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Mr. Watson, would you step to the easel there and turn to Colville Tribes' Exhibit 32-5 and state into the record what is represented by that exhibit, and the source of the data appearing on it, and whether that was prepared by you.

A Colville Exhibit No. 32-5 is a summary of the strip charts taken from the recorders on No Name Creek. Now, the top strip chart begins on January 12, 1977, and extends through November 8, 1977, here.

The point of measurement on No Name Creek is shown on Colville Exhibit No. 10 as measuring device number 9 which is No Name Creek above the Walton north boundary.

This is simply a reproduction, a composite reproduction of all the strip charts collected by the U. S. Geological Survey at that location.

Q What is disclosed in regard to discharge in the stream, or --

MR. SWEENEY: Just a moment. This hasn't been admitted yet.

THE COURT: No, it has not.

MR. SWEENEY: I don't think that is a proper question at this point.

Q (By Mr. Veeder) Well, did you prepare this, Mr. Watson? Did you prepare this map yourself?
A Yes, I did.
Q I mean this chart.
A Yes.
Q And what is the source of the data you utilized?
A The source of the data is the strip charts collected by the U. S. Geological Survey.
Q You made no interpretation of them; you just went ahead and set them out as they appeared, the strip charts; is that right?
A Yes, that is correct.
Q Based upon the data available to you is this 32-5 accurate?
A Yes, sir, it is. I might point out that I have listed the days of the month, the calendar days, on this exhibit which do not appear on the U. S. G. S. strip charts.
Q Why wouldn't they appear?
A The U. S. G. S. strip chart does show the divisions of each of the days, but it does not call out the individual calendar days separately.

MR. VEEDER: We offer 32-5.

MR. SWEENEY: Could I examine the exhibit?

THE COURT: You may.

MR. SWEENEY: If I may inquire of Mr. Watson.

THE COURT: Voir dire.

VOIR DIRE EXAMINATION

BY MR. SWEENEY:

Q Mr. Watson, as I understood from your identification of Exhibit 32-5, it shows the data from the strip recorders at a particular point on No Name Creek.

A Yes, sir.

Q And that particular point is where?

A No Name Creek above the Walton north boundary.

Q What type -- was it flow measured at that -- was the flow of the creek measured at that point?

A Yes, sir.

Q And does that appear on this exhibit?

A This is a representation of the water level as measured in the measurement device at that location.

Q And what type of -- was there a flume there or anything to measure the flow of the water?

A A Parshall flume, a 9" Parshall flume.

Q I see, and did you calculate the rate of flow based on the Parshall flume as it would appear on the exhibit?

A The rate of flow does not appear on the exhibit.

Q It does not. I notice on the exhibit some notations about No Name Creek, granite lip flume.

A Yes, sir.

Q So, there is more on there than just the point above -- there is more data on there than just the data from the measuring point just to the north of the Walton property.

A Yes, sir, that is correct.

Q Is there any -- well, would you point out where those other pieces of data are located on the proposed exhibit that go beyond what the measuring point on -- just to the north of Walton's property.

MR. VEEDER: Explain the source of the granite lip data that is on there and proceed to outline everything that is on there, Mr. Watson.

MR. SWEENEY: Well, that is not necessarily what I wanted to find out.

Q If there is actually more data appearing on this exhibit than what you said was taken from the north of Walton's property, are there other data --

A Yes, sir.

Q -- on this exhibit.

Well, what is that other data? Just point out where it appears.

A The strip chart that I began introducing here is No Name Creek above the Walton north boundary. The second strip chart down on the exhibit is the strip chart on No Name Creek below Mr. Walton's surface diversion.

Now, that is referred to on Colville Exhibit No. 10 as measurement point number 15 in the north half of Allotment 2371

Q What type of measurement device was there?

A This also is a 9" Parshall flume.

Q Now, is there other data appearing on this exhibit?

A Yes, sir. I made an error in the last statement, Mr. Sweeney. The second strip chart down is a representation of the strip charts as collected at the 9" Parshall flume on Mr. Walton's diversion.

Q I see.

A Excuse me. And that is referenced on Colville Exhibit 10 as measurement device number 12.

Q Well, to speed this up, as I understand it, this represents measurements taken at various points on No Name Creek.

A Yes.

Q Over and beyond the measurement just to the north of Walton's property.

A Yes, sir, that was intended.

Q Okay. It goes all the way down to the granite lip?

A Yes, sir.

Q Are there any calculations on the exhibit that you may have made?

A No, there are not.

MR. SWEENEY: I have no further questions.

THE COURT: State?

MR. MACK: Your Honor, may I approach the exhibit?

THE COURT: You may.

VOIR DIRE EXAMINATION

BY MR. MACK:

Q Mr. Watson, are the notations on this exhibit yours or are those made by the U. S. G. S.?

A All the notations on the exhibit are the notations of the U. S. G. S. with the exception of the marking of the calendar dates.

Q Those are just the numbers that appear there? The numbers are the ones you put that show the calendar days; is that correct?

A Yes, sir, that is correct.

Q Were there any other strip charts kept by the U.S.G.S. that don't appear on here?

A Not to my knowledge.

Q Now, you did say that the rate of flow does not appear. Does this show the depth of flow or quantity of flow or both?

A This shows the water level in the measuring device which in all cases is a Parshall flume.

Q So that would be the depth.

A Yes, sir.

Q Stream depth.

THE COURT: Mr. Price.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q Mr. Watson, does this incorporate all of the measuring points along the stream or just selected points along the stream?

A This incorporates all measuring points on the stream with strip chart recorders.

Q And I didn't quite follow the business about the days. The U. S. G. S. didn't break it down into days, but you did.

A The U. S. G. S. at the beginning of each one of its strip charts -- Now, let me explain that.

The U. S. G. S. installed the strip chart on No Name Creek at Mr. Walton's north boundary, installed the strip chart as shown in their notes, on January 12, 1977. They changed the strip chart at that location on February 2, 1977. So, the U. S. G. S. has written on the strip chart the day that they put it on and the day they took it off, and I have simply used the time scale that appears on the strip chart and just marked the individual days for easy reference.

Q There is no guesswork or interpolation by you in

arriving at those dates.

A No, sir. I know the starting point and the end point.

Q And what those purport to measure is strictly just the level of the water at a particular point and not the flow of the water, not the quantity of the water.

A That is correct.

Q Is it possible that then these measurements might measure -- if the stream were not flowing, would still measure a level even though the stream were not flowing?

A The strip charts do indicate level at certain times when the stream is not flowing and that is always well below the point where flow is indicated by the measuring device.

Q Thank you.

MR. PRICE: No further questions.

MR. VEEDER: We renew the offer, Your Honor.

THE COURT: Tribe's Exhibit 32-5 is admitted.

(Colville Exhibit 32-5 admitted)

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Would you proceed, using that Exhibit 32-5 that has now been admitted, and show where the flow was on and when it was off and the areas that were involved, Mr. Watson.

A Yes, sir. In particular, the upper strip chart which is No Name Creek above the Walton north boundary is indicated on Colville Exhibit No. 10 as measurement point number 9, shows that the Paschal Sherman irrigation well discontinued pumping on May 15 and 16 and the strip chart shows this very precisely. Prior to this period of time, the water level in the flume is shown very distinctly at a very high level, and on this particular chart, the water level in the flume is running at approximately .7 feet as measured by --

Q Right.

A And on May 15 and 16 there is a very sharp decline in the strip chart.

Q Yes.

A Which represents the period at which time the Paschal Sherman irrigation well discontinued pumping.

Q Yes.

A Now, to determine what was taking place downstream, it is necessary to take a look at those same days on the other strip charts.

Q Showing the areas in which the pumps have been shut off for whatever period; right?

A Yes, I'm referring to the dates of May 15 and 16. And from the strip charts it is possible to see that for about eight hours on the end of the 15th and for the

first eight hours on the beginning of the day of the 16th of May the water was discontinued. There was no flow at the measurement point, Walton's north boundary.

Now, going down to the Walton surface diversion on those same dates, the strip chart shows that on the 15th and 16th that the Walton diversion was not operating. The water level at that point of diversion, which is number 12 on Colville Exhibit No. 10, shows that the water had dropped down completely and that there was no diversion. You can see the high water level being recorded in the flume prior to that time, and then on the 15th and 16th there was no flow.

Now, continuing down further to measurement point 15 on Colville Exhibit No. 10, it becomes apparent -- the effect of the discontinuation of the Paschal Sherman irrigation well becomes apparent at that point. And the flow was at a fairly high level, running about .6 feet on the strip chart prior to the 15th and 16th and then there was a very precipitous decline in the water level in that flume on the 15th and 16th, and the bottom of the decline is marked on Colville Exhibit 32-5 at a depth of about .14 feet.

Now, there were additional times during the irrigation season that this phenomena occurred, and in particular on the 8th and 9th of June, on the 12th and

13th of June, and on the 1st and 2nd of July, 1977. The same kind of phenomena was observed and the effect of the Walton surface diversion is shown in all cases, and the effect on No Name Creek below Mr. Walton's surface diversion is also shown.

On the 8th and 9th the water level in the flume on No Name Creek below Mr. Walton's surface diversion which is 15 on Colville Exhibit No. 10, on the 8th and 9th the water level again dropped down to approximately .16 feet.

On the 12th and 13 of June the water level in the flume dropped down to a reading of about .16 feet, and again on July 1 and 2 the water level dropped down at that point to approximately .10.

Q Now, would you go back to the exhibit where Mr. MacNish's calculations appear, Mr. Watson.

MR. SWEENEY: Excuse me, Counsel. I think that's Mr. Cline.

MR. VEEDER: I think that you will find that Mr. MacNish made the measurements as shown on page 9 in which Mr. Cline quotes Mr. MacNish, saying that the flow was .15. You look at page 9, the MacNish report was not incorporated, and I think it might be a good idea to have it in here, Your Honor. I think that just shows the incomplete nature of United States Exhibit No. 1.

THE COURT: You have asked the witness to refer to some particular exhibit. What exhibit is it?

MR. VEEDER: The exhibit, Mr. Watson, where you first showed the period when the flow didn't go. I think it's --.

THE WITNESS: It's Colville Exhibit 17-1

MR. VEEDER: 17-1.

THE COURT: Turn to 17-1

Q (By Mr. Veeder) Now, turning to 17-1, based on your reference to 32-5, will you point out where those occurred, those breaks occurred.

A Yes. On May 15 as shown on Colville Exhibit --

Q Right.

A -- 17-1. On June 8th and 9th as shown on the exhibit.

Q In other words, they are reflected there, the same material you had.

A Yes, sir.

Q Is that right?

A Yes.

Q Now, have you considered the statement on page 9 of United States Exhibit 1 which the report prepared by Mr. Cline, and he refers to the MacNish report of May -- 1977. Are you aware of what the report is -- What is stated? .5 is it not? -- second feet?

A Yes, I am familiar with that number in the report by

Mr. Cline on page 9.

Q And what is the disparity -- what are the facts actually shown on the basis of exact measurements?

A On the basis of the water level measurements in the flume number 15, on Colville Exhibit No. 10, the actual measurement of water level at that flume indicates that --

Q Now, actual measurement of that flume of what source of water?

A The actual measurement in that flume of the stream-flow of No Name Creek in the absence of developed water by the Colville Confederated Tribes.

Q Right.

A Shows very clearly that the discharge in the creek corresponding to that water level measurement was .22 cfs at a maximum on May 15, 1977, compared with the computation of the natural discharge of No Name Creek by Mr. MacNish and reported by Mr. Cline to be .50 cfs in the U. S. G. S. report of 1978.

MR. MACK: Your Honor. I don't -- Mr. Sweeney might be wanting to say the same thing I am, but if the witness is being asked to agree or disagree with the statement in the report, I think we might save a lot of time and won't have to go into cross-examination if it were read. I don't think the figure

in the report, for example, is second feet.

Q (By Mr. Veeder) Just read the sentence then. This is a copy of the report.

THE COURT: Read it in.

A I'm referring to page 9 of the U.S.G.S. report 1978, the first paragraph, where it is stated that:

"The natural flow in No Name Creek at site N5,"

Site N5 is equivalent to site 15 on Colville Exhibit No. 10.

"which was 0.5 ft^3/s on May 13 (Mac Nish, 1977) had decreased to nearly zero by the time the pumping of well water to the creek was stopped on October 7, 1977, the flow being only 0.02 ft^3/s on October 13, 1977."

Q So it is second feet; is it not?

A The symbols in the report are given as "ft^3/s" which is cubic feet per second.

Q Does that have --

MR. VEEDER: Go ahead.

MR. SWEENEY: Mr. Mack's comment was not the one I was going to make. I thought that Mr. Watson testified to a rate of flow as of May 15 and then was comparing it to Mr. MacNish's as of May 13 and I was going to only ask that Mr. Watson, if he's going to

make that comparison, go to May 13 rather than the 15th if he can, on the exhibit.

MR. VEEDER: I think cross-examination takes care of the whole thing, Your Honor.

THE COURT: Well, one way or the other. While we've got him, let's clear it up.

MR. VEEDER: All right.

A The MacNish computation was made on May 13, May 12 and 13th, 1977. The actual measurement was made on May 15 and 16, 1977.

In my opinion, it is inconceivable that the natural spring discharge of No Name Creek, the natural stream flow of No Name Creek on May 12 and 13 could have been one hundred percent higher, and more than one hundred percent higher, than the amount that was actually measured on May 15 and 16.

MR. PRICE: Your Honor, I'm going to ask that the answer be stricken as not responsive and no foundation for his response. He is trying to compare apples and oranges.

THE COURT: Oh, I think he made the explanation of what the difference is. Maybe I don't understand your objection, but he just testified as to how he arrives at the discrepancy and explained the two-day difference.

MR. PRICE: He said he couldn't imagine, Your Honor.

THE COURT: He's talking as an expert.

MR. VEEDER: It's his opinion, too.

THE COURT: It's his opinion. Go ahead.

Q (By Mr. Veeder) Mr. Watson, does that have any effect on what we call the Cline equation down here, the water budget, which is the exhibit, U. S. Exhibit 3?

A Yes, sir, it does.

Q And would you point out the difference.

A In the water budget on the U. S. G. S. Exhibit No. 3 for the six-month period of the irrigation season, April to September, 1977, which appears in the bottom third of that exhibit, Mr. Cline has used natural stream flow of No Name Creek creek as measured -- as computed, excuse me -- at site 15 or site N5 referred to by the U. S. G. S., site 15 on Colville Exhibit No. 10. He has referred to a value of 108 acre-feet as the natural stream flow of No Name Creek at that point for the period April to September, 1977, and that figure is calculated -- "estimated" is the word used in the U. S. G. S. report, I believe -- based on the .5 cfs as quoted from the MacNish report, when the actual measurement of the discharge on May 15 was shown to be approximately .22 cfs.

Q And there was a disparity down on other points of discharge; is that not right, in June and also in July?

A Yes, sir, in the other periods --

MR. PRICE: Mr. Watson, excuse me. Your Honor, I object to the terminology "disparity" in terms of the witness testifying.

MR. VEEDER: I will say "difference" if that will make him happier. There is a difference, Your Honor.

THE COURT: Proceed.

A Also Mr. Cline relied on higher estimates, if you will, of the natural stream flow of No Name Creek which could not be separated from the developed water that was in the creek at that time.

In other words, the developed water in the natural stream flow of No Name Creek were commingled throughout the irrigation season except for these four brief periods of time when the Paschal Sherman irrigation well was discontinued.

Q When the Paschal Sherman well was discontinued, then the actual flow of the stream was subject to be measured; is that right?

A That is absolutely correct.

Q That is the discharge from the aquifer; right?

MR. SWEENEY: I think this is a little leading.

MR. VEEDER: All right.

THE COURT: I think so. Sustained.

Q (By Mr. Veeder) Would you state, then, the difference between the "estimates" used by Mr. Cline and the actual measurements as you depicted them.

A The actual measurements in June and July are less than the estimates of Mr. Cline in those months.

Q And what is the magnitude of the difference?

A The magnitude of the difference is considerable, and I do not know precisely what the number is.

Q What is the difference between the 5 and .2, then, for example, in the first measurement?

A In May the difference between the estimate or the computation of .5 cfs is quoted from the MacNish report incorrectly, is the difference between .5 cfs and point .22 cfs which is the difference of .28 of a cfs.

Q And that's that difference in regard to acre-feet used in the equation, then.

A That difference in regard to acre-feet for that month, just the month of May, is a difference of approximately 15 to 20 acre-feet.

Q In other words, the equation would have been off that

far just for the one month; is that correct?

A For the month of May, yes, sir.

Q And if we carried out those calculations the disparity would be even greater.

MR. SWEENEY: Just a moment. That's leading.

THE COURT: Sustained.

Q (By Mr. Veder) Would you state as to whether the disparity would continue from the calculation you made in May.

A Yes, sir, the disparity would continue in June, in July. Mr. Cline recognized that at the end of the irrigation season that the natural stream flow of No Name Creek as measured at site 15 had decreased to essentially zero. In his report he says, "the flow being only 0.02 ft^3/s on October 13, 1977." So, it was evident at the end of the irrigation season that the natural stream flow was substantially less than it had been at the beginning of the irrigation season which was approximately .50 cfs.

Q Would you supply, during the next recess, a calculation in acre-feet as to the disparity between what appears in the equation and strip charts as you -- .

A Yes, sir, I have that available and I can make it available.

Q That is fine, thank you. Now, would you turn to

Colville Exhibit 13-3, please. You can take down the budget.

And will you state into the record --

A I didn't hear the exhibit number, Mr. Veeder.

Q 17-3. Would you read into the record what the title block on that exhibit is, and say who prepared it. State succinctly the date that appears on it, and your opinion of the accuracy of it, please.

A Yes, sir. The title of Colville Exhibit 17-3 is Illustration of Streamflow Gains and Losses of No Name Creek between Flume below Walton Surface Diversion and Flume on Granite Lip.

The exhibit has a scale on the right hand side, a vertical scale that relates average daily discharge in cfs, and has a calendar day scale running across the bottom from January 1 to December 31, 1977.

The exhibit was prepared under my direction, and the information presented on the exhibit accurately depicts the stream flows at the two locations referenced in the title.

Now, the two locations on the title that we're referring to are locations 15 and 17 in Colville Exhibit No. 10. 15 is No Name Creek below Mr. Walton's surface diversion, and 17 is No Name Creek on the granite lip.

Now, the exhibit, again, is very similar to the

exhibits that were described yesterday, 17-1 and 17-2, and the intent of the exhibit is to show the gains in the stream flow between these two points and during what periods --

Q Between what two points?

A Between the points number 15 and 17 shown on Colville Exhibit No. 10.

MR. VEEDER: We offer in evidence exhibit 17 -- Colville Exhibit No. 17-3.

MR. SWEENEY: What's the number of that exhibit again?

MR. VEEDER: 17-3.

THE COURT: Seventeen dash three.

MR. SWEENEY: I see.

THE COURT: And excuse me, Mr. Watson. Your numbers on the lefthand side, are those cfs's?

THE WITNESS: Yes, sir, they are. Average daily discharge in cubic feet per second.

THE COURT: Go ahead, Mr. Sweeney.

MR. SWEENEY: Thank you, Your Honor.

VOIR DIRE EXAMINATION

BY MR. SWEENEY:

Q This shows stream flow from two points on No Name Creek, 15 and 17; is that correct?

A Yes, sir.

Q And 15 is below Mr. Walton's surface diversion?
A Yes, sir.
Q What type of measurement device is there?
A 9" Parshall flume.
Q And then you calculated, you make calculations as to the amount of flow as it passed through that Parshall flume; is that correct?
A Based on the strip charts that we just looked at on Colville Exhibit --
MR. VEEDER: 32-5.
A -- 32-5.
Q What I'm trying to get at is that you made calculations as to the amount of water passing that point.
A Based on the water level measurements, yes, I did.
Q And you used the manufacturer's specifications for that?
A I used the manufacturer's rating curve for that.
Q I see. Then it also shows point 17 which is at the granite lip.
A Yes, sir.
Q Okay. What kind of a measuring device is there?
A An 18" Parshall flume.
Q And then you used the manufacturer's calculations, or specifications to make the calculations there, too?
A Yes, I did.

Q And that is reflected on Exhibit 17-3.

A That is also reflected on Exhibit 17-3.

MR. SWEENEY: Okay, I have no further questions.

THE COURT: Mr. Price.

MR. PRICE: One question, Your Honor.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q Mr. Watson, is point 15 -- where does that lie in proximity to Walton's -- the return pipe from his sump?

A It's upstream.

Q Upstream.

A Yes, sir.

Q And, so, below point 15 there is a pipe that, after Walton diverts water into the sump, any overflow goes back down the pipe to the creek.

A Yes, sir.

Q Thank you.

MR. MACK: Your Honor, may I?

THE COURT: Mr. Mack.

VOIR DIRE EXAMINATION

BY MR. MACK:

Q If I understand it, Mr. Watson, you have there the cubic feet per second figures which you calculated

from some other figures given you by U. S. G. S.; is that correct?

A I calculated average daily discharge based on the strip chart records provided by the U. S. G. S. as presented in Colville Exhibit 32-5.

Q That was my understanding. Strip chart records give you what data?

A Water level, -- in the measuring flume, and the water level in the flume is very closely related to the geometry and from that geometry the discharge can be computed very accurately.

Q And did you in your calculations of that, did you follow normal, in your opinion, normal procedures to calculate the quantity figures?

A Very much so.

MR. SWEENEY: Could I ask one more question, Your Honor?

THE COURT: Yes.

MR. SWEENEY: May I approach the witness and the easel?

VOIR DIRE EXAMINATION CONTINUED

BY MR. SWEENEY:

Q Proposed exhibit 17-3 is based on the strip charts that are shown on 33-5?

A Yes, sir.

Q Could I look at 33-5?
A Excuse me. 32-5.
Q Or, 32-5. And which two strips would be the ones you used to put the data-- which would be measuring points 15 and 17?
A 15 is represented by the third set of strip charts from the top on Colville Exhibit 32-5, and 17 is represented by the fourth set of strip charts from the top.
Q And then the proposed exhibit corresponds to this.
A Yes, sir, it does.
Q But it shows an amount of flow; is that correct:
A It shows the total amount of flow at each one of these locations and the difference between the flows.
Q Now, this is 15, the third one from the top, point 15?
A The third set of strip charts is 15.
Q What date is this that I'm pointing to?
A That date is May 15-16.
Q How come it's very jagged at the bottom of the flow chart, recorder reading?
A There are any number of things that could have been influencing that, Mr. Sweeney.
Q Does that, whatever that is, then, is that reflected on 17-3?
A Is that jagged --
Q Yes.

A -- image reflected on 17-3? No, that is not.

Q Okay.

MR. SWEENEY: I have no further questions.

THE COURT: Tribe's Exhibit 17-3 is admitted.

(Colville Exhibit 17-3 is admitted.)

Q (By Mr. Veeder) Would you go on with the explanation of what is reflected on that, going straight across from left to right.

A Yes, sir. Again, the discharge at 17 and 15 are shown on Colville Exhibit No. 17-3. The green area beginning in January and extending through the month of March and into early April represents a gain in the stream flow between points 15 and 17 on Colville Exhibit No. 10. In other words, there was runoff from precipitation. This was the only that was going on in the basin was just what was occurring naturally.

Q Would you turn to Exhibit No. 7 and show where that precipitation fell and where it would enter No Name Creek and make this more -- .

A I'm referring to Colville Exhibit No. 7, titled the Watershed Map, and the precipitation fell between measurement point number 15 --

Q Right.

A -- as shown on this exhibit, and measurement point 17,

also as shown on this exhibit, Colville Exhibit No. 7.

Q Now, how is that designated on Colville Exhibit marked for identification No. 7? How have you designated that?

A The area, the drainage area that contributes -- precipitation runoff --

Q Yes.

A -- to this area, is designated by the line beginning on No Name Creek at point 17 and extending in an easterly and northerly direction over to the major watershed boundary of No Name Creek in the northeast quarter of section 2. And then the watershed boundary proceeds along the boundary between No Name Creek and Omak Creek and then joins the smaller watershed segment that begins on No Name Creek at measurement point 15, and extends to the topographic boundary between No Name Creek and Omak Creek, and a similar circumstance on the west side of No Name Creek also. The line beginning at measurement point 15 and extending in a southwesterly direction across section 21, is a watershed boundary to the Creek at that point, and the watershed boundary intersects the main watershed boundary between No Name Creek basin and the basin to the west, and then this is in the southeast, extreme southeast quarter of section 20, and from there

the watershed boundary again extends from point 17 in a northwesterly direction to the divide. Now, the whole area that is encompassed by this watershed boundary is referred to in --

Q In segment one now.

A -- Is referred to on Colville Exhibit No. 7 as segment two.

Q Segment two, all right.

A And segment two as described on the exhibit is between Walton surface diversion and the granite lip and that acreage is 926 acres.

Q So, you are able, then, to make a determination that, in your opinion -- Do you have an opinion as to what water went into No Name Creek, then, without entering the aquifer

A Yes, sir. In my opinion, the area outlined in green on Colville Exhibit 17-3 is watershed runoff from segment number two on Colville Exhibit No. 7 that did not go into the No Name Creek aquifer very quickly entered the valley of No Name Creek between points 15 and 17, flowed out of that segment and into the north end of Omak Lake. The exhibit through the non-irrigation season, through the first part of 1977, shows very distinctly the watershed runoff that would be contributed between those two points, and you can

see the high peaked areas in late February and again toward the middle of March at both locations, 15 and 17, which represent high rates of discharge from snow melt or precipitation, rainfall, that occurred in relatively short periods of time.

Q Have you made any relationship between your calculations and what appears on the water budget as prepared by Mr. Cline?

A Yes, I have.

Q Would you state that into the record.

A First, in the period from the end of January, 1977, through the end of March, 1977, and into the 19th of April 1977, I calculated the difference in the stream flow between sites 15 and 17 which would be the natural runoff from precipitation during that period and I found that the precipitation in that period of time amounted to a quantity of approximately 20 acre feet.

Q And what does Mr. Cline show here?

A Is it okay to leave the exhibit in this -- ?

Q It's certainly okay. If His Honor wants to put it up --

THE COURT: I can see it.

A I'm referring now to the U. S. A. Exhibit No. 3 where Mr. Cline shows that during the non-irrigation season, the five-month period from November 1976 through March

1977, which is a considerably longer period of time than is shown on Colville Exhibit No. 17-3, an additional two months, that he has a computation of runoff and precipitation of 20 acre feet during that period of time.

Q Have you -- and that is an estimate as distinguished from your measurement; is that right?

A Well, if I understood Mr. Cline correctly, he estimated that the precipitation runoff in No Name Creek basin based on the way precipitation runs off in a --

MR. SWEENEY: Just a moment. If I may interject, I think it's not being properly characterized. The Government's Exhibit No. 3, R is recharge from precipitation, not runoff.

THE COURT: Well, --

MR. SWEENEY: -- as Mr. Watson has characterized it. If he is going to use that exhibit, I think it should be properly --

THE COURT: He has to express his opinion on his understanding of what it is. It might be right or it might be wrong. His opinion has to be based on his belief of what the facts are, used by Mr. Cline.

MR. SWEENEY: Yes, that's perfectly all right, Your Honor.

THE COURT: Proceed.

A The parameter shown in the U. S. A. Exhibit No. 3, as Mr. Sweeney correctly points out, is the recharge to the acquifer above the point of Mr. Walton's surface diversion on No Name Creek. It's runoff or recharge from precipitation that was contributed to the aquifer during the period from November 1976 through March 1977.

Now, in my opinion, referring now again to Colville Exhibit No. 7 which shows the watershed area of segment two which has 926 acres, and the actual watershed area of the area that contributes to the No Name Creek aquifer which is shown on Colville Exhibit No. 7 as areas five and six with a total acreage of 256 plus 534. That is total acreage of 790 acres contributed to the acquifer in watershed segments five and six.

In my opinion, the watershed runoff during the period from February -- the first of February through April 19 as shown on here, Colville Exhibit 17-3, was 20 acre feet as measured.

Q And that excluded what months, as shown on the chart?

A That excluded the months of November, December and January, as given by Mr. Cline in U. S. A. Exhibit No. 3. So, the essence of that is that 20 acre feet being

contributed to the aquifer during that period, may or may not be an appropriate amount. Certainly, during this period of time that was measured here we saw more precipitation runoff being contributed by an area comparable to the area that contributes to the aquifer which is five and six on Colville Exhibit No. 7, so that it would be expected, in my opinion, during the months of November, December and January 1976-1977 there would have been more water contributed to the aquifer from watershed segments five and six.

Q And what does that do to the number 20?

Q The number 20, then, is smaller than what actually recharged the aquifer during this period.

Q Now, what does that do to the equation, then, in your opinion?

A The equation then becomes completely out of balance. Mr. Cline testified to the fact that the equation always has to balance on the left and the right side and for that five-month period, based on measurements of precipitation runoff in an area of the No Name Creek basin, not from some area outside, but based purely on the measurements of the runoff in the No Name Creek basin, it is very clear that this number 20 which corresponds to the recharge of the precipitation to the aquifer, had to be in error.

Q Now, may I ask you again, have you made a calculation in regard to the recharge from precipitation as disclosed from April to September which I observe on the water budget on U. S. Exhibit No. 3, is 93; is that not correct?

A Yes, sir, on Colville -- on U. S. A. Exhibit No. 3, excuse me, the recharge from precipitation in the six-month irrigation season, April through September, 1977, is given as 93 acre-feet.

Q And what is your determination made, Mr. -- ?

A During the irrigation season of 1977, after pumping began, as shown on Colville Exhibit 17-3, the difference in stream flow between sites 15 and 17 on the creek is attributed to runoff from precipitation from watershed segment number two, as well as any return flows from irrigation by Mr. Walton during this period of time, and, therefore, the total amount of green area shown on Colville Exhibit No. 17-3 is greater than the amount of runoff from precipitation, because there is a contribution from return flow of irrigation in this. His sump overflows at times and that contributes water between this area as Mr. Price pointed out, and any water that has been applied to the irrigated areas in that area that is not consumed by the plants appears back in the stream flow above

the granite lip or above point 17 as return flow from the irrigation. Therefore, this cannot be attributed solely to precipitation runoff during this period. I think by inspection that it is very clear that there is not considerable amount of runoff plus return flow during the period from April 1977 through September 1977, in relation to the amount of precipitation runoff in the first four -- first three months of the year. Therefore, just by inspection it is clear that if watershed segment two on Colville Exhibit No. 17 (sic) contributed only 20 acre-feet during the first three months, that not much difference in contribution to that watershed segment was experienced during the irrigation season.

Q What did that do to the 93, then?

A That would significantly reduce the 93 acre-feet shown on U.S.A. Exhibit No. 3 in reference with recharge from precipitation. Again, the effect of that difference would be to completely unbalance the equation, and the conclusions that are expressed in the water budget computations are very sensitive to those kinds of adjustments.

Q Now, as a matter of fact, what were you utilizing, estimates or measurements, when you made your calculations on two and five and six, your segments on

the watershed map number 7.

A I was making measurements of the difference in stream flows, the gain in stream flows, between 15 and 17, actually using measurements from watershed segment two, and then applying those same rates of recharge to watershed segments five and six.

Q Runoff areas of which are substantially the same; is that right?

A The runoff area of fix and six is smaller than the runoff area of watershed segment two. Therefore, the contribution from segment two that we have discussed in Colville Exhibit 17-3 would be greater than the recharge from precipitation to the aquifer in these areas, these areas being five and six.

Q And how precise do you think the number of 503 is that is set out at the end of this second equation?

I'm still referring to Exhibit No. 3, the water budget.

A Referring to the number 503 on the water budget, Exhibit U.S.A. 3, that number is clearly imprecise.

Q Now, Mr. Watson, would you turn to Exhibit No. 18, please, Colville Exhibit No. 18, and state into the record what appears on that exhibit.

A Colville Exhibit No. 18 shows a relationship between the natural stream flow of No Name Creek measured at measurement point number 15 on Colville Exhibit No. 7

and also on Colville Exhibit No. 10.

Q Recite again, just for the record, of what 15 is reflective, Mr. Watson.

A 15 is No Name Creek below Mr. Walton's surface diversion.

Q All right.

A So, Colville Exhibit No. 18 shows the natural stream flow of No Name Creek in comparison with the water level measurements made in the Peters observation well principally during periods of no pumping. So, the exhibit shows a very good relationship, very exacting relationship bwtween the stream flow at Mr. Walton's diversion dam, or No Name Creek below Mr. Walton's surface diversion, shows very good relationship between the stream flows there and the water levels as measured in the Peters observation well.

Now, there are a number of small circles on the exhibit that are numbered and referenced in the tabulation in the lower righthand corner of the exhibit and each one of the numbers corresponds to the date of measurement, of depth of water in the Peters observation well as made by the U. S. Geological Survey, and it also relates to the gauge height and the discharge or the stream flow of No Name Creek as measured at measurement point 15, No Name Creek below the Walton

surface diversion.

Q Now, just a moment. Did you prepare that exhibit yourself?

A I prepared the exhibit myself, yes.

Q And did you use the standard practices and procedures in arriving at that curve?

A Yes, sir, I did.

Q And the numbers you used are precise to the extent of your own personal knowledge?

A The numbers that I used are very precise and accurately represented on the exhibit.

Q And you believe that that curve is reflective of the quantity of water that did appear during the period from the natural spring zone to which you are making reference; right?

A I believe that this relationship is a very good representation of the discharge of No Name Creek measured on No Name Creek below Mr. Walton's surface diversion as compared with the water level in the aquifer represented by the Peters observation well. In other words, the stream flow of No Name Creek is very well correlated with the water level in the No Name Creek aquifer, and the stream flow at that point can be very accurately computed using the water level elevations in the No Name Creek aquifer as measured

in the Peters observation well.

MR. VEEDER: We offer Colville Exhibit marked 18 in evidence.

THE COURT: Mr. Sweeney.

MR. SWEENEY: Yes, Your Honor. I'm not a hydrologist, but I would like to ask a couple of probably simple questions that come to mind.

VOIR DIRE EXAMINATION

BY MR. SWEENEY:

Q On Exhibit 18, where is the flow of No Name Creek shown?

A The flow of No Name Creek is shown by the scale at the bottom of the exhibit entitled Discharge of No Name Creek Below Walton's Surface Diversion, and the scale runs from .1, excuse me, from zero in the lower left-hand corner to .7 cfs.

Q And then this curved line, what does that represent?

A The curved line represents the best fit, if you will, of the plot of the observed water levels in Peters observation well and the discharge of No Name Creek during periods of no pumping from the aquifer.

Q And you have a list of stream flow, -- well, let me rephrase that.

On the exhibit, then, you also have a statement

as to the stream flow of No Name Creek below Mr. Walton's surface diversion which is on the right of the exhibit.

A Yes, sir.

Q And that is measured where?

A These stream flows are measured at measurement point 15 which is No Name Creek below the Walton surface diversion.

Q And those were those Parshall flumes that you previously described?

A 9" Parshall flumes.

Q And you calculated from those the stream flows that appear on the exhibit?

A Yes, sir.

Q And as far as the water level elevation in the Peters observation well that also appear on this exhibit, that was taken from the U.S.G.S. data; is that correct?

A Yes.

MR. SWEENEY: Okay, I have no further questions.

THE COURT: Mr. Mack?

Mr. Price.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q Mr. Watson, this Exhibit 18 is purporting to show

that when the Tribe turns on their pumps, they can dry up the flow of No Name Creek; is that the essence of this exhibit?

A No, absolutely not.

MR. PRICE: I have no further questions.

THE COURT: Mr. Mack.

MR. MACK: Your Honor, thank you.

VOIR DIRE EXAMINATION

BY MR. MACK:

Q Mr. Watson, the second column in the box on the right-hand side of Colville Exhibit 18 there is a series of dates; right?

A Yes.

Q And is the curve that you plotted from the period of time first shown which is March of 1976 to the latest date which is November of '77?

A The curve is not plotted from -- on a chronological basis.

Q But the figures plotted on the curve are taken for certain dates; isn't that correct?

A Yes, sir.

Q Can you explain which of the dates shown in the column are represented on the exhibit and which aren't.

A All dates shown on the -- in the tabulation or shown

on the graphical illustration, both which appear on Exhibit 18.

Q I notice that in the fourth column for the date of November 7, 1977, the water level elevation being sea level figures in the Peters well is given as 1129.48 feet; is that correct?

A Yes.

Q Where does that appear on this graph?

A That is point number 26, referring to the first column, -- index number?

Q Yes.

A So, 26 is shown in the extreme lower left-hand corner on the exhibit.

Q Directing your attention from that figure which I just read which was 1129.48 to the last column which is the stream flow for No Name Creek, the figure that corresponds there is .02; isn't that correct?

A Yes, sir.

Q And does that appear somewhere on that curve, the .02 figure?

A Now, are you referring again to November 7, 1977?

Q Yes, sir.

A Yes, the .02 is shown -- do you understand the way this works, Mr. Mack?

Q Yes.

A You take the date, November 7, 1977, now that is point number 26 that appears on the exhibit.

Q So, both of those data appear at point 26.

A So, the way --

Q Correct?

A The way this is plotted is that the water level elevation of 1129.48 is plotted on the vertical scale.

Q Yes.

A And then from the vertical scale, you move horizontally to the discharge which is given as .02.

Q Yes.

A And that becomes point 26 on that exhibit.

Q Which is not on the curve; is that correct?

A No, sir.

Q Are these dates primarily during the non-irrigation period?

A All dates from 1 through 26 are during the non-irrigation period.

Q And then the last four are the only four irrigation period dates; is that correct?

A Yes.

Q Thank you.

THE COURT: Further inquiry?

Tribes' Exhibit 18 will be admitted.

(Colville Exhibit No. 18 admitted.)

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Would you now turn to Exhibit 33-1, Mr. Watson. Do you have 33-1 there now?

A Yes, I do.

Q Now, would you proceed with your correlation between the observations and the stream discharge to which you alluded.

A Yes.

THE COURT: Counsel, first, I think 33-1 has not been identified yet.

THE WITNESS: Yes, it has not been identified yet.

Q (By Mr. Veeder) Would you please read the title block and state into the record the source of the data that you have. Excuse me.

A The title block on Exhibit 33-1 is Elevation of Groundwater, Peters Observation Well. Again, we are showing a calendar scale beginning 1975, January, and extending through December, 1977, on the bottom. On the vertical scale the elevation of water. The elevation as given on that scale in feet above mean

sea level. The line shown on Colville Exhibit 33-1 simply represents the measured water levels in the Peters observation well beginning in July, approximately July 20, 1975 and extending through that year. The water level is --

Q Before going any further, would you state the source of the data to which you are referring.

A The source of the data to which we are referring on Colville Exhibit 33-1 is data collected by the Colville Confederated Tribes beginning in July, 1975, and extending to the Order of the Court of July 14, 1976, at which time U.S. Geological Survey took over the maintenance of the record and after the Order was entered, the U.S. Geological Survey collected the data.

The data from July, 1976 through November, 1977 was collected by the U.S. Geological Survey.

Q And that data is reflected on this hydrograph; right?

A The data is reflected on the hydrograph, accurately.

Q And to the best of your knowledge, it is accurate predicated from the data you had; is that right?

A It is an accurate representation of the data I had.

MR. VEEDER: We will offer in evidence the data as appearing on Peters observation well, 33-1.

MR. SWEENEY: No objection by the United

States, Your Honor.

THE COURT: Mr. Price.

MR. PRICE: Just a point of clarification more than anything, Your Honor.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q Mr. Watson, do we not already have such an exhibit in evidence where you have plotted this and then replotted it and overlaid the two on Peters observation well that you went through yesterday?

A The same information that we described yesterday on Colville Exhibit 25-1 is presented on this exhibit with the exception of the plot of the information through February 3, 1978, and the projection of water levels as given on that exhibit.

Q So, this is a duplication except that it does not show records up to date so far as we have them, plus it doesn't show your projections.

A Yes, sir.

MR. PRICE: If it assists counsel, I have no objection.

THE COURT: All right. Tribes' 33-1 is admitted.

(Colville Exhibit No. 33-1 admitted.)

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Well, proceed, then, and correlate and demonstrate from the use of those two exhibits the correlation between what you showed on the rating curve and your Exhibit 33-1, Mr. Watson.

A The first item of significance on Colville Exhibit 33-1 is that from November, 1975 through the middle of March, 1976, the water level in the No Name Creek aquifer was on a gradual and continuous decline. Now, the significance of that observation is that there was no pumping taking place. There was natural discharge of the aquifer to the channel of No Name Creek, that the water level was falling in the aquifer which meant that there was more water going out of the aquifer than was coming in as recharge from all sources.

Now, referring back to Colville Exhibit No. 18, to index number one, it is pointed out that on March 12, 1976 U.S. Geological Survey made a miscellaneous current meter measurement on No Name Creek at Mr. Walton's driveway, and if you read the note on that exhibit, it says "discharge was determined by U.S.G.S. using current meter on No Name Creek at Walton driveway cross."

Now, at that point is shown on Colville Exhibit No. 7 as point number 10. This is where No Name Creek crosses Mr. Walton's driveway. Now, this is reflective of the amount of water that was being discharged from the aquifer at that time and, as stated previously, this amount was greater than the amount of recharge being contributed to the aquifer from all sources. The water level would not have been falling in No Name Creek aquifer from November through March -- from November, 1976 through March, 1976, if the recharge had been greater than the amount of water going out of the aquifer. The converse was true.

The value of the discharge as measured by the U.S. Geological Survey on March 12 was .66 cfs, and, therefore, because of the basis that we have just established, the .66 cfs is greater than the recharge from all sources that was being contributed to the No Name Creek aquifer during this period of time.

Q Now, Mr. Watson, have you considered all of the data from the standpoint of precipitation and runoff during the full 69-year period that those measurements have been taken?

A Yes, sir, I have.

Q And have you considered the years 1975, '76, '77, from

the standpoint of whether they are representative of good years or bad years?

A The -- yes, I have.

Q And would you state into the record of what period, where you have had actual measurements, actual determinations, as to the quantities of water that was in the stream which you measured, have you taken into consideration whether they are representative or not of the precipitation that has transpired down through this long period of 69 years?

A Yes, I have taken that into consideration.

Q And have you taken into consideration all of the data that you have reviewed from the standpoint of contributions from the natural infiltration from Omak Creek into the groundwater aquifer?

A Yes, I have.

Q And predicated upon all of the data that you have reviewed here and all of the measurements that you have made, have you an opinion as to what you consider to be a firm, not an average, a firm annual supply of water that can be relied upon in the No Name Creek basin from the aquifer that is described and set forth and appears on Colville Exhibit No. 7?

A Yes, I have an opinion.

Q And what is your estimation, what is your opinion as

to the quantity of water -- what is your opinion as to the quantity of water that can be reasonably relied upon predicated upon what you consider to be a firm supply of water?

A In my opinion, the firm water supply of the No Name Creek basin, from all sources, is 550 acre-feet per year.

MR. VEEDER: Your Honor, I'm at a point where I would like to put in some additional evidence.

THE COURT: It's a good time to take a morning recess. Court will be in recess for 15 minutes.

THE CLERK OF THE COURT: All rise. Court is now recessed for 15 minutes.

(Morning recess is taken.)

THE CLERK OF THE COURT: Court is reconvened following recess.

THE COURT: You may continue.

MR. VEEDER: Your Honor, I have Colville Exhibit 15-2 which is the exhibit concerning which Mary Ann Timentwa Sampson testified as to the area that she knew to be irrigated in the 1920's and during the 30's.

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Mr. Watson, did you prepare the Exhibit 15-2?

A The exhibit was prepared under my direction.

Q And did you go on to the area and personally check out the fields as you found them to be, prior to the time of the present status of development?

A Yes, I did.

Q And are those depictions correct, to your personal knowledge?

A The depictions shown on Colville Exhibit 15-2 are true and accurate to my personal knowledge, both on the east side and west side of No Name Creek.

Q And in Allotments 901 and 903.

A In Allotments 901 and 903.

MR. VEEDER: I make an offer on Exhibit 15-2,

Your Honor.

THE COURT: Examination on 15-2?

MR. SWEENEY: We have no objection.

MR. MACK: Your Honor, if I might.

THE COURT: Mr. Mack.

VOIR DIRE EXAMINATION

BY MR. MACK:

Q Mr. Watson, just to get this clear, the process that went into preparing this, did that involve you going out to the fields with Mrs. Sampson and she explained to you what had been irrigated and then you transferring it onto this exhibit?

A Yes, sir.

Q And when you said it was prepared under your direction, could you explain who else participated in the preparation of this?

A I was solely responsible for the technical materials shown on the exhibit, Mr. Mack. When I say that it was prepared under my direction, the coloring and the actual drawing of the symbols was done by draftsmen with my company.

Q And he just followed your directions on what to do; correct?

A Yes, sir.

Q Thank you.

THE COURT: Tribes' Exhibit 15-2 is admitted.

(Colville Exhibit No. 15-2 admitted.)

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Now, would you flip that over to the Colville irrigation project. I believe that is No. 8.

Now, I hand you Colville Exhibit 24-1, and ask you to state into the record, what is that exhibit?

A Colville Exhibit 24-1 is a summary of the irrigation water requirements for the total irrigable lands of the Colville irrigation project.

Q And under whose direction was that prepared?

A This was prepared under my direction.

Q And of what is that reflective, Mr. Watson, from the standpoint of the water requirements? What does that mean?

A Water requirements are the amounts of water required at the point of diversion to irrigate a crop and to provide the actual water requirement of that crop.

Q And what are the elements that you took into consideration in arriving at the quantities of water required to produce a crop?

A The elements that I took into consideration, Mr. Veeder, were the particular and unique soils within the Colville irrigation project on Allotments 526, 892, 901 and 903.

In addition, I took into the account the very specific temperature and precipitation data as collected and published by the United States Weather Bureau for the town of Omak, Washington, which is very close to the Colville irrigation project.

In addition to that, I took into account the latitude at which the Colville irrigation project is located. I took into account the type of crop that would be grown on the Colville irrigation project, and I took into account data on consumptive use of the kind of crop that would be grown on the Colville irrigation project, as collected by the State of Washington in its central Washington experimental -- at its central Washington experimental station.

In addition to all of that information, I took into account the efficiency of the various kinds and types of irrigation application methods that could be applied in the No Name Creek valley and within the total irrigable lands of the Colville irrigation project.

Q And is the tabulation that you have set forth on

Colville Exhibit 24-2 -- 24-1, correct, to your personal knowledge?

A Yes, it is. It's correct to my personal knowledge.

Q Now, you referred to -- did you compare your determinations with any particular investigations that have been made by other official sources in --

MR. SWEENEY: Just a moment.

THE COURT: Mr. Sweeney.

MR. SWEENEY: That hasn't been admitted.

MR. VEEDER: I'm just asking the question.

MR. SWEENEY: Are you still establishing --

THE COURT: Are you identifying?

MR. VEEDER: This is part of the -- well, I will make an offer, then, on 24-1.

MR. SWEENEY: Okay.

THE COURT: Mr. Sweeney.

MR. SWEENEY: Could I see that?

MR. VEEDER: Go ahead and take a look at it.

MR. SWEENEY: Mr. Veeder, sometime ago you gave us a list that looks fairly similar. I would like to know is it --

MR. VEEDER: All right.

MR. SWEENEY: But it was marked preliminary and I don't know.

Q (By Mr. Veeder) Is that the same?

A It is precisely the same.

MR. VEEDER: May I approach the witness, Your Honor.

THE COURT: You may.

(Discussion between Mr. Veeder and Mr. Watson.)

THE COURT: Does anybody wish to voir dire on 24-1?

MR. SWEENEY: The Government does not desire to, and I will hand back the proposed exhibit to Mr. Watson.

THE COURT: The State?

MR. MACK: Yes, Your Honor.

THE COURT: You may.

VOIR DIRE EXAMINATION

BY MR. MACK:

Q Mr. Watson, you stated a number of elements that you took into account in determining the irrigable acreage figures on that exhibit. Is that including soil, particular soil characteristics, that sort of thing; is that correct?

A Is it correct that I stated that?

Q Yes.

A Yes.
Q Are you a soils engineer or any type of soil scientist?
A I am not.
Q Did you have to rely on somebody else's judgment in order to take that factor into account?
A I did.
Q And whose judgment did you rely on?
A Mr. Casmark's.
Q His figures are reflected, then, in this exhibit, or his work I should say, is reflected in this exhibit.
A To a very minor degree, yes.
Q Okay, did you alter the work he gave you that went into this exhibit before it went into the exhibit, or did you simply take his work and plug it into your irrigable acreage figure?
A No, I did not simply do that, Mr. Mack. I carefully reviewed the information that Mr. Casmark had developed and, although I am not a soil scientist, certainly as a civil engineer I have a very close acquaintance with different kinds of soil properties and on examination of Mr. Casmark's material, I was very well satisfied that there was no reason to alter --
Q That is really what I was interested in, and then you took into account the precipitation figures, and that forms an element of the analysis which produced *these*

figures on the exhibit; is that correct?
A Yes, sir.
Q From the Omak station?
A Omak II Northwest.
Q Omak II Northwest, and do you have any doubt, do you have any reason to doubt the reliability of those figures?
A I have no reason to doubt reliability of that data.
Q And you said there was an element of the types of crops that went into the final figures shown here. Is there any documentary thing that shows what types of crops, or will there be an exhibit that will show which types of crops entered into the equations that produced these figures?
A I don't think there is an exhibit on that, Mr. Mack, just oral testimony.
Q Well, can you briefly state?
A Alfalfa.
Q Is that the only crop that affected, that was considered in coming up with these figures?
A That is the only crop we have in production.
Q Well, I will ask the question again, was that the only crop that went into your work in coming up with these figures?
A Yes, that is the only crop reflected in these figures.

MR. VEEDER: I can ask a question.

Why did you use alfalfa, Mr. Watson?

THE WITNESS: That is the crop we have in production.

MR. VEEDER: And how does that relate from the standpoint of water requirements of the other crops normally raised?

THE WITNESS: It is a higher water requirement than most other crops.

Q (By Mr. Mack) Mr. Watson, you also said that some data used in coming up with your figures for consumptive use came from the State of Washington in its central Washington experimental station. Were those figures derived from any published study? From where did you derive those figures?

A Those figures were derived from published study.

Q Would you know the title of that?

A The title of the document is Circular No. 512, and I'm not sure what the title is.

Q Do you know who publishes that?

A Washington State University.

Q Was there any alteration made of the precipitation figures taken from the Omak II station before these figures were entered into your work that produced these figures in the exhibit?

A Absolutely none.

Q Does that affect the accuracy of your irrigable acreage estimates in this exhibit, that is to say, the fact that you did not alter the Omak precipitation records?

A No.

Q There was no need to make any correction in them for the conditions in the No Name Creek Valley?

A No.

Q Thank you.

THE COURT: Mr. Price.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q You relied on the efficiency of the system. What efficiency figure did you use, Mr. Watson?

A What efficiency figure did I use?

Q Right, of the system.

A I used several efficiency figures, Mr. Price, depending on the type of irrigation that would be undertaken.

Q How are those several figures reflected in this proposed exhibit, Mr. Watson?

A The efficiencies are reflected in this exhibit to the extent that the consumptive use of the crop is increased, depending on the amount of water that is

required for diversion to supply that consumptive use at the crop.

Q Right. We know that the efficiency is how much more water you have to put on the land so the crop can use it.

A Yes, sir.

Q Now, there is a figure that is used in calculating that efficiency, 65 percent, 70, 75 percent. I would like to know what figure, if any, you used in calculating these figures on this exhibit.

A I used a different efficiency depending on the allotment and the particular soil type that exists on that allotment.

Q That figure is not reflected on this exhibit, however; is it?

A The figure does not appear on the Colville Exhibit 24-1.

Q Can you give that? Can you give those figures to us?

A I can. I'm not prepared at the moment to do that.

MR. PRICE: One further question, Your Honor.

Q Mr. Watson, this exhibit also talks about calibrations from rill irrigation at the top of the exhibit; does it not?

A Not calibration.

Q It talks about rill irrigation computation at the top; does it not?

A Yes, it does.

Q And there are no lands under the Colville project that are currently rill irrigated; is that correct?

A There are currently no lands under rill irrigation.

Q And the only relevant figures at this point are sprinkler irrigation which is the system that is employed; is that not correct?

A I don't know that that is the only relevant figure, Mr. Price.

MR. PRICE: Your Honor, I would ask that the rill irrigation figures be excluded, that the exhibit be admitted without reference to the rill irrigation and that before it is admitted, that we have computated the efficiency figure of the systems for each of the allotments, as I think that is important in terms of making any validity to the exhibit, Your Honor.

THE COURT; Well, I'm going to deny the motion. However, on cross-examination you are going to be able to go into the efficiency and perhaps during the noon recess he can get those figures together.

THE WITNESS: Yes, sir.

THE COURT: And the second part of your motion, I don't think it's irrelevant as to what potentially might be some rill irrigation. The record shows that there is irrigable lands which are not yet under irrigation and I can't foretell whether that is going to be sprinkler or rill irrigation, so I think the relevancy is still there.

MR. VEEDER: I thank you, Your Honor.

We feel, and I certainly would look at Mr. Walton's property in the same light, that we cannot possibly, on each acre of land, be committed to use sprinkler systems in perpetuty. That is why we put that in there.

THE COURT: Any other inquiry on the exhibit? 24-1 will be admitted.

(Colville Exhibit No. 24-1 admitted.)

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q I hand you, Mr. Watson, the Exhibit 24-2 and ask you to state into the record what is set forth on that exhibit.

A Colville Exhibit 24-2 is a representation of the

irrigation water requirements for the presently irrigated lands of the Colville irrigation project, and by presently, I mean the irrigated lands, the lands that were irrigated at the close of 1977 irrigation season.

Again, a distinction is made on this exhibit between rill irrigation and sprinkler irrigation.

Q Now, are those calculations that appear on 24-2 correct to your personal knowledge and based upon your opinion, Mr. Watson?

A Yes, the figures that appear on Colville Exhibit 24-2 are correct to my personal knowledge.

Q And what is part of this information that you utilized from the standpoint of soil classification and data? Was that done under your direction by Mr. Casmark?

A Yes, it was.

Q And did you know those to be correct based upon your background and personal knowledge and investigation, working with Mr. Casmark on those?

A Based on my own personal knowledge and investigations, I felt that the work by Mr. Casmark was very reasonable and correct.

Q And did you correlate that with the 24-1 that has already been admitted in evidence?

A Yes, I did.

MR. VEEDER: We make an offer on Exhibit 24-2, Your Honor.

THE COURT: I assume the same question is being raised as to this exhibit because it relates only to presently irrigated lands whereas 24-1 relates to irrigable lands, but does Counsel wish any further inquiry on this?

MR. SWEENEY: We have none.

MR. MACK: One additional one.

VOIR DIRE EXAMINATION

BY MR. MACK:

Q Is there a period of time, Mr. Watson, for which figures were obtained that were necessary to compute the figures that are now in this exhibit, 24-2?

A Yes, sir.

Q What period of time was used to come up with the figures used by Mr. Casmark, for example?

A Mr. Casmark made no determination on the basis of time.

Q He just made the soils determination, again?

A That is something that is there for all time.

Q Which temporal calculations were made?

A Would you define your term.

Q Which calculations relied on time?
A The calculations of consumptive use.
Q And who made those calculations?
A I made the calculations.
Q And for what period of time were the figures used?
A 1948 through 1977.
Q 19 what -- 48?
A Yes, sir.
Q Continually -- did you use every year in that?
A Yes.
Q Pardon me?
A Yes, I did.
Q And where did you obtain records for the years preceding the development of the Colville irrigation project?
A I received records of climate from the United States Weather Bureau, from its station in Omak, two miles northwest of Omak.
Q Was a consumptive use figure only reliant on the precipitation figures obtained from the Omak station or was there some other element that had to go into it?
A There was another element.
Q What was that?
A Temperature.

Q The only two elements that you used to come up with your consumptive use figure?
A No, those were not the only two.
Q What other elements was there?
A Latitude.
Q Any others?
A The crop coefficients as published by the Washington State University in Circular 512.
Q Just so that I am clear on this, did that apply also for the years after the beginning of the Colville irrigation project? Were those elements taken into account?
A Yes, yes.
Q So, your consumptive use figure is based on those general elements which you used in preparing the previous exhibit, 24-1, and not necessarily on the actual use of water during the years covered, 1948 to 19 -- whatever it was, '77.
A Let me make this very clear, Mr. Mack. The consumptive use figures were based on climatic conditions that prevailed as measured at the Omak II Northwest Weather Station for the period 1948 through 1977, and the consumptive use information that is reflected in this exhibit is an average of the consumptive use computations that were made on a yearly basis during that

period.

In other words, there were times during that period that the consumptive use was far higher than that reflected in Colville Exhibits 24-1 and 24-2. There were also periods when the consumptive use, there were years that the consumptive use was lower because of change in precipitation and temperature.

Q Just to clear -- I just have one more question. I think this will clarify this. Is this going into the record? I think it ought to be clarified.

In your Exhibit 24-2 and your Exhibit 24-1, is it correct to say that they differ only to the extent that 24-2 applies the same calculations that you make for 24-1, but only to the lands presently under irrigation which is as of 1977, whereas 24-1 applies to all of the lands that you have concluded are capable of being irrigated?

A Yes, that is correct.

THE COURT: Mr. Price.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q The figures per acre, are those theoretical figures or are those actual figures based on your use over the past couple of years?

A These are figures that have been weighed in view of the actual water requirement demonstrated in the 1977 irrigation season. Consideration has been made in reviewing the determination of water requirements as presented on these exhibits of the actual water use in 1977.

Q Does that mean, then, that, for instance, the water, the crop consumptive figures that may have been contained in Circular 512 from the Washington State University might have been adjusted as reflected on Exhibit 24-2 as a result of your actual experience?

A They were not adjusted.

Q Is there anything in here that has been adjusted, based on actual experience versus the theoretical calculations?

A I resist, to some degree, your depiction of these as theoretical, Mr. Price, because the consumptive use estimates that are reflected in this exhibit were very carefully checked with the actual measurement of consumptive use by the Washington State University at its central Washington experimental station near Prosser, Washington.

Q Maybe I can shorten this, Mr. Watson.

THE REPORTER: Mr. Price, I can't see you; I can't hear you.

Q (By Mr. Price) Maybe I can shorten this. Can you tell me if there has been an adjustment in these figures based on actual use, what that judgment might have been.

A There has been no adjustment.

Q Thank you.

THE COURT: Tribes' 24-2 is admitted.

(Colville Exhibit No. 24-2 admitted.)

MR. VEEDER: May I approach the witness, Your Honor.

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q I hand you Exhibit 24-10 and ask you to state into the record what is represented by the exhibit, and under whose preparation it is. Is it your own preparation, Mr. Watson?

A Colville Exhibit 24-10 was prepared solely by myself.

Q And of what is it reflective, Mr. Watson?

A The exhibit is a summary of 1977 water use in the No Name Creek basin.

Q And would you state into the record the source of the information that you utilized in setting forth that.

A The source of the information was exclusively the

surface water measurements of the U.S. Geological Survey on No Name Creek as well as the records checked by the U.S.G.S. of the amount of water pumped from each of the production wells in the No Name Creek basin.

Q And that is correct to your personal knowledge; is that right?

A And the information presented on Colville Exhibit 24-10 is correct to my personal knowledge.

MR. VEEDER: I make an offer of 24-10, Your Honor.

THE COURT: Mr. Sweeney.

MR. SWEENEY: Could I see that, Your Honor.

MR. VEEDER: I thought you had one.

MR. SWEENEY: No.

MR. VEEDER: Go ahead.

THE COURT: Mr. Sweeney?

MR. SWEENEY: I have no questions, thank you.

THE COURT: State?

VOIR DIRE EXAMINATION

BY MR. MACK:

Q Do you have a copy of this, Mr. Watson?

A Yes, I do.

Q Thank you.

Were all of the figures on this exhibit obtained from the U.S.G.S.?

A No, sir, not all the figures on the exhibit were obtained by the U.S.G.S.

Q Could you tell the Court which ones were and which ones weren't.

A The figures that appear on the exhibit that were not obtained from the data of the U.S.G.S. were the 1977 acres, as shown in Column 2 on the exhibit, and I assume that you are referring to the numerical values that appear here. The figures in Column 3, water use in acre-feet, were based on measurements of the U.S.G.S. of surface water and water being pumped from the wells.

Q But those are calculated by you; weren't they?

I don't know. Do you know who calculated those in Column 3?

A The figures in Column 3 are to some degree calculated to separate things by allotment, but, for example, the 254.8 is simply a measurement of the amount of water being pumped from the wells that serve the upper allotments.

Q Who came up with those measurements, I guess is what I want to know.

A The U.S. Geological Survey.
Q How about the fourth column? Those are based on calculations; aren't they?
A Yes, the fourth column is simply calculation of the amount of water per acre and it is obtained by dividing the third column by the first column.
Q And did you do that?
A I did that, yes.
Q And the fifth column is average annual sprinkler water requirements; correct?
A Yes, sir.
Q Who came up with that figure?
A I determined those figures.
Q Based on actual use or something else?
A The information that is presented in Column 5 of the Exhibit 24-10 is consistent with Colville Exhibits 24-1 and 24-2. The amount of water requirement per acre that is shown on Colville Exhibit 24-10 is consistent with the previous exhibits. The exception is the amount of water requirement for grass.
Q And you indicate that by an asterisk; don't you?
A Yes, I have.
Q What I'm interested in, then, Column 5 is not based on actual use. It is based on the same elements which were plugged into exhibits 24-1 and 24-2.

A Yes, it is provided for comparison with Column 4.
Q And the figures for the Lahonton fishery were obtained from whom?
A The figures for the Lahonton fishery were obtained, based on my computations of the amount of water that was delivered to the Allotments 901 and 903 for the purposes of irrigation and the Lahonton fishery and as measured by the U.S. Geological Survey.
Q And those figures, are they not figures representing water actually delivered but not necessarily waters actually necessary for the use described in this exhibit?
A Oh, no. They are necessary for the use there.
Q How did you -- well -- that is your opinion, and that is reflected in this exhibit; correct?
A That is reflected in this exhibit as the actual amount of water that was used for those purposes.
Q I think I understand.

THE COURT: Mr. Price.

VOIR DIRE EXAMINATION

BY MR. PRICE:

Q Mr. Watson, Column 2 lists your judgment of acreages under irrigation on the Walton property; doesn't it?

A Yes, it does.

Q That is not an actual figure; is it?

A It is an actual figure, Mr. Price.

Q You have got Mr. Walton down with irrigating and surviving, apparently, on 50 acres, supporting his dairy herd; is that correct?

A During 1977.

Q Mr. Watson, isn't it true that you and I have had a long-standing dispute, and that is one of the issues in this case, as to how many acres is being irrigated by Mr. Walton?

THE COURT: Counsel, that is a cross-examination question.

MR. PRICE: Your Honor, this is a summary of evidence that they have not established or laid a foundation for, and I am seriously concerned that they have assigned consumptive uses of water to Walton's land which --

THE COURT: Counsel, this exhibit, as I understand it anyway, is merely illustrative of his opinion on these matters.

MR. VEEDER: That is right.

MR. PRICE: Yes, Your Honor, but the opinion has to be based on a foundation.

THE COURT: You go into that on

cross-examination.

MR. PRICE: May I pursue voir dire?

THE COURT: You may pursue voir dire.

Q (By Mr. Price) Mr. Watson, you have assigned water use in acre-feet to Walton's S-25 (sic), Walton's S-2371, and Walton's H-894 with respect to water uses in Column 3 with respect to each of those tracts of land. You don't know what amount of water went to the respective tracts of land in the Walton property; do you?

A Yes, I do.

Q How did you calibrate that?

A I don't understand your question.

MR. VEEDER: Once again, I think this is cross-examination.

THE COURT: No, I think this is all right. He is trying to establish what that figure is supposed to represent, the acreage.

A I didn't understand your question.

Q How did you calculate, for instance, that 152.5 acre-feet were used by Mr. Walton on his property designated as S-525.

A That is the amount of water that was pumped from the Walton new irrigation well in 1977 as provided by the records of the U.S. Geological Survey.

Q That is the amount of water that was pumped?
A I have not adjusted that figure. That is -- the only adjustment that I have made is not an adjustment, but just a conversion of the total amount of gallons recorded by the U.S. Geological Survey as having been withdrawn from the Walton irrigation well during 1977, and I have converted the gallons to an acre-feet.
Q Do you know why --
A Quantity.
Q Do you know whether the water withdrawn that was pumped was applied for irrigation or used for other consumptive uses, such as dairy.
A I know that the -- that a very substantial amount of the 152.5 acre-feet had to be used for irrigation, that a dairy could not consume very many acre-feet of water.
Q What you're saying is, you don't know.
A I do know, based on discussion with you in August in your office in 1977 that Mr. Walton was using water from the Walton irrigation well for domestic purposes and that would include his dairy, I'm sure.
Q So, this 152.5 doesn't reflect water that was solely put for irrigation; does it?
A Mr. Price --
Q Mr. Watson, that can be answered yes or no.

A It does not.
Q As to Walton S-2371, you do not allocate the amount of acre-feet applied to that particular tract; do you Mr. Watson?
A I do not.
Q Because you don't know; do you?
A All that I am representing on Colville Exhibit 24-10 is the amount of water that was used by Mr. Walton for the cumulative irrigation on Allotments 2371 and 894. I recognize, as I have displayed on the exhibit, that I have no way to separate the water use on Walton Allotments 2371 and 894, and that that is --
Q Where did the combined figure come from then, please.
A The combined figure of 115.4 acre-feet is the amount of water that was diverted from No Name Creek as measured by measurement device no. 12 shown on Colville Exhibit No. -- 10, I believe.
Q Is that on Mr. Walton's diversion, surface diversion?
A Yes, that is Mr. Walton's surface diversion.
Q How much of that returned to the creek through the return flow pipe?

THE COURT: Counsel, we are now getting back into cross-examination.

I might point out, and I think throughout the trial there has been some difficulty with the difference

between what I know counsel is used to in the state rules on experts, and the federal rules of evidence.

The federal rules of evidence at 705 have considerably and fundamentally changed our old concept of use of experts, and that calls to the Court's attention and the committee notes make it very clear that under the new rule that a witness who is an expert may state his opinion and his reasons without specifying the data on which it is based. That is a matter left for cross-examination.

Now, that is entirely different from when we all practiced under the state rule, and that is why I have been constantly cutting you off, Mr. Price, because we do have a different rule here.

MR. PRICE: I appreciate that, your drawing that to our attention, but I do want the Court to know that Mr. Watson's answer to that was that he doesn't know the return flow on that, and my objection just --

THE WITNESS: I did not state that, Mr. Price.

THE COURT: He didn't say that.

MR. PRICE: I thought he did.

THE COURT: You can go back into that on cross-examination, Mr. Price.

MR. PRICE: Thank you.

THE COURT: Any other inquiry on 24-10? 24-10 will be admitted.

(Colville Exhibit No. 24-10 admitted.)

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Mr. Watson, in calculating the water requirements as reflected on Colville Exhibits 1, 2 and 10, and what you perceive to be, and as an expert made a determination as to what are reasonable water requirements, both as to irrigable lands and the present irrigated lands, have you had an opportunity to contrast or compare those figures with the figures set forth in what we refer to as the Cline Report, Exhibit No. 1 of the United States, in this case?

A Yes, I have.

Q And I'm going to hand you a copy of that Exhibit No. 1, refer to pages 27 and 28, under the heading of recharge --

MR. VEEDER: May I approach the witness, Your Honor.

A You are referring to U.S. Exhibit No. 1?

Q That is right, and would you state into the record --

MR. SWEENEY: What page are you on Counsel?

MR. VEEDER: 27.

Q Will you state into the record the difference that you determined in regard to the water requirements, and those are as reflected in Mr. Cline's report, that is, U.S. Exhibit No. 1.

A Yes. The difference -- first, Mr. Veeder, I should read, I believe, from the U.S.G.S. report, to establish --

Q By all means.

A On page 27, paragraph 2, of the U.S.G.S. report, U.S.A. Exhibit No. 1, the following statement is made:

> "The quantity of evapotranspiration loss was obtained by applying the Blaney-Criddle formula (U.S. Department of Agriculture, 1970) to calculate the consumptive use for alfalfa and grass. Monthly water surplus or deficit was obtained by subtracting the monthly precipitation (table 1) from the monthly consumptive use."

Now, this is the sentence that we are getting to. The water deficit during the period late April

to mid-October, 1976, was estimated to have totaled 22.1 inches for alfalfa and 20.0 inches for hay and grass.

Q How does that contrast with your calculations, Mr. Watson, and if you --

A My calculations of the average consumptive use for alfalfa in the No Name Creek valley, my computations are 34 inches of consumptive use per year. Therefore, a difference of 12 inches is evident between the figures determined by myself and the figures determined by Mr. Cline.

Q Have you had any occasion to correlate your calculations with the calculations of any other source, related to the Omak area?

A Yes, I have.

Q And would you state into the record what that source might be?

A That source is the Circular No. 512 prepared by Washington State University.

Q And how does that comport with the numbers upon which you relied, Mr. Watson?

A It comports very well.

Q And when you say "very well," --

A The computations, the estimates of consumptive use prepared by Washington State University in Circular

512, are given on a certain page of that document as 34 inches per year for the town site of Omak.

Q And did you utilize that to compare, contrast with your number?

A Yes, I did.

MR. VEEDER: Your Honor, it may be helpful to the Court, these haven't been offered, but the data referred to by Mr. Cline is Irrigation Water Requirement, Technical Release No. 21. The State of Washington has station Circular 512, November, 1969, entitled Irrigation Water Requirements, Estimates for Washington.

It might be helpful to the Court if I put those in because there is such a sharp contrast between the calculations by Mr. Cline and those by Mr. Watson, and I think that I would just put them in, if I --

THE COURT: You may have them marked for identification.

MR. VEEDER: And I put them in and the series would be 24-11, I think.

THE COURT: No, because we have already pre-marked and we have trouble with these numbers. I'm going to go to the end of the numbers which I think is 36; is it not?

MR. VEEDER: Yes.

THE COURT: We will mark them as Exhibit 36 for the Tribe.

MR. VEEDER: Irrigation water requirements, that is the technical release, 21, and then the Irrigation Water Requirements, Estimated for the State of Washington.

MR. SWEENEY: Maybe we could take the recess and give us a chance --

THE COURT: Yes, because I want to look at those, so we will take the luncheon recess at this time.

Gentlemen, I have scheduled at 1:00 a criminal matter for about a half an hour. However, I am advised that the fog situation is such that maybe Counsel hasn't been able to get here.

I want to suggest that although I am recessing this case until 1:30, you might kind of want to collect things together on your desk, because we may have counsel here on a criminal matter at 1:00. I can't tell until I find out whether the planes are landing this morning, but this case will be recessed until 1:30.

THE CLERK OF THE COURT: All rise. The Court is recessed until 1:30.

(Luncheon recess is taken.)

Afternoon Session

February 10, 1978 1:30 P.M.

MR. SWEENEY: Your Honor.

THE COURT: Mr. Sweeney.

MR. SWEENEY: I have a request to make. Mr. Cline would like to leave about 3:00 to catch a plane. He will be back when we reconvene, but we hope it will be all right for him to do so.

THE COURT: Sure. Did somebody raise the question that they wanted to establish now rather than at 4:30 whether we are going to be coming back to finish the trial?

MR. BURCHETTE: Your Honor, we are fine with 4:30. That is fine with us. It probably would be a good time to do it.

THE COURT: It's immaterial to me. I don't know whether we are going to change much between now and 4:30 as to what our prognosis is for requiring additional time.

MR. BURCHETTE: I think the State's suggestion is that by about 4:30 we will have been through enough evidence that we will probably be ready for a break, so maybe we ought to hold it at 4:30.

THE COURT; Very good. You may proceed.

MR. PRICE: Your Honor, before we proceed.

THE COURT: Yes.

MR. PRICE: I don't think, in connection with my last voir dire which turned out to be cross-examination, that I made a record of objecting to that exhibit, and I would like it in the record.

THE COURT: The record will show the objection.

MR. PRICE: Thank you.

MR. VEEDER: The record should also show that we delivered to counsel the Project Efficiency of the Colville water requirement summary, the data that was being interrogated about, we delivered that to all counsel and I haven't offered it in evidence. I didn't think it was necessary. I think the cross-examination from it --

MISS ECKERT: Could you speak up, Mr. Veeder, please.

MR. VEEDER: Yes. I just stated -- normally I speak louder, I'm sorry.

What we have here is the calculated water requirement showing project efficiency and related data concerning which Mr. Price had gone on voir dire. I think everybody has a copy of this. Do you? You don't have a copy of it?

MR. MACK: No.

DIRECT EXAMINATION CONTINUED

BY MR. VEEDER:

Q Mr. Watson, we were interrogating in regard to, I guess, the differences between your calculated water requirements and those that are set forth in Exhibit No. 1 of the United States, what we have referred to now as the Cline Report.

A Yes, sir.

Q And have you, during the recess, given further consideration to the differences between your calculations of water requirements on the Colville irrigation project and those assigned by Mr. Cline to the same area?

A Yes, I have given consideration to that.

Q And I hand to you Colville's Exhibit 36-1 and 36-2 and ask you to state into the record what those documents are, please.

A 36-1 is titled Irrigation Water Requirement, Technical Release No. 21, prepared by the United States Department of Agriculture, Soil Conservation Service, Engineering Division, April 1967, revised September, 1970.

Q Now, is that the document to which Mr. Cline made

reference on page 27 of the U.S. Exhibit No. 1?

A Relying on the reference that Mr. Cline cited in the U.S.G.S. report 1978, this is the document.

Q And have you had occasion to compare at least the formula set forth therein as to calculating water requirements?

A To compare the formula, Mr. Veeder?

Q To compare the formula that you have used in assigning water requirements for the Colville irrigation project?

A Yes, I have.

Q And have you an opinion as to the applicability of the data set forth therein to this area?

A The formulas used by myself in calculating the water requirements for the Colville irrigation project and the formula used by Mr. Cline, are the same. The difference between the water requirements determined by Mr. Cline and by myself are predicated on the use of data in applying the formula, rather than in the formula itself.

Q And what is that difference?

A The difference is that the crop coefficient as defined by Technical Release No. 21, Exhibit 36-1, are developed on a national scale based on measurements of evapotranspiration across the United States and do

not reflect local conditions pertinent to the State of Washington.

Q Now, for the record, I ask you to read from United States Exhibit No. 1, page 28, the water duty as assigned to this area by Mr. Cline, if you would, please.

A Mr. Cline states on page 28:

> "The water deficit for 1977 during April-September was estimated to have totaled 26.7 inches for alfalfa and 21.6 inches for hay and grass."

Q Now, how did your calculations compare with those, Mr. Watson?

A My calculations of the consumptive use for alfalfa for the Colville irrigation project in 1978 are approximately 38 inches.

Q Just for the record, the difference between the two?

A The difference is 12 inches.

Q Have you an opinion -- before I go further, have you looked at other local data to compare your calculations with, for example, what the Washington University has, Washington State University has utilized for the same area here?

A Yes, I have.

Q And how did you state those compare?

A The calculations that I performed for the Omak area compared very closely with the calculations prepared by Washington State University, and specifically --

Q Did you use the same formula that was generally used?

A I used the same formula that Washington State University used.

MR. VEEDER: I would like to offer in evidence the exhibits marked 36-1 and -2, Your Honor, if I may, and all counsel have looked at those.

THE COURT: Any objection to the exhibits?

MR. SWEENEY: No objection.

MR. PRICE: No objection.

MR. MACK: Your Honor, my only question would go to this: the Exhibit 36-1 which is Technical Release No. 21, contains all kinds of text and narrative and conclusions. If I understand it correctly, it is being offered simply for the use of those formulas in there, or formula, which Mr. Watson used in his calculations.

MR. VEEDER: That is correct.

MR. MACK: Is that correct?

THE WITNESS: That is not correct.

MR. VEEDER: It is not correct?

THE WITNESS: Would you restate that, Mr.

Mack?

MR. MACK: Well, Mr. Veeder would be the one who could tell us what he is offering.

MR. VEEDER: The only offer I was making is to have this witness identify the formula that was used in 21 and relied upon by Mr. Cline in coming up with the 26.7 inches of consumptive use. That is the only reason I offered it.

THE WITNESS: Yes, sir, I'm sorry. That is correct.

THE COURT: Well, it will be admitted for that purpose only, then.

MR. VEEDER: That is the only purpose, Your Honor.

MR. MACK: Thank you.

THE COURT: 36-1 and 36-2 are each admitted.

(Colville Exhibits 36-1 and 36-2 admitted.)

Q (by Mr. Veeder) Now, would you state into the record, utilizing your calculations as to water requirements, what would be the effect upon Exhibit No. 3, the water budget, set forth on that, and would you step to that exhibit and state into the record the difference between your numbers and those set forth in the water budget by Mr. Cline, if you would, Mr.

Watson, please.

A As I stated, the difference in water use, in consumptive use, per acre during 1977 between Mr. Cline's report and my determinations was 12 inches.

THE COURT: Mr. Watson, I can't see the bottom part. Can you put it up on one of these easels?

THE WITNESS: Yes, sir.

THE COURT: Thank you.

Q (By Mr. Veeder) Would you start again, please.

A As a predicate to this we are referring to the quantity labeled by Mr. Cline as IL = Irrigation Leakage (excess water) to groundwater reservoir.

Now, the number that Mr. Cline uses during the 1977 irrigation season, April to September, is given at the bottom of Exhibit 1 of the U.S. as 104 acre-feet.

Q That is 3, U.S., I believe, Mr. Watson.

A 3. The Exhibit is U.S.A. 3.

Now, as I stated previously, the difference between Mr. Cline's determination and the determination made by myself was 12 inches during the 1977 irrigation season and both Mr. Cline and myself recognize that 95 acres were irrigated on Allotments 892 and 526 in the 1977 irrigation season, so we are both using the

same number of acres and we had provided Mr. Cline with that acreage. So, the difference in the consumptive use for the 95 acres is 95 acre-feet, one foot for 12 inches times the 95 acres, is 95 acre-feet.

Q And what does that do to the equation then?

A The effect is that 104 acre-feet is evaporated.

Q And what is it now, after the evaporation?

A And that number would become 9 rather than the 104.

MR. VEEDER: You may cross-examine.

MR. SWEENEY: You are completed with this witness?

MR. VEEDER: Yes.

THE COURT: All right, who wants to start? Mr. Price, do you want to start cross-examination?

MR. PRICE: Not really, but I will. I think I'm in that position, Your Honor.

CROSS-EXAMINATION

BY MR. PRICE:

Q Mr. Watson, there have been lots of charts and lots of graphs and I'm not a hydrologist. What I'm primarily interested in is attempting to elicit for this Court's benefit the amount of water that is in this aquifer that is available for use, beneficial

application.

You have used a term from time to time called a "firm annual water supply."

A Yes, sir.

Q Would you define that for me, please.

A The firm annual water supply is the amount of water that can be used on a year to year basis without significant shortages in water supply for beneficial purposes that would reduce the production of crops significantly.

Q Taking in -- what considerations do you plug into that firm annual water supply? Does that assume that, for instance, No Name Creek is to continue with a certain flow throughout the year for use down below in 901, 903, or not?

A Does that assume that No Name Creek --

Q Is the firm annual water supply, is that computed so as to maintain a surface flow in No Name Creek?

A Not necessarily, Mr. Price.

Q Okay. Does that firm annual water supply of 500 -- is it 50?

A 550 is correct.

Q Does that assume that there will be no surface flow in No Name Creek?

A No, it does not assume that there will be no surface

flow.

Q All right. Tell me what it means in terms of the effect on the surface flow of No Name Creek.

A It means that in the No Name Creek basin under the facilities that currently exist, that there would be less natural flow in No Name Creek than there has been in the past. It does not mean that there would be no natural flow in No Name Creek at all times.

Q Under the facilities that presently exist.

A And under facilities that could exist to irrigate the remaining acreage to bring the total project to 228.4 acres.

Q Could the facilities be altered in any way, Mr. Watson, so as to procure water for the allotments on Walton's land that would affect No Name Creek differently and still withdraw the same amount of water from the acquifer?

A From Walton's land?

Q From all of the property.

A Could water be attained differently?

Q Yes. Could the system be rearranged, pumps relocated, wells relocated, alternated, so as to use, consume the same amount of water, but have a different effect on the flow of No Name Creek?

A Well, my opinion, Mr. Price, is that the arrangement

of the facilities in No Name Creek basin as they exist is very adequate and very well prepared and certainly, I don't believe that any modification is necessary, and that the kinds and types of modifications that have been proposed by the U.S. Geological Survey would very definitely lead to a disaster in the No Name Creek basin at some point in time.

Q Mr. Watson, I don't think that was my question, and I will try and be specific so as not to mislead you.

My question is not whether you think the existing system is adequate or satisfactory, but whether or not it could be altered so as to remove the amount of water that is now being removed without seriously affecting the water table or the flow of No Name Creek.

A Without seriously affecting the water table?

Q Yes.

A No.

Q Okay. You disagree with Mr. Corke that if you had it to do over again he would locate the southermost Tribe well further away from Walton's irrigation well.

MR. VEEDER: Object to the question. That is not what Mr. Corke said, Your Honor.

MR. PRICE: I think he mentioned it.

THE COURT: I thought that is what he said,

but go ahead and clear it up here .

MR. VEEDER: Mr. Corke said it might have been that on a second look you might have changed Colville No. 2 to some point, but he also said on redirect that it wouldn't have made any difference in regard to the quantity of water that is available.

THE COURT: No, you may ask the question. I think he made a statement along that line at least.

Q (By Mr. Price) Do you disagree with Mr. Corke in that regard?

A If the context that you're stating that question was properly Mr. Corke's intention, I disagree.

Q Okay. What sources, very simply, did you calculate contribute to the available water supply in the No Name Creek Valley?

A There are two sources of water supply to the No Name Creek valley, and your word for valley may be somewhat different from mine, Mr. Price, but the two sources of water supply to the No Name Creek basin as defined on Colville Exhibit No. 7, for example, the two sources are natural runoff from precipitation and natural infiltration from Omak Creek.

Q And would you outline for us on Exhibit No. 7 -- is that a Plaintiff's exhibit? Can you tell from there?

A It's Colville Exhibit No. 7.

Q Would you outline for us on Colville Exhibit No. 7 the parameters, perimeters of the precipitation boundary?

A Yes, sir.

Q That would contribute. I thought that was Exhibit No. 7 right there.

A No, this is Colville Exhibit No. 15-2.

Q Why don't we just stick with 15-2. It's right there.

A Okay. Now if your question is to outline the boundaries of the area that would receive precipitation runoff --

Q That would contribute to the valley, to the water supply.

A Yes, sir.

The area outlined by the heavy dashed blue symbol -- I'm referring to a heavy dashed blue symbol that is approximately a quarter of an inch wide on Colville Exhibit 15-2 -- the area contained within the boundary of this heavy blue symbol which begins at the north end of Omak Lake and runs in a generally northerly direction to the northeast quarter -- excuse me, the northwest quarter of Section 9, and then begins a southern migration through Section, the corner of Section 16, across Section 15 into 22, back around into Section 14, down through Section 23, through Section 26 and then again into the north end of Omak

Lake after passing through a corner of Section 35 and 34.

The area within that boundary received precipitation that eventually ends up in the No Name Creek basin and is discharged to Omak Lake in a natural state.

Q All right. Specifically, I would like to call your attention to the northwesterly most tip of that boundary which would encompass the Paschal Sherman Indian School and beyond; is that correct?

A Yes, sir.

Q And does not the surface groundslope slope away from the No Name Creek valley in that area?

A Yes, it does.

Q So, what you are saying by incorporating that area, is that precipitation is percolating through the ground into the groundwater and becoming available to No Name Creek as part of the groundwaters?

A I am saying that, Mr. Price, in a natural condition.

Q In a natural condition.

A Yes, sir.

Q Very good. Now, what figure value do you assign to the amount of precipitation that is going to be contributed in this manner to that valley?

A What value of precipitation?

Q What amount of water do you assign to this precipitation within the boundaries you delineated?
A I can give you an estimate of that, Mr. Price.
Q An estimate?
A Yes, sir.
Q All right. Let's have your estimate, please.
A In my opinion, the amount of precipitation runoff that is contributed to the No Name Creek basin that becomes a component of the firm water supply is 175 acre-feet.
Q And how do you compute that, Mr. Watson, please?
A I computed that by --
Q You can sit down, if you prefer. You may want to stand.
A I computed that amount, Mr. Price, by separating the amount of precipitation runoff from the total firm water supply and, as I stated previously, the two components of natural water supply are Omak Creek, the infiltration that occurs naturally, and precipitation runoff. Now, the 175 acre-feet is the difference between what I consider the infiltration from Omak Creek and the natural runoff from precipitation.
Q What do you consider -- you are arriving at this -- may I put it backwards, then. You are calculating

some other quantities and then subtracting those and coming up with a figure that you assign to precipitation percolating to the groundwater; is that correct?

A Yes, sir.

Q And what, again, are the other figures that you are using to get back to this 175 acre-feet?

A It's 550 acre-feet is the firm annual water supply.

Q Doesn't that incorporate the precipitation, or --

A Yes.

Q Or is the precipitation in addition to that?

A No, the precipitation is incorporated in the 550, so the balance, the difference between the 550 acre-feet and 175 acre-feet is the contribution from Omak Creek.

Q Well, I thought you said you computed the amount of precipitation by first starting with two other figures and subtracting those to get to the precipitation. Now you are starting out with the precipitation figure.

A No, well, I'm just -- you asked a question with regard to precipitation.

Q Right.

A And I had to tell you that I derived the precipitation from the total of 550 acre-feet, and a determination of

the infiltration from Omak Creek that occurs naturally.

Q You can't determine -- Mr. Watson, I suggest you can't arrive at 175 feet by starting with 550 feet which already incorporates the 175 feet; is that not correct?

A I think maybe -- let me go ahead and tell you what it did and maybe this will clear this up for you, Mr. Price.

Q Well, let me continue my line and then your counsel and come back in that regard.

A Okay.

Q Apart from precipitation, then, there has to be another quantity assigned and that is from infiltration of Omak Creek; is that not correct?

A Yes, sir.

Q And what figure do you assign to the amount of water contributed from Omak Creek?

A 375 acre-feet.

Q All right, would you tell me how you arrive at that 375 acre-feet, please?

A Yes, the 375 acre-feet was determined by examining all the outflows from the No Name Creek aquifer during a period from February 1, 1977, to April 19, 1977.

Q Excuse me just one moment.

And what did the outflows tell you about the

infiltration of Omak Creek and what -- first of all, would you identify the outflow, please.

A The outflows, the outflows during this period from February 1 to April 19, 1977, were natural stream flows as discharged from the spring zone of the No Name Creek aquifer, plus any additional watershed contribution between the No Name Creek aquifer and Mr. Walton's point of diversion. This was the natural runoff from precipitation in that area.

Q February 1 to April 19, 1977, you measured No Name Creek stream flow.

A That is right. That was the total amount of outflow until pumping began which was April 6, 1977, and during the period from April 6, 1977, to April 19, then a component amount of water that was pumped from the No Name Creek aquifer was also included.

Q Let's just stick with this period. How does that outflow relate to leakage from Omak Creek some distance into the aquifer?

A The period that was selected for investigation, Mr. Price, from February 1 through April 19, was specially selected because it was a period during which time the water levels in No Name Creek aquifer did not change significantly. On January 31 or February 1, 1977, the water level in the aquifer was

essentially the same as the water level in the aquifer April 19, 1977, so the effect of any change in storage in the aquifer during this period of time was very small. It was possible, then, to measure the contribution from Omak Creek during this period by examining how much water flowed out. If there had been any significant change in storage in the aquifer, if there had been a decline in the water level, if there had been a rise in the water level, then some of the water that had infiltrated from all sources, Omak Creek and precipitation runoff, would have made some differences in the water levels if that same -- if less than the amount that was coming in was being discharged, or if more than was coming in was discharged. Do you understand what I'm saying?

Q I will try and work through it with you. To be doing that you had to assume that the aquifer storage capacity was full; is that not correct?

A No, no.

Q Unless the storage capacity of the aquifer is full, you are going to not get a true reading of what the outflow is or should be from that basin; are you?

A No, that is not correct, Mr. Price.

Q What is the storage capacity of that aquifer, Mr. Watson?

A I don't know what the storage capacity is, and it's not necessary to know.

Q Well, let's find out. You say there was a short water supply, and I guess what you are saying is that at one time last year the water reduced the level -- the aquifer reduced below certain pumps, or at least came into close proximity to where the pumps were located in the ground; is that not correct?

A That is correct, yes.

Q And if, in fact, the Tribe and Mr. Walton had placed their pumps 15 feet beneath the surface, there would have been what you call a short water supply the first day of irrigation season; wouldn't there?

A If it had been attempted to withdraw the amount of water that was taken, yes.

Q And if the Tribe and Mr. Walton located their pumps at 35 feet beneath the surface of the ground, it would have been a short water supply at some point during the irrigation season last year; is that not correct?

A Yes, that is correct.

Q So, short water supply is an integral part of the pumping system that is developed to extract that water; isn't it?

A No.

Q It is not. So, no matter how much water is down there underneath the ground, it doesn't make any difference to you even though it's there. If you just don't want to put your pump down and get it, then you have got a short water supply according to your determination; isn't that correct?

A Short water supply, Mr. Price is determined by the amount of water coming into the aquifer. If you are taking out more water than is coming in, your pumps are going to go dry, and that is definitely the case in 1977.

Q But as you pump an aquifer, Mr. Watson, you expand the area upon which that aquifer draws to recharge itself, and you increase the amount of water that is regenerating in that aquifer; is that not true?

A No.

Q Okay. Do you even know how deep the valley, the bottom, that granite floor is?

A I have a pretty good idea.

Q Okay. You have an exact idea; do you not?

A No I do not.

Q Did not your office make detailed geology workup on this valley?

A Very, very detailed.

Q And they didn't consult with you in that regard?

A Yes, they did.
Q And they made very, very detailed studies and you do know where the floor of that granite floor is in that valley; don't you? You know its width and you know its depth; don't you?
A No.
Q Okay. And is that why you can't calculate, then, the total storage volume of that aquifer?
A No.
Q Why can't you?
A The reason you cannot calculate the total storage volume of the aquifer is because there is no way to determine the amount of space in the materials that would store water.
Q You are talking about the specific yield.
A I'm talking about the space for the aquifer to store water which Mr. Cline has referred to as a specific yield.
Q Yes. And you made no studies to determine the specific yield of the land properties within this valley?
A Yes, I did.
Q And what were those studies?
A The specific yield for the No Name Creek valley that was determined in this investigation was .145 and that does not comport precisely to the definition of

specific yield used by Mr. Cline.

Q What was the figure, again, Mr. Watson?

A .145.

Q And how does it differ from Mr. Cline's definition?

A The difference is that it is a coefficient that was intended to represent the percent of the total volume of mass, including all of the rock materials, all of solid materials, that would yield water from the No Name Creek aquifer.

Q Okay. Can't you take that figure and with the rest of the information you have, calculate the storage of the valley, then?

A The dimensions, the precise dimensions and delineations of the boundaries of the granite, are unknown to everybody, to my knowledge.

Q Mr. Watson, did I misunderstand you in a deposition that we had several weeks ago, maybe it was months now, here in Spokane --

MR. VEEDER: I can't hear you, Mr. Price.

Q (By Mr. Price) I'm asking the witness whether possibly I misunderstood him when he talked about how you determine the amount of infiltration from Omak Creek to No Name Creek valley, and I thought that you took measurements from Omak Creek and measured its flow in March of 1976 at less than .66 cfs, and then the

figures you talk about from January 31 of 1977 through the middle of April of 1977, of .54 cfs. Was I in error?

A You definitely were, Mr. Price.

Q Did you take any measurements in March of 1977, Mr. Watson?

A Did I take any measurements in March of 1977?

Q Yes, in connection with trying to determine the amount of infiltration from Omak Creek into No Name Creek.

A No, I did not.

Q And you didn't determine that the flow of -- the amount of infiltration was greater than the .50 cfs in March of 1976?

A In March of 1976 I did make a determination that the contribution to the No Name Creek aquifer was in excess of .5 cfs from all sources. Excuse me, that is not correct, Mr. Price. The dates are wrong on that.

In March, 1976 I made a determination that the inflow to the No Name Creek aquifer from all sources was less than .66 cfs.

Q This is March of 1976?

A This is March, 1976, March 12.

Q And how did you make that calculation? Is that the

one you previously described or was that a different one?

A That is calculation that I don't believe has been previously described in the courtroom.

Q You made a calculation March of 1976 of less than .66 cfs?

A It's not a calculation, Mr. Price, it's a measurement.

Q You made a measurement in March of 1977 that the infiltration was greater than .50 cfs; right?

A I didn't hear the date on that last question.

Q March, 1977 that the infiltration from Omak Creek was greater than .50 cfs.

A No, that isn't what I said. This is a very complex subject, Mr. Price, and the reason I'm not responding to your answers is because of the complexity and you are misstating those.

Q I'm sure you will bear with me, Mr. Watson.

The final bottom line of that deposition was your calculations as to the amount of water source for No Name Creek valley, and my notes reflect -- and if they're wrong, go ahead and say so. We don't need the rest of this. Just tell me what the calculation was. What was the calculation in March of 1976 that calculated out to be less than .66 cfs?

A Can I refer to the exhibits?

Q Surely.

A Now, again, I repeat, this isn't a calculation, it's a measurement.

Q That is right.

A On March 12, 1976, the United States Geological Survey made a measurement of No Name Creek at Location 10, shown on Colville Exhibit No. 10, and the location of this measurement point is fairly near Mr. Walton's driveway. In fact, it is at his driveway. And the U.S.G.S. in that measurement found that the discharge of No Name Creek was .66 cfs.

Now, the significance of that measurement is that from November, 1975, through March, 1976, the water level in the No Name Creek aquifer under natural conditions was declining which meant that more water was flowing out of the aquifer than was coming in from all sources including natural runoff and precipitation and including natural infiltration from Omak Creek. Just like filling your bathtub. If you fill your bathtub and you put more water into it than has gone out of it, the water level in your bathtub is going to rise. But if you are not putting in as much as is going out the drain, the water level is going to fall. So, this is an indirect measurement of the amount of water that was being recharged to the No

Name Creek aquifer from all sources under natural conditions. That is a measurement of the amount of water that was coming in during that period of time.

Now, .66 of a cfs in terms of acre-feet, Mr. Price, -- I'm at a loss because I can't convert quite that quickly, but I would estimate that that is about 425 acre-feet, far less than the 550 acre-feet that I have testified to as a firm water supply, and far less than the 1100 acre-feet testified to by the U.S.G.S.

Q All right.

A As an average water supply.

Q Because you are not calculating precipitation in there at that point, are you?

A Yes, I am.

Q That is why you don't come up to 550 feet; do you?

A That is not correct.

Q Your calculation --

A The measurement --

MR. VEEDER: Let the witness answer.

Q (By Mr. Price) Go ahead.

A The measurement of .66 of a cfs is a measurement of all the -- it's a measurement of the outflow from the No Name Creek aquifer which reflects the contribution from all sources. It doesn't just isolate itself to

the infiltration from Omak Creek.

Q At a given point in time.

A At a given point in time it is reflected by the water levels from November through March -- November of 1975 through March of 1976.

Q That is correct.

A We can't see that the water levels continue to decline on a natural basis because something began shortly thereafter and the water levels declined because of the rates of withdrawal from the wells.

Q Does that reflect to you, Mr. Watson, then, that the storage capacity of No Name Creek valley was full to its limit and was overflowing, the bathtub was overflowing in 1975 and into 1976?

A The No Name Creek aquifer was discharging natural stream flow in 1975 and 1976.

Q My question was, does that indicate to you, if the level of the water was declining in the valley at that point, that it has reached its storage capacity and is discharging because the natural inflow cannot be accepted by the aquifer anymore and it needs to run out somewhere?

A It simply means, Mr. Price, that the water level in the aquifer was high enough to discharge water to the natural spring zone of No Name Creek.

Q So it doesn't mean -- that doesn't necessarily have any correlation with how much water is coming in at the other end unless you know the transpecifity of the material and how fast it can flow through to get down to the No Name Creek channel.

A That is completely irrelevant.

Q I see. All right. So, the only thing that is relevant for you is how much is coming out at a particular point in time as to how much is going in at the other end of this aquifer.

A That, correlated with the observation of the water levels. The water levels are falling which means that there is more coming out of the aquifer than is going in. If the reverse was true, the water level in the aquifer would be rising.

Q Can it continue to rise forever, Mr. Watson? How far can this water level rise in connection with exhibit --

MR. PRICE: If I may, Your Honor.

Q Plaintiff's Exhibit 33-1. How high up on that chart can the water level go?

A In my opinion, the water level on the chart -- and we are referring to Colville Exhibit 33-1 -- does not in a natural state rise significantly higher than was observed in October-November, 1975. It just

followed a year of very heavy precipitation. To the extent that this aquifer is recharged from precipitation and from contributions naturally from Omak Creek, these contributions were reflected in very high water levels during this period of time. It's an extremely wet period of time that we are following.

Q Okay. Then, my question is, again: The aquifer is full; is that correct?

A Essentially.

Q And it's got a hole in it, and it slopes downward in the vicinity of the Walton's north boundary and discharging from that is the water that it can't accept.

A Well, your concept is appropriate, but it's not a hole down there; it's just water flowing through.

Q Springs where it appears. Do you have any idea why that water appears at spring zones at that point in the land?

A Yes. That's where the water table, the elevation of the water surface in the No Name Creek aquifer intercepts the land surface.

Q And the records that you have compiled and obtained show that during the time that the Waltons were irrigating that the aquifer remained in a balanced system, remained at its highest level that it could be at; is that not correct?

A In 1975, in my opinion, the Waltons were not withdrawing large amounts from the No Name Creek aquifer as reflected by the small declines in the water level in late July, early August in a couple of small depressions in the water table in middle September.

Q And it is obvious from that exhibit that whatever they did withdraw was certainly recharged.

A It's obvious from the exhibit that whatever they withdrew during this short period of time was filled in. The void around the pump was filled in by water being contributed in a very local area just to fill the depression around the pump.

Q Oh, then that exhibit doesn't tell us anything about the level of the water in the aquifer itself, just around a given point, a particular pump?

A This is reflecting the water levels in the Peters observation well. Please keep that in mind.

Q And that is the one you described as a poor observation well?

A I did not describe it as a poor observation well.

Q I'm sorry, I thought you did.

So, this is just a given well and does not relate to the level of the groundwater aquifer in terms of its total supply?

A This is very reflective of the total supply in the

aquifer.

Q All right. Then, my question is: Doesn't that reflect that all of Walton's use was fully recharged in the end of the year of 1975 and commencing the start of the year '76.

A I don't use the term recharge, but water from the surrounding area, very local area, in the south end of the aquifer did flow in and fill the void that was created by the pumping around Mr. Walton's well, and I do believe that the Peters observation well did reflect draw down in the aquifer from Mr. Walton's pumping.

Q And recharged.

A If you want to use the term recharged, Mr. Price, I would accept that, but it is recharged from a -- it is not a generation from a new supply of water. It's simply the movement of the water that is in the aquifer back into the void created by the well.

Q Where does the water come from that fills in the void after the Tribe turns off their pumps?

A The same sources that recharges the aquifer.

Q That recharge the aquifer.

A That's right.

Q All right. Fine, thank you.

Does the firm annual water supply mean that that

is all you can take out in any given year or is that an average, or is it every third year or what does it mean, those terms?

A Well, the firm annual water supply, Mr. Walton -- excuse me, Mr. Price, is always less than the average. Consider your own home, for example. Would you design the roof of your home for an average snow load? What would you do when a heavy snowfall came.

Q You say it's designed for less than the average. What would you say the average available water supply might be in No Name Creek valley?

A The average available water supply in No Name Creek Valley would be approximately 800 acre-feet.

Q 800 acre-feet. As a hypothetical, if this court were to limit use of water for whatever parties or any parties, to 500 acre-feet a year, according to your own testimony, there would be many years when 300 acre-feet of water would go to waste; is that correct?

A Now --

Q I'm proposing a hypothetical. If any party or all parties were limited to withdrawing 500 acre-feet from that aquifer, then many years 300 acre-feet would go to waste; is that not correct?

A No, the figure that I gave you of the 800 acre-feet

average, Mr. Price, is the average water supply that occurs during the entire year. Now, that water supply is not usable to its fullest extent because there are spills from the aquifer during the non-irrigation season and, therefore, the amount of average water supply that is available during periods when it can be beneficially used is less than that.

MR. PRICE: If I may approach the exhibit, Your Honor.

Q Exhibit, Plaintiff's Exhibit 33-1, we have the level of the water supply in the aquifer at an elevation of approximately 1150 feet. You are suggesting that we -- and that represents a full water table.

A I'm speaking -- I'm accepting that, yes.

Q And you are suggesting that we can't concern ourselves with the first 300 feet in that aquifer because that is going to discharge in some manner or another every year.

A The first 300 feet in the aquifer?

Q Right. Why can't we consider this extra 300 feet above the 550, the 200.

A Oh, the 300 acre-feet. Acre-feet you're talking about, not depth.

Q No, acre-feet.

We can't consider that -- I don't know what depth it

would bring it down to -- but we can't consider that because you are concerned that it's going to be lost or discharged out of the system before it can be used.

A First, it's not 300 acre-feet, Mr. Price. The difference between 800 acre-feet and 550 is 250.

Q Yes, I just commented 250. Thank you.

A And it is inconceivable, in my opinion, to manage the management of this aquifer such that there were no longer any discharges of natural stream flow to No Name Creek during periods when it cannot be beneficially used. That is inconceivable to me.

Q Mr. Watson, haven't we proven this past year that if the Tribe continues to pump in the manner that it has, that there isn't going to be any stream flow, surface flow, so we don't have to worry about losing 300 acre-feet of discharge through the stream flow; do we?

A I certainly think that we proved that the water supply is inadequate to meet the demands that have been placed on it in 1976 and 1977.

Q What if you put your pump down another 50 feet, each of the three pumps? There would have been more water available; would there not?

A You would be inviting disaster, Mr. Price.

Q I will try not to do that, Mr. Watson.

My question was: There would have been water to have been pumped for the crops; would there not?

A There would not have been a supply to stand that additional pumping.

Q You are telling me that that aquifer was dry at the end of 1977.

A I'm telling you that the aquifer had been pulled down to the point that the pumps could no longer draw water from the aquifer in the amounts that were needed to provide full water requirements for the irrigated crops.

Q But my question is, if we just lowered the depth of the pumps 50 feet, would there not have been enough water?

A There would not have been enough water to continue to do that on a sustained basis. If you pull the water table down this year, then where would you be next year?

Q I'm just asking about this year for right now. There would have been enough for this year; would there not, Mr. Watson?

A Under what conditions.

Q Under the conditions we had.

A I don't think we have a system -- we have a system

out there that we know about. If you put the well -- if you put the pump 50 feet deeper in the aquifer, I can't state that there would have been a capability to withdraw additional water.

Q You know the specific yield of the material in the valley.

A The specific yield is variable throughout the valley. There is no way to determine the specific yield at any point in that aquifer.

Q I see. Were you just guessing when you put the well down the first time, any of the wells, or did you have some idea of what you were putting those wells into?

A I'm sure that Mr. Corke had some idea as to what material he could expect in those wells.

Q If he had an idea then, he can have an idea now; can't he?

A Yes, sir.

Q Isn't it true that this has been one of the most extensive studies ever run in the state of Washington on a hydrologic system?

A I think that this is probably the most extensive hydrologic investigation ever undertaken in the United States on such a small amount of water, Mr. Price.

MR. MACK: Your Honor, I don't know what

the nature of the objection would be, but except that to me the question and the answer is unclear as to which study is being referred to, or all of the cumulative studies done by all of the parties being referred to in that answer.

MR. PRICE: I think that takes an explanation of the question.

THE COURT: I don't consider there is any objection before me. Go ahead.

Q (By Mr. Price) Mr. Watson, were you aware of the historic use of water from Omak Creek and the beneficial application to the northernmost tract of land with which we are concerned in this litigation?

A I don't understand your questions, Mr. Price.

Q Were you familiar -- did you inform yourself or learn information during this study that the historic use of what is marked Allotment -- the northernmost allotment that is now owned by the Tribe, 526, was irrigated from waters from Omak Creek?

A I had no knowledge of that until Mrs. Timentwa testified to that the other day.

Q You did not observe the remnants of the diversion across the land in that vicinity?

A No, I did not.

Q And water from Omak Creek, the surface water, is

available for beneficial application on those allotments; is it not?

A Not to my knowledge.

Q Not to your knowledge. Omak Creek actually crosses part of Allotment 526; does it not?

A Yes, it does.

Q Traverses?

A Yes, it does.

MR. PRICE: Excuse me one minute.

Q On Exhibit No. 7, Tribes' Exhibit No. 7, you purported to divide the aquifer or watershed boundary into various segments; is that not correct?

A Yes, sir.

Q And is it not correct that you have assigned 46 percent of the watershed boundary to encompass Allotment 901 and 903?

A I haven't made a determination as to percentage.

Q Mr. Watson, in terms of the current level of the aquifer, when is the last data you have in terms of the refilling of the aquifer?

A The last data that I have is a water level measurement in the Peters observation well on February 3, 1978.

Q And could you state for the Court the depth of water in the well.

A I would have to refer back to the exhibit. I couldn't

recall from memory.

Q But you have already testified to that, and it is shown on the exhibit.

A Yes, sir.

Q All right.

MR. PRICE: I have no further questions at this time, Your Honor.

THE COURT: Does the State have cross-examination?

MR. MACK: Yes, Your Honor, it does.

CROSS-EXAMINATION

BY MR. MACK:

Q Mr. Watson, to Mr. Price's last question you stated that you have data for the water level in the Peters well for the date of February 3, 1978. Do you have data from 1978 for the water table in the water level in other wells to which you have testified today and yesterday?

A No, I do not.

Q Do you know if such data are available?

A It is my understanding that it is.

Q Where are they available from, to your understanding?

A They are available from the U.S. Geological Survey to the extent that they make them available.

Q Have you attempted to obtain such data?

A No, I have not.

Q Would such data have any relevance in your view to a determination of the extent of recovery of the water table at the point of those wells?

A No, in my opinion. No.

Q It would not.

A No.

Q Am I correct that the data for a shorter period of time as shown on your exhibit --

MR. MACK: May I approach the exhibit, Your Honor?

THE COURT: You may.

Q (By Mr. Mack) I don't know where I was in the grammatical construction of that sentence, but referring your attention to Exhibit 25-1, isn't that -- let me ask you this: What, in your opinion, is the most important conclusion that you could draw from Exhibit 25-1?

A The most important conclusion from Exhibit 25-1 is that during the 1978 irrigation season it's extremely likely that we will be in the same situation that we were in in 1977, August, but by as much as a month earlier.

Q And isn't that based on the information which appears

on 25-1 with regard to the water level table in the Peters well for the years 1976 and 1977?

A Yes, it is.

Q And haven't you computed, based on the information you placed on Exhibit 25-1, a projection of a recovery of water level for the Peters well for some time in 1978?

A Yes, sir.

Q And what is the date to which you decided the recovery period would end in 1978?

A The illustration is intended to show that irrigation began in 1977 in early April, and that if irrigation again started in the No Name Creek basin from the Colville irrigation project in 1978 at that same date that similar decline in water level could be expected.

Q As of April 1?

A No, that goes beyond April 1.

Q Well, let me ask you that again.

Do you have a recovery period for the two years, the irrigation years of 1976 through 1977 and 1977 through 1978, depicted on Exhibit 25-1?

A Yes, I do.

Q And that period of recovery for both those years runs from which dates?

A In 1976 the period of recovery runs from October 5, I believe, Mr. Mack, to April 6, 1977, and the period of recovery in -- for 1977-78, begins -- well, the period of recovery that I'm showing here begins November 7, 1977 and this is just a transposition of this elevation across to here for comparison.

Q I understand.

A From November 7, 1977 to April 6, 1978.

Q Is there any significance to stopping the recovery period around the month of April?

A Yes, there is.

Q Could you just explain what that is.

A Beginning of the irrigation season.

Q And is that the normal final date on which recovery period calculations are done?

A That was the period last year. I don't think there is any normal about it.

Q Well, you are a hydrologist; are you not?

A Yes, I am.

Q And are you aware of the calculation of recovery periods for irrigation purposes by hydrologists done in the normal course of their studies and duties?

A I'm not sure to what you are referring, Mr. Mack.

Q Do hydrologists calculate recovery periods, Mr. Watson?

A Recovery periods in aquifers?

Q Yes, sir.
A I don't know that hydrologists calculate recovery periods.
Q What do they do with them? Maybe my terminology is bad. If they don't calculate them, what do they do with them?
A Mr. Mack, the intent of that exhibit is to show that 1976 -- 1977 --
MR. MACK: Well, that wasn't my question, Your Honor.
Well, I will let him go ahead.
A That 1977 irrigation began in the first part of April and that we can expect the beginning of the irrigation season in the first part of April, 1978.
Q Mr. Watson, isn't it true that in the calculations of recovery periods that it is normal for hydrologists to finish the recovery period at the point at which irrigation season begins, that is, to calculate the recovery period up to the date at which no major withdrawals are taking place for irrigation purposes?
A Yes, that would be correct, yes.
Q And they do that normally; don't they, when they calculate recovery periods?
A I think that would be appropriate thing to do when you are trying to estimate when you are going to begin

withdrawing water which is precisely what I did there.

Q That is exactly what you did; isn't it, with Exhibit 25-1?

A That is precisely it.

Q And does 25-1 show the water table as projected by you for the entire No Name Creek basin or does that indicate the water level that will appear at one point, namely the Peters well, as of April of 1978?

A Reflects the water level at the Peters well and that is very reflective of the water levels in the No Name Creek aquifer. If you look at the profiles of water levels in the No Name Creek aquifer during the state of nature you will find that they conform to the same profile, the same slope, at any time in a state of nature when the water level in the Peters observation well is at a given level it conforms very well to water levels in the wells to the north and -- to the north.

Q Now, Mr. Watson, you have used on numerous occasions during your testimony the term "state of nature" with regard to answers to questions.

What is your understanding when you use that term? What is your understanding of the meaning of the term "state of nature" with regard to this water system?

A The Colville Confederated Tribes have resolved that the waters of Omak Creek are to be maintained for the purposes of beneficial use within that watershed. Therefore, my responsibilities as a hydrologist to the Colville Confederated Tribes and Mr. Corke have been to determine the water available in the No Name Creek basin in the state of nature, in other words, without the induction of water from outside sources, namely, Omak Creek.

Q So, when you used the term the No Name Creek basin or valley or aquifer, whatever, in a "state of nature," all you mean is that it has no waters contributed to it from Omak Creek.

A In a state of nature, the No Name Creek aquifer has a natural contribution from Omak Creek. In a state of nature Omak Creek does contribute to the No Name Creek aquifer.

Q Well, let me rephrase that. When you use the term, "state of nature," you mean only that it does not contribute any more than it does naturally; is that correct?

A That is what I mean.

Q And by "state of nature," do you mean the No Name Creek basin without any development in it?

A By recharge, I mean the amount of water that would be

contributed to the No Name Creek aquifer in a state of nature, namely, the amount of water that would be infiltrated from Omak Creek without any development in the aquifer and the amount of precipitation runoff that would contribute to the aquifer in that same set of conditions.

Q Yes, but isn't that assuming -- and the only reason I'm going into this is because I think it qualifies a lot of your answers, that phrase that was used. Isn't that assuming a state of development of surface water diversions and groundwater withdrawals as of a certain date, or does it assume no development whatsoever having taken place in the No Name Creek valley?

A It simply assumes -- it is not an assumption; it is a statement of fact, but the only intent in saying "in a state of nature," is that the Colville Confederated Tribes have resolved that the No Name Creek Colville Indian Irrigation Project is not to obtain water artificially from the Omak Creek watershed.

Q Well, yes, I understand that, but --

If there were no development whatsoever at all in the No Name Creek basin, no withdrawals, no surface diversions, would you term that system as being in a

state of nature?

A Yes, I would.

Q Nevertheless, it is also in a state of nature with all of the development presently in place; is that correct?

A It is not in a state of nature with all of the developments in place, no.

Q Well, explain that. Explain the difference to me, please.

A When the system is in a state of nature, the ground-water profile, the discharges to the natural channel of No Name Creek, are all unaffected by diversion, by pumps, by diversions from the stream system of No Name Creek, and in a state of development, the water level profiles are markedly changed, modified, due to pumping of the well; surface diversions are taking place from the stream; water is being placed in the No Name Creek stream after being pumped from the development wells of Colville Confederated Tribes.

Q So, "state of nature" means that the water table remains relatively the same.

A It doesn't mean that the water table remains relatively the same. It simply means that it is unbroken in profile due to pumping effects. It is a very continuous, gradually sloping kind of profile.

Q Well, Mr. Watson, let me ask you this: If there were

only one well in that whole valley pumping, wouldn't the profile be broken, the water table?

A Any time there is withdrawal from any well, regardless of the number, there is a break in profile.

Q Yes, so that your term "state of nature" which you have just defined, could not apply at all to the system as it is today; isn't that correct? The water table is broken by development.

A That is absolutely correct, but all I'm saying is that the water entitlement to No Name Creek as determined by the Colville Confederated Tribe is only that water that is contributed naturally. Let me give you an example.

Q Well, before -- Go ahead.

A I'm involved in the San Juan River basin which is a major tributary of the upper Colorado River basin in the Southwest, and there is a project in that area known as the San Juan Chama Diversion Project. Now, water is being taken from the headwaters of the San Juan River, delivered through the tunnels of the San Juan Chama Project into the Rio Grande system. That is a trans-basin diversion. It's an artificial induction of water from one basin to another.

Now, in the San Juan River basin when you talk

about a state of nature, you're talking about the amount of water that is in the San Juan River basin in a state of nature without the diversion through the San Juan Chama Project into the Rio Grande basin, and this is precisely the same situation here. The only difference is that we are dealing with a very small amount of water. We are dealing with a very small basin and Omak Creek and the No Name Creek basins are completely separate, except to the extent that water is contributed naturally from Omak Creek to No Name Creek basin.

Q And are they separate based on your view as a hydrologist without any other consideration or are they separate based on your view as a hydrologist pursuant to the Tribal resolution which you have described?

A Those are my orders, Mr. Mack.

Q Pardon me, could you repeat that.

A I'm operating under the resolution of the Colville Confederated Tribes. I'm operating under the directions of Mr. Corke and the Colvilles have decided that Omak Creek is a separate watershed and that artificial induction of water from that creek to the No Name Creek basin is not what they like; it's not what they desire.

Q Pardon me. And your hydrological conclusions are based on that; are they not? They are affected by that.

A My hydrological conclusions are not affected by that, Mr. Mack.

Q Well, which conclusions are affected by that, Mr. Watson?

A I think yours.

MR. MACK: Well, Your Honor, I think that was unresponsive. I will ask it again.

Q Did the Tribe's resolution, in your mind, that the Omak Creek system and the No Name Creek system, which I have yet to hear defined, are to remain separate in your work, affect the conclusions you came up with in your work as to the determination, for example, as to the boundary of the No Name Creek watershed?

A No.

Q Did they affect any of your conclusions?

A No.

Q Then what would -- but I understood you earlier to say that they were relevant to your work in the field, that you were working pursuant to them.

A That is correct.

Q Now, am I correct in understanding that they did not at all limit your professional conclusions or the

scope of your investigation?

A No, they did not.

MR. VEEDER: Well, Your Honor, it seems to me like we have ridden this as far as we need to. The witness has said he knows what is naturally affluent to the No Name Creek basin. The idea is not to induce any more water than would naturally flow in there. They accept the quantity of water that naturally goes in there as the natural infiltration. They don't want to induce any more water. I don't know how it can be more clear on that.

THE COURT: Cross-examination is entitled to considerable leeway.

You may proceed.

MR. MACK: Thank you, Your Honor.

Q Mr. Watson, how many groundwater withdrawals took place in 1977 in what you have described as the No Name Creek watershed?

A How many groundwater withdrawals, Mr. Mack?

Q Yes, how many -- let me phrase it this way: How many wells were pumping in 1977 within the exterior boundaries of what you have described as the No Name Creek watershed?

A Can I refer to an additional exhibit?

Q Please do.
A I believe there were eight.
Q And how many surface water diversions were occurring in the No Name Creek within the exterior boundaries of what you have defined as the No Name Creek watershed during the year 1977?
A Two.
Q Now, under your definition of that system being in a state of nature, could it have been in a state of nature with eight groundwater withdrawals and two surface water diversions?
A It was not in a state of nature.
Q Do you know the last year in which that system was in a state of nature, according to your definition?
A No, I don't.
Q Is there anyway to determine that?
A Not from my personal knowledge, no.
Q Wouldn't you have to go -- would it be the last year during which the system had no surface groundwater withdrawals or surface diversions, that is, the last year before some human being went out there and affected the water table by withdrawing some water?
A Are you limiting yourself to the water table now?
Q As my understanding of the relevance of the water table with regard to your definition of the term

state of nature which is an unbroken water table, yes.

A I have no knowledge.

Q Wouldn't that be the last year that you would have a natural state of nature system?

A In the aquifer, yes.

Q Yes, but when you say you have no knowledge, you mean you don't know what year that is, that would be the year in which you had a state of nature in the system?

A Yes.

Q Now, could you explain with regard to -- well, strike that.

Now, there have been a lot of references in your testimony to various terms such as No Name Creek valley, No Name Creek watershed, No Name Creek basin, No Name Creek groundwater aquifer. Am I correct that on the exhibit as shown there --

MR. MACK: May I approach the exhibit, please.

Q -- Colville Exhibit 7 -- 11, pardon me. 11, that what is indicated by the blue broken line is the boundary as you have determined it for the No Name Creek watershed?

A Yes, that is correct.

Q Now, you have referred also in your testimony to the No Name Creek basin. Does the boundary of the No Name

Creek basin, to your understanding, differ from the boundary of the watershed, or is it identical?

A When I refer to the No Name Creek basin and the No Name Creek watershed, I'm referring to those synomymously.

Q Now, with reference to your reference to the term No Name Creek valley, is that also a synomymous area?

A The No Name Creek valley is a term coined by the U.S.G.S. in the report they prepared in 1978. I have never heard reference to that before. I suspect that I have used that in my testimony here because of the investigation of the report that I had undertaken.

Q Yes, and when you have used it, have you used it in the same way that you understand the United States Geological Survey to have intended it to be used?

A Well, the No Name Creek valley that U.S.G.S. talks about is the, as I understand it, I am just telling what my understanding is.

Q Go ahead, because the record is going to have to indicate what you mean by those terms and that is what I'm interested in.

A Yes, the No Name Creek valley, as I understand the U.S.G.S. to mean, extends from the north end of Omak Lake to somewhere in the vicinity of Mission Creek

and maybe beyond, I don't really know where they chop off the No Name Creek valley.

Q Does it differ, for example, on the -- is the valley the boundary on the west the same as your watershed boundary?

A The U.S.G.S. use of the word valley is so unclear to me I just don't know how to answer your question precisely.

Q Okay. When you used the term valley what was the boundary you had in mind, or did you have any boundary in mind?

A The only thing I would refer to in a technical sense in the No Name Creek area is the No Name Creek basin and the No Name Creek watershed, and if I have used the word valley to imply the No Name Creek basin or the No Name Creek watershed, I have done that without precision.

Q Well, all I really want to know is when you have used it, is it likely that you used it synonymously with the watershed and the basin?

A Yes, it is.

Q Now, the term No Name Creek aquifer has been used, groundwater aquifer. Do you have any idea on the boundary of that when you use that term?

A Yes, I did.

Q Where is that boundary?
A Referring to Colville Exhibit No. 7, the No Name Creek aquifer is the area depicted in green which extends from the southern end of the spring zone of No Name Creek located about two-thirds of the way from the south boundary of Allotment 525, and the No Name Creek aquifer extends from that point to a northern extremity which is common with the watershed boundary as depicted on the exhibit, in Section 9.
Q And is that the sole extent of the No Name Creek aquifer in your opinion?
A That is the sole extent in a north-south, east-west direction.
Q What is your understanding of the term aquifer?
A My understanding of the term aquifer is that it is the material that is capable of yielding water to production wells.
Q Is there such material farther south than the green area?
A Not to my knowledge.
Q Are all the wells within the exterior boundaries of the watershed, as you have shown it, located in the green area?
A No, all the wells are not.
Q How many wells are located in the green area and how

many are outside of the green area?

A That will require a lengthy count, Mr. Mack.

Q Well, I thought there were eight wells, pumping. I am just talking about the ones pumping last year.

A There is -- I'm thinking very carefully about this because I don't want to overlook something here.

Q Go ahead.

A To my knowledge there are seven wells of those eight pumping from the No Name Creek aquifer.

Q As you define it.

A From the No Name Creek aquifer.

Q You mean from the green area on that exhibit?

A From the No Name Creek aquifer as described on Colville Exhibit 7.

Q Which well is outside of that area?

A The Bradshaw domestic well.

Q Do you know if water can be or has been obtained from that well?

A I know that Mr. Bradshaw drilled a previous well and that well failed because it could not receive sufficient quantities of water and that apparently in the new location Mr. Bradshaw, if he still maintains the property and I'm not sure of that, has been able to develop enough water for domestic purposes.

Q Now, if there are no materials capable of yielding

water outside of the green area, could you please explain how the Bradshaw well obtains water.

A The definition of aquifer is shown on -- well, the aquifer as described by the green area on Colville Exhibit No. 7 is capable of producing water to wells for the purpose of irrigation, domestic purposes, uses of that kind and types. Certainly, there is water contained in materials depicted on the red area on Colville Exhibit 7, but that material is not capable of yielding large quantities of water to wells for purposes other than domestic use.

Q Yes, but your definition of aquifer did not include a large yield. You said capable of yielding water. Did you mean, when you defined aquifer, capable of yielding a large amount of water?

A Capable of yielding water sufficient for the purpose of irrigation.

Q Just for irrigation.

A Well, for irrigation and any other uses that require those kinds of quantities of water.

Q Not domestic use?

A Well, certainly you can, if there is sufficient water in the aquifer for purposes of irrigation, there is sufficient water for purposes of domestic use. A domestic well can do quite well on five gallons a

minute. The wells that are penetrating the aquifer in the area described in green are withdrawing, have withdrawn water in amounts as high as a thousand gallons a minute.

Q Yes, but aquifer is an important term, would you not concede, in the use of analyses of the availability of water in the water system. It is a term that is used in your work; is it not, as a hydrologist?

A Yes, aquifer is used in the profession.

Q And you have used it in your analysis of the No Name Creek system; have you not?

A Yes.

Q And, in fact, you have used it in order to determine the green area on Exhibit 7; have you not?

A Yes.

Q And doesn't the Bradshaw well draw from an aquifer but one not shown on your map and possibly not one that would produce the amount of water you might desire for certain purposes?

A The Bradshaw well does not penetrate an aquifer.

Q Well, what does it pull water out of if it's not from an aquifer?

THE COURT: I think he has already answered that, Counsel.

MR. MACK: Thank you.

Q Are there any other aquifers within the boundary other than the green one?

A No.

Q Is there any water received into the green area which you have marked as an aquifer from outside the exterior boundaries of the watershed as shown on Exhibit 7?

A I was considering your question and lost it, I'm afraid, Mr. Mack.

Q Well, I direct your attention to the green section on exhibit 7 which you state is the aquifer.

A Yes.

Q Is there any water obtained in that aquifer, obtained by that aquifer, outside of -- that would arise outside of the exterior boundaries of the watershed as you have indicated?

A I have no knowledge of water coming in from outside.

Q You limited your -- did you limit your analysis solely to looking within the exterior boundaries of that watershed?

A I limited my analysis, Mr. Mack, and this is very important. I limited my analysis to the amount of water that can be measured coming out of the aquifer which is an indirect measurement of the amount of water coming in. In other words, I didn't try to go

into areas of the aquifer and try to measure precipitation runoff and try to measure the contribution from Omak Creek in a state of nature, but I measured the amount of water that was coming out of the aquifer and that gives a very good indirect measurement of the amount of water coming in from all sources.

Q Yes.

A And the water is all commingled and there is no way to separate them.

Q Yes, and you not only mentioned water coming out, but you mentioned the points at which the water comes out; is that correct, of that aquifer?

A I measured the water coming out of the aquifer at selected points, such as wells and points of surface discharge on No Name Creek.

Q And you made no attempt to determine any points at which water enters that aquifer; did you?

A It was impossible, in my opinion.

Q Isn't it fair to say that that aquifer may extend farther than is shown on that exhibit?

A No.

Q Based on the lack of your analysis with regard to points at which water may enter that aquifer?

A Mr. Mack, there has been a very intensive, a very, very, intensive geologic investigation of this area,

and there are other witnesses here far more qualified than I on the geologic aspects of the No Name Creek watershed, No Name Creek basin, and I think that they can answer your questions quite satisfactorily.

Q Well, let me just -- the boundary of that aquifer, are you saying, was that determined by geologic studies?

A The boundary of the aquifer was determined by geologic study.

Q And you did not do those studies?

A I carefully reviewed those investigations. I did not perform the geologic investigation. I did participate in the field inspections.

Q Who did them?

A They were performed by Dr. Robinson and Mr. Casmark.

Q Did Dr. -- who determined the boundary -- after taking that geologic study, who determined where the boundary of the groundwater aquifer was going to be? Was that Mr. Casmark or Mr. Robinson, or you?

A It was Dr. Robinson and Mr. Casmark and they were working jointly on that.

Q So, you didn't determine the extent of that green area, you accepted what they told you on that?

A I investigated with them in the field. I understood precisely what they were saying in the field and their

opinions comported to my personal observations.

Q And when you say field investigation, I assume that is visual observation of the topography in that area.

A Visual observations of the surface geology, examination of the well logs, a number of factors.

THE COURT: Counsel, I think we will take the afternoon recess at this time. We will be in recess for 15 minutes.

THE CLERK OF THE COURT: All rise. Court is now recessed for 15 minutes.

(Afternoon recess is taken.)

THE CLERK OF THE COURT: All rise. Court is reconvened following recess.

THE COURT: You may continue.

MR. MACK: Thank you, Your Honor.

CROSS-EXAMINATION CONTINUED

BY MR. MACK:

Q Mr. Watson, referring you to Colville Exhibit No. 7 and the watershed boundary shown there, was that watershed boundary decided by you or did someone else decide on that and then you concurred with it?

A Referring to Colville Exhibit No. 7 which is the watershed map, the watershed boundary from the extreme northwest corner of Section 9, extending in a southerly direction all the way to the north end of Omak Lake was determined by myself. The watershed boundary beginning in the northwest corner of Section 16 and extending south to the north end of Omak Lake was determined by myself also.

The watershed boundary beginning at the same point that I just described, in the northwest corner of Section 16 and extending northward to the northwest quarter of Section 9, was determined on the basis of geologic investigations, and that watershed boundary was determined by Dr. Robinson and Mr. Casmark.

Q And you concurred with their determination; is that

correct?

A They determined the geologic boundaries to the system and I made the determination that the water within the boundaries to the east of that line would contribute water to the No Name Creek aquifer in the state of nature.

Q So you concurred with their findings?

A Yes, I did.

Q Now, your understanding of a watershed, as a professional hydrologist, is what?

A It's the area that natural precipitation falling within that boundary contributes naturally water supply to the basin. Water falling outside that boundary, precipitation falling outside that boundary does not enter the soils or the other geologic factors in that area and end up in the basin.

Q To your knowledge, was the northwest portion of that, that is to say, the section which you have described as beginning in the northeast corner of Section 17 and moving up to Section 9 to the northern-most limit of the watershed boundary, was that determined based on geology; am I correct in understanding that?

A From the northwest corner of Section 16 to the northwest quarter of Section 9.

Q Yes.

A Yes.
Q Was the rest of that line determined by geology or by some other matter?
A The rest of the line was determined by topography.
Q Why wasn't that one section determined by topography?
A The section beginning in the northwest quarter of Section 16?
Q Yes.
A And extending northward to the northwest quarter of Section 9?
Q Yes.
A The area to the east of that line, watershed -- precipitation falling to the east of that line, Mr. Mack, entered the No Name Creek aquifer, and precipitation falling to the west of that line which is a geologic boundary, as we have described, flows into Omak Creek.
Q Could that have been determined by topography?
A Pardon me?
Q Could the fact which you have just testified to -- I do not acknowledge it, but the fact as you stated it, that water to the east of that line falls into the No Name Creek aquifer or watershed, and the water to the left of that line falls outside of it, could that have been determined by topography rather than by

geology.

A In this case the geologic boundary forms the constraint rather than topography. By constraint, I mean the boundary to the system.

Q It could not have been determined by topography, then, by a topographical analysis? Could it or couldn't it have been?

A It could not have been.

Q Why is that? Why --Does the topography differ there considerably than elsewhere within the watershed?

A The geology differs considerably.

Q Does the topography differ?

A The topography to the west of this line breaks away from a relatively flat area to the east, into a relatively steep area that drains into Omak Creek, but this, Mr. Mack, is not a topographic divide where water from the peak runs both ways. In both cases, on the east side and on the west side of the boundary that we are referring to, the slope of the land is to the west, but there is a sharp break in slope away from the boundary to the west toward Omak Creek at the point where this boundary exists, and the difference, the reason for the break in slope is because of a change in geology and not because of a topographic divide. If a topographic divide existed at this point,

there would be a high point and water falling on that divide would flow to the east and water falling on the west side of the divide would flow to the west.

Q Yes, I understand that, and isn't that why a topographic divide analysis was used to determine the watershed -- the boundary for the rest of the watershed?

A That is the reason that the rest of the boundary was based on topography.

Q And it was not used there because of unusual geologic conditions; is that correct?

A That is correct, yes.

Q Was a geologic study done of all of the other areas around the boundary of that watershed to determine whether there were also unusual conditions existing there beneath the topography?

A Yes, to the extent that it was recognized that the topographic divide in the rest of the area is formed by granite bedrock material. The balance of the topographic divide is very well -- in examination of that it is very clear that it is rock and forms a perfect boundary.

Q But precipitation falling in the area of the watershed boundary in the northwest corner of the watshed will fall into the No Name Creek watershed, in your opinion; isn't that correct?

A To the east of the boundary that we have been discussing?

Q Yes.

A To the east of the boundary that forms the west boundary.

Q Yes.

A Precipitation falling on that area will enter the No Name Creek aquifer.

Q How does it enter that aquifer?

A It percolates -- first the precipitation falls within the boundary on the east. Precipitation falls to the west of the eastern boundary of the watershed in Section 9, and it is conveyed by the topography to the west and at such point as it reaches the area where the Paschal Sherman School is located which is a flat, relatively high elevated terrace and does contain some agricultural fields in this area, very flat, as soon as that water encounters that area, this area is very susceptible to infiltration and except during periods when the ground is frozen or when the infiltration rate is exceeded because of a large amount of water coming from the east to the west, that water can enter the aquifer material and reach the water table, but to the west of the western boundary in Section 9 precipitation falling to the west of that

point encounters very dense material and that dense material is located on a steep slope breaking away from the alluvial material into this more dense type of material and that material conducts water very readily to the channel of Omak Creek and then the water that is captured by Omak Creek flows northward beyond Mission Creek and into the Okanogan River.

MR. MACK: May I approach that exhibit, Your Honor, please.

THE COURT: Yes.

Q (By Mr. Mack) Now, Mr. Watson, and the record should indicate I am referring to Colville Exhibit 7 and to the portion of that that lies within the exterior boundaries of the watershed as indicated thereon in Section 9 and a portion of Section 8, you have testified Mr. Watson, as to what happens to the precipitation that falls in this, what looks to me as a blue area within that section, and what happens to the precipitation that falls to the west of the western boundary line? What happens to the precipitation that falls in the green area in that section?

A The precipitation that falls in the green area enters the No Name Creek basin except during the periods that I mentioned previously when the ground would be frozen and the water cannot penetrate. The land is

sloping from east to west through the area that we're talking about.

Q But is the green area frozen at times the blue area isn't, or are they generally frozen about the same amount of time; do you know?

A Well, the water only enters the green area, Mr. Mack. Water flows off the blue area.

Q Yes.

A That is a granite material and it doesn't penetrate that readily, but at such time as the water from the blue area encounters the green area, in most times, that water would be absorbed and transmitted to the No Name Creek aquifer.

Q And does it enter what you have referred to as the No Name Creek watershed solely as vertical percolation into the groundwater aquifer, or does it enter also as surface water runoff?

A Well, to the extent that there is surface water runoff in this area, there is no contribution to No Name Creek basin. By surface water runoff, you mean the water that cannot be received by the materials at the land surface and, therefore, the water is running off. That water is not received, it is running downhill east to west and would enter Omak Creek and then flow northward, but water that can be received by this

material does enter the materials and percolate downward to the aquifer.

Q So, to get the amount of water, the volume of water that enters your system as described in the watershed exhibit number 7, one would have to subtract the amount of water that runs into Omak Creek west of your western boundary from the amount of precipitation; isn't that correct?

A No, I have to go back again to explain to you the way the water supply determinations were made, Mr. Mack. It was not necessary in the water supply determinations that were made, as I have testified to, to have to take into account these various contributions and their magnitude. Certainly, I was interested in knowing how much water was being contributed from Omak Creek and how much water was being contributed from natural precipitation in a state of nature, but the measurement of the amount of water supply is based on the discharge from the aquifer which is a very good indirect measurement. It is the only way to measure the contribution to the aquifer from all sources. It is very valid; it's the most valid, appropriate technique that can be undertaken, because it avoids having to make all the assumptions that are expressed in U.S.A. Exhibit 3 with regard to nine or ten parameters of which only one

can be identified, and it's the only that can be identified with any specificity as the amount of water that was pumped from the aquifer. All those other parameters are based on estimations.

Q In your opinion, is it generally better to use an analysis that used fewer parameters to determine the groundwater availability in this watershed; is that correct?

A If the parameters are fewer and if those are the appropriate parameters to measure.

Q Okay, now I don't want to belabor this, but I believe you testified that precipitation falls in the area which I just indicated, the northern extrusion, if you will, of the watershed boundary as shown in Exhibit 7 and isn't it true that you testified that the water that falls there through precipitation either enters the groundwater aquifer in the green area as shown there, or enters the Omak Creek to the west of the western boundary of the watershed; isn't that correct?

A Yes, that is correct.

Q And that is a point of entry of water into the No Name Creek aquifer; is it not?

A Yes, it is.

Q Could runoff calculations be -- could the calculations be done to determine the amount of water entering the

Creek in just that one area of the watershed, entering Omak Creek, from precipitation?

A Calculations could be made, yes.

Q And if you could calculate that, could you also calculate the amount of water that would enter the groundwater aquifer, as you have described it, of No Name Creek in that one area?

A Yes.

Q And you haven't done that.

A Again, I have to point out, Mr. Mack, that that is a very hypothetical situation that requires estimates. As Mr. Cline testified, he went to Wisconsin to get estimates of the amount of runoff that is derived from precipitation. It was important because of the various uncertainties involved in that kind of analysis to actually take measurements and, again, I have to refer back to the Colville Exhibit 25-1 --

Q Yes.

A -- which is now on the board, and which shows a natural decline in the water level in November 1975 through March 1976 at which time there was insufficient natural recharge to that aquifer to maintain the water level in the aquifer and this is a five-month period that we're talking about, in late 1975 and early 1976, and that the amount of water coming out of the aquifer

.66 of a cfs which is equivalent to an annual rate of about 425 cfs, and this is a very appropriate measure of the amount of water coming in. We know that it was less than .66 of a cfs because the ground water was falling, and that is less than 425 acre-feet per year, and the testimony that we have heard by myself is that the firm annual water supply is 550 acre-feet which recognizes that there may be more water available on a firm basis than the 425 acre-feet that I have talked about there.

Now, I'm sticking my neck out in saying that. Here's an actual measurement of the amount of water over a long period of time during the last three years. Now, the last three years, Mr. Mack, 1975, 1976 and 1977, precipitation in those three years was very near normal precipitation for the three-year cycle. I examined precipitation records that went back as far as 1908 at Omak Weather Station and at the Omak II Northwest Weather Station, and in the 69-year period of record, from 1908 to 1977, there are 67 three-year cycles, and of these 67 three-year cycles there were 31 that had a lower total precipitation than the total precipitation in 1975, 1976 and 1977.

In 1928, 1929 and 1930 there was approximately 17 inches of total precipitation in those three years.

In 1975, 1976 and 1977 there was approximately 33 inches of total precipitation. This is a normal type of situation, and I have gone so far as to say that I recognize very explicitly that there are periods in the record that are much dryer than the three-year cycle that we have encountered and water shortages much greater than the three-year cycle that has been encountered can be expected, and you cannot design a system to operate on a sustained basis except to acknowledge that there are periods of dry cycles.

Q I heard your answer, Mr. Watson. My question was: You did not calculate the amount of water entering the groundwater aquifer for No Name Creek in that section on Exhibit 7 which I have shown, and I believe your answer to that was: Yes, you did not calculate it; isn't that right?

A I didn't have to calculate it. I measured it.

I measured it as outflow from the aquifer. The outflow from the aquifer includes all sources and that was measured as a component. I did not separate it out of that measurement.

Q You measured outflow; you didn't measure inflow; did you, in that section? That's all I really want to get at. You determined inflow based on your measurement of some outflow later on down in the watershed; isn't

that correct?

A That is right.

Q Rather than measuring inflow.

A You can't measure the inflow.

Q Well, maybe I'm using the wrong --

A You can estimate --

Q You can calculate it, can you not? Your testimony was you could calculate it, for the section I was showing you, the northern-most section of the watershed.

A You can. It is not a reliable calculation.

Q But you didn't do it and the reason was it was too hypothetical, in your view; wasn't it?

A It was far too hypothetical. We had to live with the facts in the No Name Creek basin, and those are the facts as demonstrated on Colville Exhibit 25-1 and Colville Exhibit 33-1.

Q Now, don't professional hydrologists commonly use hypotheses and theories and projections in their work?

A They may commonly use hypotheses and projections, but it depends, Mr. Mack, on whether or not the facts are required or whether or not judgment for engineering design or some other purpose is required. In this case, facts were required and those are the facts.

Q Well, isn't it true, however, that you have used hypotheses, theories and projections in your analysis?

A The hypothesis that I used in the analysis that I have just described is the law of the conservation of mass. It is a simple law of physics which says that the amount of water coming into a system has to equal the amount of water coming out of a system, plus or minus the change in storage.

Here we are demonstrating that the change in storage is decreasing, and, therefore, the amount coming into the system has to be less than the amount going out.

Q I think --

A It's a simple law of conservation of mass, and I don't know who established it, maybe Newton or some other physicist.

Q I didn't have it in law school. I assume it's not in the statute books, it's a scientific deal.

Isn't it correct that you will use hypotheses and theories and projections depending on the facts you have and the particular you are applying to a particular problem and hydrologists have to make those decisions on a case-by-case basis and problem-by-problem basis; isn't that right?

A In this situation I did not have to, Mr. Mack.

Q You made no hypotheses or theories or projections.

A The hypotheses that I made were to the extent that I

just described.

Q They are based on laws.

A Very simple laws of physics and very simple observations.

Q And which exhibit -- you were referring to which exhibit when you were giving me that answer?

A I'm referring to Colville Exhibit 25-1 and also Colville Exhibit --

MR. MACK: May I approach that exhibit, Your Honor?

THE COURT: You may.

A (By Mr. Mack) And referring your attention to Exhibit 25-1, Mr. Watson, there is a red broken line; is there not, which you have previously testified to as a projection of the rise in the water level in the Peters observation well for a period from 1977 through 1978, some months therein; isn't that correct?

If it isn't, state what it is, what that red dotted line is.

A The red line is a straight line projection, I think was the word that we used previously.

Q That was your term, but go ahead.

A Of the water level from February 3, 1978, to -- well, I have the line extended to about April 19, 1978.

Q Did you have to determine a slope or some section of

slope for the 1977-78 line to determine where your straight line projection would go?

A No, I simply observed the rate of rise in the water level beginning in late 1977 as shown on the exhibit extending forward into early January 1978, extending to February 3, 1978, and I extended the line from there on the same slope as was experienced from January through February, but in my testimony I indicated that there is very little discharge from the aquifer now and that there has been very little discharge from the aquifer since the close of the 1977 irrigation season, and that the rate of the rise in the aquifer can be expected to decline as the water levels rise higher because of a higher rate of discharge from the aquifer.

Now, that was the relationship that was described on one of the previous exhibits which shows the relationship between the natural stream flow of No Name Creek and the water levels in the No Name Creek aquifer as measured in the Peters observation well.

Q And referring your attention to the same exhibit and to the point on that exhibit where your red broken line breaks off from the green line.

A Yes, sir.

Q Do you see the remaining green line which goes up like

this and then slopes and then breaks into a broken blue line and goes on a downhil movement?

A Yes, I see that.

Q Is that a projection?

A That is a projection that reflects the fact -- and that was the projection that I was referring to in our last, in the last answer to your question -- that is also a projection that reflects the fact that there is going to be more water being discharged from the aquifer as the water levels in the aquifer rise. So, to expect a straight line projection, as shown by the red line, is very unreasonable. There will be more water flowing out of the aquifer and that will reduce the rate of rise in the water level in the aquifer.

Q So the green line is a better one than the broken red line; is that right?

A In my opinion, yes.

Q And that's a projection. Do you have -- did you have to figure out a rate of slope or something of that slope for the projected green line? How did you determine it was going to fall below the broken red line and to the right of it which it does? How did you determine that?

A I determined that based on the rate of rise in the aquifer once the aquifer reached its lowest level in

1976. I pointed out previously that on February 3, 1978, that the water level in the No Name Creek aquifer as measured in the Peters observation well was more than a foot and a half lower than the lowest water level in 1976 after heavy pumping from the aquifer in 1976. After a period of five months -- four months -- of recovery, the aquifer is still one and half feet and more lower than the lowest level experienced in 1976. Now, --

Q Let me interrupt you there. Which was at the end of the pumping season; was it not, in 1976?

A Yes, it was.

Q Are we any where near a pumping season now?

A We are getting pretty close.

Q It hasn't begun, has it, Mr. Watson?

A No, it has not.

Q Go on.

A Where were we?

Q I don't know. Let me ask you this question.

You have continued that green line on a slope, or rate.

A Yes, sir.

Q And the rate you used was the rate of increase for the 1976-77 water level rise instead of the 1977-78 rise; correct?

A That is absolutely correct. Again, you have to understand, Mr. Mack, that this is a rate of rise that is projected from the period from January '78 to February '78. The red line is an extension of that rate of rise, and we know that it can't be that high because of the fact that there will be more water discharged as the water levels rise in the aquifer.

Now, if by some circumstance that I'm unaware of presently, there was a tremendous amount of precipitation, that rate of rise could be exceeded. But that is a very hypothetical situation at this point.

Q Mr. Watson, is it fair to say that you have used to project the remainder of the 1977 to '78 water level rise in the Peters well, the rate of rise in 1976 and '77 rather than the 1977-78 rate of rise that you know of as of this date.

A From -- it is not correct to say that. From the point where the aquifer would recover from its lowest level in 1976 which is shown on this projection on February 25, 1978, from that point the rate of recovery that I have shown from February 25, 1978, out to the first week or the second week in April is projected on the same rate of increase in the water level from the lowest water level in 1976 and 1977. In other words, if you projected the rate of rise from October 10, 1977,

and just took this and transferred it over into the projection for 1978, that rate of rise would be the same, from February 25, about six weeks before the start of the irrigation season.

Q Well, let me just ask you this: For the actual figures that you know of, that is to say, the actual water level measurements for both those periods of years, isn't it fair to say that the water level in the Peters observation well for the 1977-78 period has risen more steeply than it did in the 1976-77 period?

A It is fair to say that, but it has not reached the lowest level that it was in 1976.

Q I understand that but up to date it has risen much more steeply; has it not?

A That's because water has not been flowing out of the aquifer. Everything has been running into the aquifer. There hasn't been any discharge out. It has been stored.

Q In your opinion, it will stop rising that steeply.

A Absolutely.

Q In fact, you have it projected to stop rising that steeply tomorrow; don't you? I've lost track of the dates, but it looks like February 11 on that exhibit that it is going to stop rising. It's according to your projection, and it's hypothetical. I understand.

A Every day the water level rises there is more discharge from the aquifer in natural stream flow, so every day that the water rises -- if the same amount of water was coming in during that period of time, as the water level rises and allows enough energy to produce more stream flow to the natural flow of the creek, then the rate of rise is going to decrease because of the discharge of more water out the south end.

MR. MACK: I'll move off that, Your Honor. May I put the water budget up?

THE COURT: You may.

MR. MACK: Can you help me?

THE WITNESS: Sure.

Q (By Mr. Mack) Now, I refer you to the United States Exhibit No. 3 which is the water budget prepared by Mr. Cline. You have testified as to your opinion, I believe, of the unreliability, I think that's a fair word, of some of the numbers in that water budget; is that correct?

A I think to all of the numbers with the exception of the pumping from the wells.

Q You believe every number on there is unreliable except for the water pumping figure.

A Absolutely. Every number in there is an estimate.

Q Could you go through those, please, starting with what

is -- let's start with a five-month period. First, what is marked OCL, Omak Creek Leakage, the figure given there is 240 acre-feet. Is that an inaccurate figure? I assume it is. You said it is -- unreliable, I mean.

A Yes, sir.

Q And why is that unreliable?

THE COURT: Counsel, I have got to give you a lot of leeway on cross-examination because I have no way of knowing what you're driving at, but so far we've plowed the same ground so many times, I don't know if we're learning much. I can't cut you off because I don't know what you're driving at.

MR. MACK: Your Honor, I could shorten this, if this is the case. My notes indicate that some of those figures were testified to as being unreliable, but not all of them.

THE COURT: Go ahead.

A Just for clarification on that, Mr. Mack, in my opinion, every number in this water budget is unreliable with the exception of P, which is the pumpage of groundwater. There are one, two, three, four, five, six, seven, eight, nine parameters in this equation for the water budget. In my opinion, one of those nine is a reliable number.

Q Yes, and as I said to the Court, and I don't really want to belabor this, my notes indicate that you testified as to only some of the other numbers as to why they were unreliable and I was wondering if they are all unreliable, what is your basis for determining that for each one.

A I will give you a basis.

Q Well, that's what I'm interested in.

A You referred to the Omak Creek Leakage which I assume Mr. Cline means as infiltration from Omak Creek. The way Omak Creek Leakage was determined by Mr. Cline was simply by taking the measurements of the surface flow of Omak Creek at two sites before his hypothetical movement of the groundwater in a northward direction and those two sites were sites 1 and 5 as shown on Colville Exhibit No. 10, which is the surface water monitoring and management system, December 1977.

Now, site 1 is located near a footbridge below an area referred to as the Falls on Omak Creek. Site 5 is located at a point which the U.S.G.S. describes as --

Q Well, whatever, it's on there.

A Anyway, it's number 5 here. Let me read that. I'll tell you, here. That's Omak Creek near Paschal Sherman School abandoned domestic well.

Now, the U.S.G.S. has relied on the difference in

stream flow at those two points and I checked this out very extensively. They have taken the stream flow measurement with a current meter at site 1, determined the discharge on the basis of their computations from the current meter. They have gone down to site 5 and they have made the same kind of measurement and they have taken the difference between those two measurements and said that that is the leakage from Omak Creek to the No Name Creek aquifer.

Now, I examined very carefully the differences in the numbers, in the measurements, that were performed by United States Geological Survey. They averaged -- there were nine measurements they relied on to make their determination that there was .8 of a cfs leakage from Omak Creek, and every time I use "leakage" in this discussion, I'm referring to the language of the U.S.G.S., I get a statistical analysis of that to determine the reliability of those measurements. A point estimate of .8 of a cfs is no good unless you know the reliability of the measurements, and there were wide disparities in the differences that were calculated between those two points, so in my opinion, it was necessary to undertake an investigation to develop some level of confidence in those measurements.

Q Did you do that?

A Yes, I did.

Q What was the result of that?

A The result was that I was 50 percent confident, Mr. Mack, --

Q Yes, I'm listening.

A -- that the leakage was as little as .25 of a cfs. That's not very much confidence, so I also made a statistical determination at a 95 percent confidence level and I determined that, in fact, on the basis of the measurements of the U.S.G.S., just using pure statistics, a statistical analysis of the confidence in the difference between the measurements in site 1 and 5, I found that I was 95 percent confident that the difference in flow between sites 1 and 5 could have been a gain in flow of .91 of a cfs.

That's one of the reasons.

Q Did you ever observe that creek during the period for which that water budget speaks, that is to say, 1977?

A Yes, I did.

Q Could you, based on your observations at all, state whether you believe -- and if you can't, just say so -- state whether that creek had a net gain or net flow loss?

A In my opinion, there was a net loss.

Q Did you ever compare that conclusion to your 95 percent

confidence that there was a gain in flow of .91 cfs?

A Yes, I did.

Q What conclusion did you draw after comparison?

A My conclusion was that there was a net gain, but my conclusion was, also, that there could be no liability placed in the determination of an average leakage as made by the U. S. Geological Survey. Now, there are reasons for that.

Q Well, go ahead.

A The measurements were so widely varied. One measurement was .24, if I remember correctly. Another measurement was 1.3, if I remember correctly. There was simply an averaging of the differences that the U.S.G.S. used to develop the .8 cfs. Now, I recognize that there was loss of flow. I deny that it can be measured as the difference between locations 1 and 5 because of the unreliability of the stream flow measurements, first. Again, a stream flow measurement is a computation based on a number of velocity observations in the stream, and knowing the geometric properties of that stream, namely the width and the depth and the velocity at certain sections across the stream, and a current meter is not designed for an accuracy that would give such precision in these kinds of differences. Now, another reason is that the U.S.G.S. simply took

the measurements between 1 and 5, the difference in the stream flow. They did not take into account evapotranspiration that occurs along the stream and they did not take into account the fact that the alluvium of Omak Creek has the capability to transmit water that does not appear at the surfact. So, the U.S.G.S. made its determinations based on the measurements between 1 and 5. They didn't take into account evaporation. They didn't take into account subsurface flow through the alluvium. The measurements that they took were unreliable for the purposes of determining differences between flows at those two points.

MR. SWEENEY: Excuse me.

THE COURT: Mr. Sweeney.

MR. SWEENEY: Because it is really my exhibit that is being discussed here, I think it should be pointed out that the U.S.G.S. did a lot more than what Mr. Watson is saying that they rarely took these readings. They also had all the readings in those test holes up above, but --

MR. VEEDER: Well, just a moment, Your Honor. If Mr. Sweeney wants to be sworn and put on the stand, I would like to cross-examine.

THE COURT: I'm going to ignore his remarks because Mr. Cline gave his testimony as to the basis on

which he put together this water budget. I remember that.

MR. MACK: Your Honor, the reason I'm going into this, if it needs explanation, is that I think it may be important to the final determination of this case as to whether the various estimates produced by the various experts are accurate, and I think some of the crucial issues, possibly, may rely on this, so I would beg your pardon.

THE COURT: I recognize that. Go ahead.

MR. MACK: Thank you.

Q Just to shorten this for today, Mr. Watson, did you come up with a figure, yourself, for Omak Creek leakage?

A Yes, I did.

Q What was that figure?

A 375 acre-feet.

Q And how did you come up with that?

A First I should state the reason I came up with that.

Q Well, why don't you answer my question first, then give me the reason.

A The way I contributed the contribution from Omak Creek was described during the testimony of Mr. Price. I took the period from January 1977, from January 31, 1977, to April 19, 1977. Now, the reason I selected

this period was because the U.S.G.S. had taken water level measurements on both of those days, January 31 and April 19. They had also taken miscellaneous stream flow measurements on those dates. That was not particularly relevant to what I did. But the relevant--

Q You meant relevant; didn't you? That was particularly relevant, is what you meant. It may come out as irrelevant, that's why I want to --

A That was not particularly relevant; yes.

The reason for the selection of the period was because of the measurements of the water levels, and also because there was no -- very little change in the water levels between January 31 and April 19. Now, as shown on the previous exhibit --

Q May I just interrupt for a second.

Are you saying you took the stream flow measurements for that period?

A No, water level measurements.

Q Where? In Omak Creek?

A No, water level measurements in the No Name Creek aquifer in all of the wells that penetrate --

Q To determine the amount of water leaking from Omak Creek. That's the question I wanted; I'm just hoping you're going that way. That's how you came to a determination; is it?

A Yes.

Q Okay.

A I'm giving you the background on how I came to the determination of the amount of water in Omak Creek which wasn't essential in my analysis. I did it because I knew it was going to come up.

But the period I selected was because there was no significant change in storage in the aquifer during this period. On April 19 and on January 31, 1977, the water levels in the aquifer were essentially the same. There were slight differences in the water level in the wells, but for the most part the water levels were the same.

Now the significance of selecting that period of time was that the amount of water coming into the system was very close to the amount of water going out of the system, and by "the system" I mean the No Name Creek aquifer.

Q I understand.

A And this is the amount of water from all sources. It's the amount of water from Omak Creek and it's the amount of water from precipitation.

Q And you had to parcel those out in order to come up with the figures for the same elements of the equation used by the U.S.G.S. for its water budget; isn't that

right? You came up with one big figure based on water level, water table measurements and then you had to parcel that out to get, for example, Omak Creek leakage figure; isn't that correct? I think that's what you said. If it isn't, go ahead and --.

A I'm not sure I followed you, but I'll go ahead and explain.

During this period, and we introduced an exhibit on this previously. I think it's 17-1?

Q I don't know.

A 17-3.

During the period from January 31 to April 19 we had a measure of the runoff from precipitation between No Name Creek below Mr. Walton's surface diversion and No Name Creek, granite lip, and also, if my memory serves me, measurement sites 15 and 17.

Now, the measurement of the runoff from precipitation during that period is shown on exhibit 17-3 by the green shaded area. Now, there are 926 acres in the watershed area that contributes between those two points.

And now I'm going back to the watershed map, Colville Exhibit No. 7, which shows the watershed area segment two, again, formed by the boundaries at measurement sites 15 and 17. So, I had a measurement of

the precipitation runoff. There are 256 acres in watershed segment number six and 534 acres in watershed segment number five.

Q Yes.

A And those two areas, in my opinion, are the contributors of natural runoff from precipitation to the No Name Creek aquifer.

Q Now, Mr. Watson, the precipitation that falls and eventually becomes surface flow in Omak Creek to the east of your watershed boundary -- let me ask you this.

Is there precipitation that falls to the east of your watershed boundary that becomes part of the surface flow of Omak Creek?

A Precipitation to the east of the watershed boundary that becomes --

Q Yes.

A Yes.

Q Do you know how far east?

A As far east as the easterly boundary of the Omak Creek watershed.

Q Do you have any idea how much water enters the stream at all those points and is lost before entering your watershed boundary?

A And is lost, Mr. Mack?

Q Well, let me ask you this. Do you know the stream

flow of Omak Creek that is entering your watershed? At the eastern boundary.

A I know that there was essentially none in 1977 for a period.

Q Well, you know that the U.S.G.S. surveyed it; do you not?

A Yes, I do.

Q Measured it.

A Yes.

Q And you say those measurements are unreliable to give you quantities.

A Yes.

Q Let me just, because I think there may be something else coming up after this fairly soon, let me just ask you briefly.

Was that the only surface water measurement that is unreliable or were other surface water measurements done by the U.S.G.S. unreliable?

A The measurements -- let me be very clear on this, Mr. Mack.

Q Oh, please do. That's what I want.

A The measurements of the difference in flow between sites 1 and 5 is very unreliable as indicated by the statistical analysis, and there is nothing fancy about a statistical analysis. All you do is take your data

and determine --

Q You've already testified to that, Mr. Watson. What I asked you was -- I know that was unreliable, in your opinion. Are there other surface water measurements made during this study that are unreliable elsewhere in the watershed?

A There are other surface water measurements, in my opinion, that are imprecise and inaccurate.

Q For No Name Creek?

A For No Name Creek.

Q Between which points?

A In my opinion, there are inaccurate and imprecise measurements of surface water at site 9 as shown on watershed map, Colville Exhibit 7, at site 15, at site 12 and at site 17. Site 12 shows on Colville Exhibit No. -- I don't recall the number right now. It's the surface water monitoring and management system exhibit.

MR. VEEDER: Number 10; isn't it.

MR. MACK: Your Honor, I've got a few more questions, but --.

MR. VEEDER: I would like to offer that, Your Honor.

THE COURT: 10 was identified. It has never been admitted.

MR. VEEDER: That's right. I'd just like to

offer it now.

MR. MACK: Which one is 10?

THE COURT: Surface Water Measuring.

MR. MACK: May I approach.

THE COURT: Is that 10 you have?

MR. MACK: Yes, sir.

THE COURT: Does any counsel have objection to the admission of 10?

MR. SWEENEY: Could I look at that a little more closely, Your Honor?

THE COURT: Go ahead. It purports to show the sites at which surface water measurements took place.

MR. SWEENEY: Well, we have no objection.

THE COURT: Mr. Price?

MR. PRICE: I have no objection.

THE COURT: No. 10 will be admitted, Tribe's 10.

(Colville Exhibit No. 10 is admitted.)

Q (By Mr. Mack) Mr. Watson, just to finish with this, you have problems with the leakage from Omak Creek; is that a poor phrase to use, in your opinion, in analyzing this system?

A When you are referring to leakage from Omak Creek as

the total difference in stream flow between sites 1 and 5, I have considerable trouble, because the leakage implies that all the water that is being measured as a difference in stream flow between those points enters the No Name Creek aquifer, and that is absolutely incorrect. Some is lost to evapotranspiration and other amounts of surface flow are lost to subsurface flow.

Q But, acknowledging that, you would use the term, would you not, "leakage from Omak Creek," understanding those limitations?

A I like to use the word "infiltration."

Q You prefer that word?

A Yes.

Q Is there any point or series of points at which infiltration of waters from Omak Creek enter your, as you've defined, the No Name Creek groundwater aquifer and could you please indicate on any exhibit you choose what those points are.

THE COURT: Just a moment. Mr. Price? Did you have an objection?

MR. PRICE: A comment, Your Honor. In a line between ecstacy and agony, I think I'm approaching agony, and I'm wondering if the hour of the day is appropriate for us to adjourn and take other matters up.

THE COURT: Well, I understood counsel to ask that we recess at 4:30 and take up the matter of where we are and when we will be back to it, so I guess that's where we're at. We'll never finish the cross-examination of this witness if we ran another couple of hours.

MR. MACK: I believe that's correct, Your Honor, and I leave it up to you whether you want to take the time for an answer or wait on that.

MR. VEEDER: Did I hear correctly, two more hours of cross-examination?

THE COURT: I made the comment that I suspected that we would not finish cross-examination within the next two hours. Therefore, I think I better accede to counsel's earlier request that we recess at 4:30 and take up the matter of scheduling the rest of this case.

MR. MACK: Thank you, Your Honor, I apologize for running over.

THE COURT: That's all right. I have one problem. Do you want to discuss the problems we face in chambers or do you want to put it on the record?

MR. SWEENEY: I'm going to request that it be put on the record, Your Honor.

THE COURT: Very good. Then the witness

may step down.

(Witness is excused.)

MR. VEEDER: I haven't yet offered 7. I can't put that in, Your Honor until I have a geologist. So, I think that is the last one I have.

THE COURT: That's the watershed map.

MR. VEEDER: Right, and I have a geologist on that.

THE COURT: Well, gentlemen, we're in this posture: We have run out of the scheduled time this week, and as I previously indicated to you, the Court doesn't have any time for the next two or three weeks, at least, to take up this case. I can give you some possible dates, all of which would be tentative. It would be firm, subject to requirements of trials of criminal matters under the Speedy Trial Act. I will put no other civil case in ahead of this, but I would have to bump any setting that I give you now if we run into problems under the Criminal Speedy Trial Act, so, Mr. Sweeney?

MR. SWEENEY: Well, Your Honor, I was just going to mention that I have talked to counsel for Mr. Walton, Mr. Price, and also counsel for the State of Washington and I think we can see that Mr. Veeder's presentation from now on will probably take at least

an additional day because I understand he has three or possibly four witnesses remaining, and calculating what some of the other parties may have to present, we're looking at maybe almost six days or maybe more than that. Maybe eight days of testimony on this matter.

THE COURT: Well, that leaves a couple of possibilities. One is that we have two further sessions of the trial, because I don't have an eight-day period that is open. I can find two four-day periods or we can get over into April and that is so far away that I can't tell where I am, but I can try and hold out eight straight days and, in essence, that's two weeks, because every Monday is out. I have to take care of all the motion matters and all criminal matters on Monday. So, we're talking about a week being a four-day session.

So, those are our possibilities, gentlemen.

MR. VEEDER: Well, what are your first four days, Your Honor?

THE COURT: The first four days would be March 14. That's kind of iffy, but I can try that. The week of March 21 for four days looks pretty good. And then I have a week open at the present time, April 4, which again is four days.

MR. VEEDER: I would like very much to pick

up the first four days so we can get at this, Your Honor, and get back and get in as much as we can. I understand your calendar. I understand the pressures, but I do believe that what we are confronted with is the reality of the exhibits showing a short water supply, and I would like to get my case in and have the world know what we have got to offer. I don't know where they get eight more days, but so be it. I would like to get here and get this thing going and get ours done.

MR. SWEENEY: Your Honor, we vote for the March 21 four-day slot there. I have talked with Mr. Burchette and maybe we can do something that might help. Could I ask Mr. Burchette to address the Court?

THE COURT: Yes.

MR. BURCHETTE: Your Honor, during this past week we have been listening to evidence which relates to the availability of water in this basin, and we've also been listening to evidence which relates to the uses of water by the Tribe and by Mr. Walton, and also the projected uses that the Tribe might have for the water. We recognize, too, that we want to expedite the matter, both from the standpoint of Mr. Walton and from the standpoint of the Tribe.

I think what I'm getting to is perhaps a suggestion

as to how we might best do that to resolve the matter completely, and perhaps rather than making a suggestion, I should do it in the form of a motion, which I will do.

I would propose, the Government would propose that we move for partial summary judgment as to those questions of law which could be addressed and could be answered irrespective of the facts. Certainly, the facts have to be on the record. We have to know how much water is available; we have to know what the Indian uses are, to make the final determination. But the questions of jurisdiction et cetera, could best be handled by a motion for partial summary judgment.

What I'm suggesting is this: That the Government would move for partial summary judgment that the creation of the Colville Indian Reservation in 1872 reserved for the Colville Confederated Tribe and its members, as a matter of law, the amount of water necessary to satisfy the future as well as the present needs of the Reservation with an effective date as of the date of the creation of the Reservation.

Also, we would move that the allotment of the lands of the Colville Indian Reservation pursuant to the General Allotment Act of 1887 that each allottee of the land with the right to use of water necessary for the allottee's needs with a priority date as the date of

the Reservation.

With respect to the issue of the transfer of lands to the non-Indian, we would move for partial summary judgment that at the time of the transfer of Indian allotted land to the non-Indian ownership, the non-Indian would be entitled to the right to use of whatever quantity of water was being utilized by the previous Indian allottee when the land was removed from trust status, and this water right would have a priority date also as of the date of the creation of the Reservation.

We would move for partial summary judgment that following the transfer of land from Indian to non-Indian ownership, the successor's right to the use of water would be predicated on the application of the water to a beneficial use upon the lands with a priority date as of the date of the use.

We would move that the rights of the Colville Confederated Tribes and its members to the use of waters within No Name Creek have a priority date of 1872; that as a matter of law, this right is prior and paramount to, the rights of the Waltons to the use of the water of the lands in the No Name Creek valley.

And, lastly, that the State of Washington, would have no jurisdiction or authority to control or

regulate the use of water on lands within the exterior boundaries of the Colville Indian Reservation whether such lands are trust lands owned by the United States or fee lands owned by Indians or non-Indians.

Now, Your Honor, there is one other issue which you have brought up on occasion, I know in talking to Mr. Sweeney, and that is with respect to the jurisdictional question between the United States and the Tribe. Now, in moving for partial summary judgment we would also address that particular issue and state the position of the Federal Government with respect to that question. And what I'm getting at, Your Honor, if we take the date March 21, what we would propose to do is that we would file a brief in support of our motion for partial summary judgment by the 1st of March, then allow the other parties to have until the 17th of March to respond to that brief, and then when we come back on the 21st, I would suggest that we take some time out initially and let's argue these questions of law, because the way I view the way we are proceeding now, it's very difficult to get to the real questions of law. We are intermingling the facts with the law and it is difficult to understand where we are coming out. Now, granted, we still have to go forward with the factual determination, but as a

judicial economy in getting to the bottom of the matter, it just seemed to the Government that this is probably a way to proceed that would allow the Court to see the issues, see the facts, and then be able to make a determination, because as we view it, the question of the jurisdiction, the question of the nature of the Indian and non-Indian rights in this case are questions of law which do not relate to the factual matters which are being determined here today, or are being set forth this week, and which would come to pass whenever we convene again.

So, with that, Your Honor, I would put it in the form of a motion, but it is also in the form of a suggestion to the Court as a way to proceed.

THE COURT: Well, I think that each and every issue that you have just delineated have been in the case. Most of them and I think all of them have been raised by previous motions which we really didn't get to before we got to trial in this matter.

I also recognize that most of these issues have been covered by your previous briefs, but, of course, over the years sometimes they get lost, so I think what you are suggesting, if I try and rephrase what you are suggesting, that before the next session of this trial, that we try and finalize those issues which have been

in this case all along that are purely matters of law, and that would have to include the matters raised this morning by Mr. Price, that is, what amounts to a motion to dismiss on the grounds of absence of indispensable parties.

MR. BURCHETTE: With respect to that, Your Honor, I would suggest that given the scenario that I have just set forth, that Mr. Price begin and have his brief to us as of March 1 and we would have until March 17 to respond to his two questions which he raised this morning.

I'm just trying to look at a way to expedite the matter, if you will, Your Honor.

MR. PRICE: Your Honor.

THE COURT: Mr. Price.

MR. PRICE: Could I respond to just one of those points?

THE COURT: Yes.

MR. PRICE: We intend, in our case in chief, to go into some depth into the factual background behind the debate and adoption of the General Allotment Act as to what we think are factual matters to assist the Court in making a determination of what the purpose of that Act was. Now, before this Court decides as a matter of law as to the purpose of the General

Allotment Act, I think we, as has been done on other Indian water rights cases, the legislative history has gone in as a factual question before the Court makes a determination, and we do want that right to put that testimony, not testimony, but evidence and the record in before Your Honor makes a determination on that question.

THE COURT: Counsel, it's a new concept to me that the legislative record is a factual question. It seems to me that's a matter when the Court has to construe legislative action,the Court looks at that as part of the construction of the statute.

MR. PRICE: That's correct, Your Honor.

THE COURT: And, therefore, you can present that in brief form.

MR. PRICE: All right, in other words, the exhibits the Court would accept in brief form.

THE COURT: Absolutely.

MR. PRICE: And the only other testimony we'd have beyond that -- If I might have a moment.

THE COURT: I think I know what's bothering you, and I can't foreclose is that in your examination, -- this is any counsel -- in your examination of the issues raised by the current motions before the Court you may respond if you find you think there is

factual issues before it can be decided. I don't want to foreclose that.

MR. PRICE: I would accept that as a legal opportunity, Your Honor. Thank you.

THE COURT: The State next and then I'll come back to Mr. Veeder.

MR. MACK: Your Honor, this motion, I must say, comes as a surprise to the State, at least to me, but he State's position in a nutshell, I suppose, has always been that the questions of law that this Court has been asked to decide in this case cannot be decided absent the facts that are in dispute and I think Your Honor probably understands our theory by now after all these file after file has been filled with documents from all the parties.

With regard to the schedule, I must say that the State would be in the unique position of having to respond not only to Mr. Burchette's motion which has come as a surprise, but to Mr. Prices which is equally a surprise. We are somewhere in the middle on that.

My preference, frankly, would be that -- would be for the April date for the arguments. I just think, knowing the way lawyers work and the time schedules and the constraint this Court is under, it seems to me more realistic to set up a briefing schedule if there is to

be one on this motion that would set the matter for oral argument by April 4 rather than the March 21 date, and from a selfish standpoint it could give the State more time to research both motions both of which were a surprise.

THE COURT: Well, Counsel, I just want to remark one thing about that. I don't think there is anything in the motions pending before me now that haven't been pretty thoroughly briefed. My problem is the briefs have come in over a period of three or four years. Now, I either have to sit down, and I simply don't have the time to do it, and go back through about three feet of files here to try and find out what you are trying to tell me, or ask you to pull your previous briefings together and zero in on these points.

I think you've covered all these, because I have read them as they come in, but I can't assimilate them all back that far.

MR. MACK: That may be true, Your Honor, and I suppose all sides are going to have to rewrite what they have already written. It seems to me, and it's up to Your Honor the way you handle it, I don't know, that as presently scheduled by Mr. Burchette, you would be receiving the reply briefs of, for example,

the State three or two days, I guess it is, three days before oral argument. If that's fine with you, I suppose that's the way it will be, but my position would be that the State would prefer the later, April 4, date. I think it just makes more sense, if the issues are as important as the United States believes them to be.

THE COURT: Well, the problem I have with going to April 4 is, this gives us no leeway whatsoever if we run into some problems, and I might have to -- I might run into a docketing problem at the last minute. Of course, maybe Congress will do something to give us some help in the meantime, but that's conjecture. So, I need to give a little lead time here because by April 1 it is obvious you are going to be into the critical time of the year in this case, and, therefore, I think I need to keep that much lead time available in case we run into an emergency where I have to postpone the setting date, so I'm reluctant to look at the date of April 4. Well, Mr. Veeder, I haven't heard from you yet.

MR. VEEDER: Well, Your Honor, I may be old fashioned about this. We had motion for partial summary judgment in regard to State jurisdiction, in regard to 25 U.S.C. 381 and in regard to the affirmative

defense interposed by Mr. Price. I would rather see the facts going in and get it before Your Honor because we have a pragmatic matter. We're going into an irrigation season. There is no injunctive relief like we had the monitoring and measuring program last year. We've got to deliver water downstream. Those are things with which we are confronted. I think we all know what we think the law is. I have no objection. I think I briefed a lot of the law in regard my proposed findings of fact and conclusions of law.

THE COURT: You did.

MR. VEEDER: I'm perfectly willing to go along with that. But I do submit, Your Honor, and I said before I would like to get as much evidence in as we can on the 14th. If you want to go then to the 21st, let's get the rest of the evidence in and I submit, Your Honor, that we all agreed on what I thought was a very pragmatic way.

There are these issues of law. They are before Your Honor, and the issue of indispensable parties, fine. I think you can raise a jurisdictional issue at any time. You can raise one. Let him file his briefs. But please, Your Honor, I respectfully petition you, let us get this evidence in. I don't see

how it can take eight days, but I am perfectly -- the big ones are in. The U.S.G.S. report is in.

THE COURT: Excuse me. Bailiff, would you get me my docket book off my desk, please.

MR. VEEDER: Availability of water from our standpoint is in. I can't see our geology taking very much time, frankly. I'll put those in. I have got Dr. Casmark and Dr. Robinson. The next we've got is the issue of the water delivery to the Lahonton cutthroat trout.

Now, it may be that we'll put in some evidence with regard to Omak Creek. I don't know. It has been raised so frequently I would like to show the obligation of the Tribe on Omak Creek.

But why can't we get our evidence in when we are confronted with an irrigation season that is very soon to be upon us.

THE COURT: Mr. Veeder, I recognize all this, and the reason I asked for my docket book, I suddenly remembered that I have got a Grand Jury convening on March 6. Under the Speedy Trial Act, within ten days after that, if they return indictments, I'm under the gun to see something is done about those cases. That gets us right into that week of the 14th and to give you a trial date here is almost kidding ourselves.

On the 21st I have the protection of having a visiting judge at that time, so if we did run into criminal problems, the chances of having to strike this are very slim because I will have some help here.

So, to take these into consideration, I think the only thing to do is to recess this case to March 21 which I feel can be quite firm under these circumstances Mr. Veeder, I don't feel this is going to delay the ultimate resolution because even if I moved this up to the previous week, I still have the problem of finding time to study your briefs and coming up with the answers on the legal issues which have nothing to do -- and there are many legal issues in this case that have nothing to do with facts that are being presented, and Mr. Burchette has indicated some of those. They are issues which have been thoroughly briefed by counsel over the past number of months and even years.

So, I'm not too concerned about the shortage of time between the projected, or the proposed date of final briefs by the 17th and setting this for the 21st because I have already read a lot of these. I just need to get you fellows refreshing me pretty much on your positions on these matters.

I'm going to set this, recess this trial until

March 21. I'll set the briefing date, as suggested, and, of course, this runs both ways, Mr. Price. You have your motion for dismissal. Your opening briefs by March 1st, any responsive briefs by the 17th. We can argue those matters on the opening day of the recessed trial on the 21st and, hopefully, get these facts completed in that session of the trial.

MR. VEEDER: Your Honor, how long will that session be?

THE COURT: It's a four-day session, however let me look on the 28th. Well, it's a four-day session. I have the Chamokane case scheduled to begin on the 28th. That's the other Indian water case. So, maybe I could consolidate these.

MR. VEEDER: Well, the arguments on Chamokane are going to be very much the same as this, Your Honor.

THE COURT: I recognize that. That's why I said, facetiously, we ought to consolidate them, because the issues are very much the same.

But that brings me to the thing I said a while ago, Mr. Veeder, that if we really get into a jam, then I can move over to that April 4 date which I'm holding, if we cannot finish the fact-finding in this case in the four days on March 21.

MR. VEEDER: We are to proceed with some

facts; is that right, Your Honor?

THE COURT: We'll go right ahead with this trial on the 21st. Now, I'm going to ask counsel, because it's obvious from the trial this week, that many of the exhibits counsel simply haven't gotten down and looked at, because we are wasting a lot of time while we go back and show the foundation. That ought to be done before you get in here. You fellows have seen these exhibits. You can go over them, and if you have got a legitimate question as to the authenticity of the exhibit, of course, I'll listen to it, but that hasn't happened here. It has been a case this week, and I understand this because the way the case has developed, it has been a case of where counsel has to go back and refresh themselves and then the exhibits ultimately have gone in, but you fellows can sit down before the 21st and go over these exhibits and we can save a lot of time in the introduction of exhibits. Then we can get right to the bottom line of these things and the experts can say what these exhibits mean and what their opinions are. I think, really, we can save some time by that.

MR. SWEENEY: I would suggest that counsel meet on the 20th, then, and go over these exhibits.

THE COURT: Well, that's a good suggestion

because the 21st is a Tuesday, because, you see, Monday is our motion and criminal docket day, so as long as you fellows have to come in here on the 21st I guess it wouldn't hurt to come the 20th and get these exhibits --.

MR. VEEDER: The geology we looked at on March 11, 1976, and I would just as soon show it again, Your Honor.

THE COURT: Well, because of the time element, and I recognize this that everybody is busy, and you look at something a year ago. I can't expect counsel to sit here and say, yes, I recall that, and I recognize that. So, I'm going to ask you before the 21st, and you do this at your own time schedules, before the 21st any questions you have as to admissibility of any exhibit be gotten right down to the basic facts so we're not into something that after you refresh yourself, then you agree that these are all right, and I think it can save us a couple of days in the total run of the rest of this case.

Anything further, gentlemen?

MR. SWEENEY: No, Your Honor. Thank you very much.

THE COURT: Court will be adjourned.

(This trial is recessed until March 21, 1978.)

C E R T I F I C A T E

I do hereby certify that the foregoing is a true and correct transcript of my notes taken in the entitled proceeding and on the date stated.

I further certify that the transcript was prepared by me or under my direction.

WAYNE C. LENHART

Official Court Reporter

CD