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Deposition of Mike Watson

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UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF WASHINGTON

COLVILLE CONFEDERATED TRIBES, Plaintiff, vs BOYD WALTON, JR., et ux et al Defendants, and STATE OF WASHINGTON, Defendant Intervenor.	)	Civil No. 3421
UNITED STATES OF AMERICA, Plaintiff, vs WILLIAM BOYD WALTON, et ux et al Defendants.	)	Civil No. 3831

DEPOSITION OF MIKE WATSON

Deposition upon oral examination of Mike Watson, taken at the request of the Defendant Intervenor, before David Caviezel, a notary public, at Room 897E, Federal Building, Spokane, Washington, commencing at or about 10:30 a.m. on January 5, 1978, pursuant to the Federal Rules of Civil Procedure.

APPEARANCES:

FOR THE PLAINTIFF COLVILLE CONFEDERATED TRIBES:	WILLIAM H. VEEDER Attorney at Law 818 - 18th Street N.W. Washington, D.C. 20006
	and
	STEPHEN L. PALMBERG Attorney at Law P. O. Box 150 Nespelem, Washington 99155
FOR THE WALTONS:	NANSEN & PRICE By: RICHARD B. PRICE Attorney at Law P. O. Box O Omak, Washington 99841
FOR THE STATE OF WASHINGTON:	LAURA E. ECKERT and ROBERT MACK Assistant Attorneys General Temple of Justice Olympia, Washington 98504
FOR THE UNITED STATES OF AMERICA:	ROBERT M. SWEENEY Assistant U. S. Attorney United States Courthouse Spokane, Washington 99201

MS. ECKERT: As a preliminary matter, Mr. Veeder, and on the record, do you make the usual stipulations concerning objections?

MR. VEEDER: Yes. I want to make a general objection to anything that's offered. I reserve the right to tell a witness not to testify if I don't think it should be in testimony. I'd like, however, when I get the

deposition to be able to freely separate objections to each, if that's all right with you.

MS. ECKERT: To each person's deposition?

MR. VEEDER: That's right.

MS. ECKERT: Of course, yes.

MIKE WATSON

called as a witness at the request of the Defendant Intervenor, having been first duly sworn according to law, did testify as follows herein:

EXAMINATION

BY MS. ECKERT:

Q. Mr. Watson, would you state your name and spell it for the record, please?

A. My name is Thomas M. Watson, spelled W-a-t-s-o-n.

Q. Where do you presently reside?

A. I reside in Helena, Montana.

Q. Where are you presently employed?

A. I am employed by Morrison Maierle, Incorporated, consulting engineering.

MR. SWEENEY: Better spell that.

THE WITNESS: M-o-r-r-i-s-o-n, and Maierle is M-a-i-e-r-l-e.

Q. (By Ms. Eckert) How long have you been

employed with Morrison Maierle?

A. Since 1971.

Q. And prior to your employment with Morrison Maierle, by whom were you employed, if at all?

A. Previously I was employed by Montana State University in a graduate program, and prior to that I was employed by David E. Flemming Company, consulting engineers, in Denver, Colorado.

Q. Would you very briefly, please, describe your educational background since high school?

A. Since high school I attended the University of Denver beginning in 1964. I graduated from the University of Denver in 1969 with a Bachelor's degree in civil engineering. Subsequently I was employed by David E. Flemming for approximately two years, and then attended Montana State University to finish a Master's degree in civil engineering that I had initiated at the University of Denver.

Q. Okay, and what is your present capacity with Morrison Maierle Consultants?

A. I'm chief of the water resources department.

Q. Would you describe in more detail what that involves precisely?

A. I'm responsible for the water resources activities of the company. Water resources is one of five departments of civil engineering by the company, and I have

technical and administrative responsibilities.

Q. Okay. Now, when you say you're a civil engineer in the water resources department, have you also acquired practical experience in the field of hydrology?

A. Yes. Civil engineering encompasses hydrology.

Q. Okay.

A. The curriculum that I was engaged in at both the University of Denver and Montana State University dealt extensively with hydrology so I did have the academic background as well as experience.

Q. Okay. Now, Mr. Watson, are you familiar with that area of the Colville Indian Reservation in Washington State that's become known as No Name Creek?

A. Yes, I'm very familiar with that area.

Q. Can you explain for us, please, how you came to be familiar with that area?

A. I came to be familiar with that area through approximately two and a half years of extensive study of the No Name Creek Basin involving numerous field investigations and analyses of considerable data collected in the basin.

Q. Okay. You say two and a half years of extensive study. When did that two and a half years of study begin, when did you first become familiar with the area?

A. July, August, 1975.

Q. Okay. Do you know if prior to that time--I take it in July 1975 you were retained or your firm was retained by the Colville Indians to make these studies, is that correct?

A. Yes, we were retained on behalf of the Colville Indian Tribe.

Q. And prior to your being retained on behalf of the Colville Indians do you know if there was any other engineering or consulting firm performing study of the hydrology in and around No Name Creek.

A. I have no knowledge of anyone performing hydrologic investigations for the Colville's.

Q. Now, let's zero in on the two and a half years that you spent. I take it that brings you up to the present?

A. That brings us up to the present, uh-huh.

Q. Can you explain in more detail in July of 1975 what it was you were called upon to do and what was the scope of your proposed work with respect to No Name Creek?

A. Are you speaking to me as my individual responsibility or as the firm's responsibilities?

Q. I'll ask it first in terms of the firm's responsibilities.

A. Firm responsibilities were to undertake an investigation of the geology and hydrology of the No Name

Creek Basin. More specifically we were engaged to determine water requirements for irrigation in the basin by the Colville Confederated Tribes to determine the water supply available for development in the No Name Creek Basin.

Q. Okay. Now, in the course of that work the firm then had to consider the amount of irrigable acreage which could be developed in that basin, is that correct?

A. That is one of the parameters that was investigated.

Q. Were you, yourself, personally responsible for the determination of the amount of irrigable acreage?

A. No, I was not personally responsible for the--I'm not exactly sure what you're asking there, but I was not personally responsible for the soil surveys. I was responsible for determining the amount of land that we could put into production.

MR. VEEDER: Maybe to save some time, Mike Kaczmarek performed the soil surveying.

MS. ECKERT: I just basically wanted to make that clear on the record.

Q. (By Ms. Eckert) Now, you previously testified as to the general responsibilities of the firm?

A. Uh-huh.

Q. What the Colville Indians have requested you to do. Can you be more specific then on your individual

duties with relation to that project?

A. Yeah. My individual duties were to determine the water requirements. Also to determine the water supply.

Q. Now, when you say to determine the water requirements, what exactly does that mean?

A. That means to determine the amount of water required for irrigation in the No Name Creek Basin.

Q. And to determine that then, let's follow this through a little bit more, what factors go into the determination of water requirements for that basin? I imagine you consider the kind of crops, for instance?

MR. VEEDER: I'm going to object to that. I think the witness should not respond until we get down specifically to the areas that are being irrigated. I don't think we can talk about the No Name Creek Basin. I think we have to refer to the lands that are irrigated. The No Name Creek Basin is--much of the land is not irrigable, and I think it's much too broad.

Q. (By Ms. Eckert) Well, I can narrow this down. I was asking a general question to try and speed this matter up, but we can certainly narrow it down.

In determining water requirements for irrigation projects by the Colville Indians then I take it you looked at specific parcels of land to determine what crops and

patterns of usage could be made of that land, is that correct?

A. Yes.

Q. Can you specifically tell us which parcels of land in and around the No Name Creek Basin you considered? Do you have a list of that or a list--

A. Yes, I have an exhibit that I could present showing that although if you're talking about the lands that are irrigable in the basin Mr. Kaczmarek would be better to present that.

Q. Okay.

MR. VEEDER: I may also point out that we served on the State of Washington an exhibit showing the irrigable acreage.

THE WITNESS: That's correct.

MR. VEEDER: Location of the irrigated acreage.

MS. ECKERT: I believe it was Mr. Watson who signed the cover letter on that.

MR. VEEDER: That's right.

MS. ECKERT: I was going to ask then--I suppose I will do so now. I'd like to have that marked one, please.

(Deposition Exhibit No. 1 was marked for identification.)

Q. (By Ms. Eckert) Mr. Watson, I'm handing you

what's been marked as Deposition Exhibit No. 1, and ask you if you're familiar with that?

A. Yes, I am.

Q. Did you prepare that exhibit?

A. The exhibit was prepared under my direction.

Q. And very generally what does that exhibit purport to show?

A. The exhibit shows the indian allotments in the No Name Creek Basin. It also shows the watershed boundary of the No Name Creek Basin. It shows the land descriptions in terms of section and township and range. It shows the location of No Name Creek, the location of Omak Creek, the location of Mission Creek, and it shows the irrigable and presently irrigated, as of 1977, lands of the Colville Confederated Tribes.

MR. VEEDER: Can you read the title block on that?

THE WITNESS: The title block is the Colville Irrigation Project. In addition to the irrigable lands the exhibit shows the facilities on the indian allotments used for purposes of irrigation.

Q. (By Ms. Eckert) That is, the type of diversion facilities?

A. That's correct.

Q. Also I note on Exhibit 1 in the corner it's

marked, preliminary. Is there a more recent version of this particular exhibit?

A. There is a more recent version, yes.

Q. What does the more recent edition add or subtract or change on Exhibit 1?

A. I don't recall anything substantial in the way of a change. We did enlarge the lettering in the explanation.

MR. VEEDER: Mr. Watson, I'm going to recommend if there has been any change you compare now with your exhibit just to save some time.

THE WITNESS: Is that all right?

MS. ECKERT: That's fine. I wasn't sure if you had it here.

THE WITNESS: Yeah, I do have it.

MR. VEEDER: And we delivered to you a copy of it now.

THE WITNESS: No, Bill, we--

MR. VEEDER: Don't have a copy?

THE WITNESS: Don't have copies. We do have the large exhibit.

MR. VEEDER: All right.

(Discussion off the record.)

(Deposition Exhibit No. 2 was marked for identification.)

Q. (By Ms. Eckert) My question basically was, in what respect did the preliminary version, which has been marked as Exhibit 1, differ from what I take it is the permanent version marked Exhibit 2?

A. That's correct. The changes that I recall in the allotment 526, in section 16, the location of the pivot was incorrectly shown on the small size exhibit, and we--

MR. VEEDER: When you say, pivot, please explain on the record what that is.

THE WITNESS: The pivot is the center pivot irrigation system on that allotment. The location of the point of rotation was incorrectly shown about a sixteenth of an inch on the previous exhibit, and that's been corrected. The only other change that I recall on this exhibit is in the explanation. The irrigation summary is in the lower right-hand corner of the exhibit. In the previous exhibit we had, under the column, allotment, we had referred to land west of allotment H-892 and west of S-901. In the legend now we were calling that tribal trust, which is a better explanation of that piece of land in both cases.

Q. (By Ms. Eckert) But I take it the numbers themselves have not changed, it's merely the description on those numbers?

A. The numbers have not changed.

Q. Okay, fine, you can sit down.

A. These are the only changes that I recall.

Q. Now, Mr. Watson, drawing your attention to Exhibits 1 and 2, on both of those exhibits there are areas marked in green shading and in yellow shading, and according to the key the green is the irrigated acres in 1977 and the yellow is the undeveloped irrigable acres. You stated that this had been prepared under your direction. Where were the figures for the description of the green irrigated acreages shown on Exhibits 1 and 2 taken from? Did you develop those numbers yourself?

A. Yes, absolutely.

Q. Okay, and now when I--

MR. VEEDER: When you say numbers, please, Miss, what do you mean by numbers? There are several.

Q. (By Ms. Eckert) In relation to the green shaded area, the irrigated acres, there are a number of acres in there, and I'm requesting the witness to respond. Did he--

MR. VEEDER: When you say numbers--

MS. ECKERT: Numbers of acres.

MR. VEEDER: Numbers of acres, thank you.

Q. (By Ms. Eckert) Excuse me, and now when you calculated the number of acres that are presently irrigated, that is, in 1977, can you explain for us how you did that for the Colville allotments and trust lands shown on

Exhibits 1 and 2?

A. Yes. I was very familiar with the lands that were irrigated because of the numerous visits and the operation of the water supplies during 1977. So I obtained the aerial photo that you're looking at on the exhibit and delineated the boundaries of the areas that you knew were irrigated. Then I used a device to measure those acres known as a planimeter, and from that determined the acreage. I asked Mr. Fred Jones, who is the consultant for the Department of Justice in this matter, to check those acreages.

Q. When you say check, you mean field check?

A. Yes, and also to check the delineations and the determination of the acreage in any manner that he wished to pursue.

Q. Did Mr. Jones have any comments which led you to either expand or decrease the amount of irrigated acreage?

A. No. We were in very close agreement although his figures were somewhat higher than the figures that I have.

Q. Okay.

A. I also should point out that after delineating the areas on the aerial photo a field check was made of each boundary by physically going on to the land and refreshing memory, and being very careful in the delineation.

Q. Did you perform that field check?

A. Yes, I did.

Q. Okay. Now, when you perform the field check does that involve any kind of surveying or is it simply a visual, informal observation?

A. A visual observation, yes.

Q. And I take it you went then through the same process for the irrigable lands, is that correct, to determine the boundaries of what's now marked in yellow on Exhibits 1 and 2?

A. The same process was done on the irrigable lands although the delineations of those lands was performed by Mr. Kaczmarek.

Q. Okay. So I take it both you and he worked together?

A. Very closely.

Q. In developing the yellow shaded areas?

A. (The witness nodded his head affirmatively.)

Q. Okay. Now, when you say that the areas on Exhibits 1 and 2 marked in green, that is, the irrigated acres were irrigated as of 1977, do you know when those areas first came into irrigation, and I'll ask that specifically with reference to parcel S-526, the north end by, I believe it is just south of the Paschal Sherman Indian School?

A. I can give you very close recollections.

Q. Okay.

A. On this date that the areas on allotment 526 were first irrigated I believe all the acreage in allotment S-526 was initiated on August 1976.

Q. Okay, and then the same question with respect to--what is it, 892?

A. Okay. In allotment H-892 the southern--the acreage in the south half of this allotment--

MR. VEEDER: When you say this, would you please refer to the exhibit, and when you point to something be specific as to what you're pointing, Mr. Watson, please.

THE WITNESS: Okay. I am describing the irrigation in allotment H-892 as shown on the Colville Irrigation Project Exhibit dated December 1977, and I'm referring to a parcel of land in the south half of allotment H-892 lying to the south of the yellow and white band that bisects the irrigated and irrigable lands on this allotment.

MR. VEEDER: You pointed to Deposition Exhibit No. 2?

A. THE WITNESS: This is Deposition Exhibit No. 2.

Q. (By Ms. Eckert) Now, my question was, when did those areas come into irrigation?

A. These areas--this particular parcel of land that I've just described came into irrigation in May, 1976.

Also the parcel to the north, which is a larger area.

Q. Now, that's also on Exhibit 2, and allotment H-892.

A. This is also on Deposition Exhibit 2, and also in allotment H-892, and I'm referring to the green shaded area in the north half of that allotment. Approximately the east half of the north parcel was irrigated beginning in May 1976 as well. Approximately the west half of that allotment began in August of 1976.

Q. Okay. Now, the same question with reference to the parcels further south, that is, allotments S-901 and 903 with respect to the irrigated acres there, do you know when those irrigated acres came into production?

MR. VEEDER: I'm going to ask the witness not to respond to that. We're going to call witness Mary Ann Timentwa Sampson and Stanley Paul Sampson, who occupied that land, and we have a resume as to what their testimony would be on page six of our response to the Department of Justice interrogatories, would be numbers five and six. This witness wasn't born when they were using that, and I don't want him testifying--

Q. (By Ms. Eckert) Let me ask, do you know when that came into production?

A. Do I know when?

Q. 901 and 903. If you don't know, just say so.

A. I have no personal knowledge.

MR. PRICE: Excuse me, off the record.

(Discussion off the record.)

Q. (By Ms. Eckert) In reference to parcels 901 and 903 as shown on Exhibit 2, is there any recent irrigation development with which you're familiar?

MR. VEEDER: I object, don't respond to that.

THE WITNESS: Any recent what?

MS. ECKERT: Well, since 1975. I believe that could be clarified in cross examination, Mr. Veeder, but I would clarify the question.

MR. VEEDER: He's already pointed out to you--I don't want to be argumentative on this, but the 1920 dates are extremely important, but go ahead.

Q. (By Ms. Eckert) When I say recent, since your familiarity with the Colville Indian Irrigation Project, that is, since the middle of 1975, I take it, are you familiar with any new irrigation development on either allotments 901 or 903?

A. I'm familiar with irrigation on allotment 901 and 903 since the work that I had been performing was initiated.

MR. PRICE: I'll object to the form of the question.

Q. (By Ms. Eckert) Well, let me ask you this,

what work have you performed since August of 1975 with respect to developing irrigation systems on allotment 901?

A. On allotment 901 I participated in the development of a sprinkler irrigation system.

Q. And when was this sprinkler irrigation system developed then, specifically?

A. Water was first applied to the lands on Deposition Exhibit 2 in allotment 901, the areas shaded in green on the east side of No Name Creek and the west side of No Name Creek beginning in August of 1976.

Q. Okay, and with respect to allotment 903 then, did you have occasion to develop any sprinkler or irrigation system since middle '75 for allotment 903?

A. Yes.

Q. And can you tell us when that was developed and put into production?

A. The water on allotment 903 on Deposition Exhibit 2 the areas shown in green, those areas were first to receive water in August of 1977.

Q. '77?

A. '77.

Q. Going back just a little bit to some of your previous testimony, when you were describing how you differentiated between your irrigated acres and your irrigable acres on Exhibits 1 and 2, that is for purposes of

drawing your green and yellow lines. I take it that the primary work in drawing the yellow shaded areas was done by Mr. Kaczmarek, is that correct?

A. That's absolutely correct.

Q. And you accepted the conclusions and results of his studies?

A. Yes, we discussed it in great detail.

Q. Okay. Did you ever look into it yourself in terms of making field checks or analyses of Mr. Kaczmarek's conclusions?

A. I accompanied Mr. Kaczmarek on several occasions at the time when he was making field investigations.

Q. Okay. Now, shifting to a related subject, on both Exhibits 1 and 2 in heavy dashed line you have basically a rough circle which is marked on key as the watershed boundary, I believe, and marked on Exhibits 1 and 2--well, Exhibit 1 on a black line and Exhibit 2 in a heavy navy-blue line, you see what I'm talking about?

A. Yes.

Q. Okay. Did you--

A. You're talking about the--

Q. The watershed boundary line that begins, for example, at Omak Lake in section 33 of range 27 east and then proceeds northward, makes a loop, and then proceeds back in a generally southerly direction.

A. Yes, I'm familiar with what you're talking about.

Q. Can you explain for us how that line was developed? In the first place, let me ask you did you, yourself, have the responsibility for determining the watershed boundaries?

A. Yes, I did.

Q. Did you perform the field work that was necessary to draw the conclusions which result in the line shown on Exhibits 1 and 2 as the watershed boundary?

A. There was--I'm not sure of your question.

MR. VEEDER: Then don't answer.

THE WITNESS: Exactly properly.

MR. VEEDER: Don't answer the question until you get it straight.

Q. (By Ms. Eckert) Okay. Well, was there anyone else working with you in the determination of the watershed boundaries for No Name Creek?

A. There was someone else, yes.

Q. Who was that?

A. Mr. Kaczmarek assisted in that.

Q. Can you briefly describe for us how you determined the exact place out of the watershed boundary after your investigations?

A. Yes, I can. The watershed boundary beginning

at section 34 on Deposition Exhibit 2 township 33 north range 27 east, beginning at the north end of Omak Lake and traversing through section 35, through section 26 into a corner of section 24 across 23, into section 15, back into 22, back again into section 15 and into section 16 and the south half of section 9 as well as that portion of the watershed boundary beginning again in section 33 of the same township and range and extending into section 28, 29, 20, and 17. It was determined from U.S.G.S.topographic mapping of the area.

Q. When you say U.S.G.S. topographic mapping, are you referring to stereoscopic mapping or what are you talking about when you talk about that?

A. U.S.G.S. has prepared published maps of this area with contours.

Q. Would these be quadrangle maps?

A. Yes, and also orthophoto quad.

Q. Would you state into the record the name of the quadrangle and also the full name of any other data that you relied upon?

A. The name of the quadrangle shown to the south of the splice shown on Deposition Exhibit 2 which extends through the center of sections 8, 9, 10, 11 and 12 as shown in the exhibit, that was a 7-1/2 minute U.S.G.S. quadrangle known as Omak--

MR. VEEDER: Do you have it?

MS. ECKERT: I think we have, excuse me.

Q. (By Ms. Eckert) Is it Tonasket?

A. No, it's Omak two southeast. I believe this is Omak southeast quadrangle. I'm going from memory, I'm not precisely sure. The quadrangle to the north of the splice that I just described is Omak northeast.

MR. VEEDER: When you refer to the splice, please explain what that is then.

THE WITNESS: The splice is the common boundary between the two quadrangles, the Omak northeast quad lies to the north of the splice, and the Omak southeast quad lies to the south of the splice.

Q. (By Ms. Eckert) Okay. Now, when you're talking about these quadrangles are you using 7-1/2--

A. 7-1/2 minute quads.

Q. Okay, and just while we're on this, when you say that you used aerial photos to make Exhibits 1 and 2, what's the source of the aerial photos that you used?

A. The same quads that I just named. It's an orthophoto of U.S.G.S.

Q. Do you know when that photo was taken?

A. The 1970's. I believe it was 1975.

Q. Now, getting back to my question on how you determined the watershed boundaries, you used the U.S.G.S.

quadrangle maps. How did you use these maps?

A. From the quadrangle maps and the contours shown on these maps I was able to delineate the watershed boundary as the top of the ridges that separate the No Name Creek watershed from adjacent watersheds such as Omak Creek. The boundary represents the highest point along the divide through the sections that I described, and water in the form of precipitation falling outside the boundary eventually flows into other watersheds. Water falling inside the boundary begins to flow toward No Name Creek and eventually to Omak Lake.

Q. Okay. Drawing your attention to Exhibit 2 and the area marked as section 22 and 27 of range 27 east, I don't know the township, but basically sections 22 and 27, in that area, visually looking at it there is a large dark mass that runs diagonally from the upper right-hand corner of section 22 and then narrows down and enters section 27. Do you see the area that I'm referring to?

A. Yes.

Q. Okay, and do you happen to know what that dark area is?

A. I believe that this dark area, based upon field inspection of this particular area is a shadow shown by the photographic process, and the shadow--this is a shadow, to answer your question.

Q. Okay. Well, let me ask you, what casts the shadow?

A. The shadow is cast by a ridge located beginning in section 22 and extending in a southerly direction across section 22 and further in a southerly direction into section 27.

Q. Okay. Now, you just stated that in drawing the watershed boundaries on these exhibits for the purposes of these exhibits you followed the highest point along the divide, and you've also just stated that you believe that there is a feature, a ridge feature, running somewhat southerly through sections 22 and 27. Can you explain then how you came to choose the boundary which is shown which actually runs through sections 23 and 26 on Exhibit 2 rather than choosing the divide along the ridge in sections 22 and 27?

A. Yes. There are numerous divides in the No Name Creek watershed that divide the watershed into smaller segments. For example, in section 15 there is also a shadow cast by a prominent ridge in this area which is a very small drainage area that eventually contributes to the No Name Creek Basin. Also, a shadow, a very large shadow, larger than the shadow that is depicted in section 22, is shown in section 21 and extends further into section 20 and into section 17. Part of the shadow is defined by the

watershed boundary that has been defined on this exhibit, but the shadow continues into section 21, and the watershed boundary does encompass an area much broader than that that would receive water, and that water would eventually end up in the No Name Creek Basin. So this is simply a segment of the watershed. When you refer to the shadow in section 22 and 27 you are referring to a section of the watershed that is born by a divide in that area.

Q. So you're basically telling me that if a raindrop falls on section 23, and assuming it's not evaporated in some form, remains intact as water, it will eventually move towards No Name Creek?

MR. VEEDER: Object, don't answer.

Q. (By Ms. Eckert) Is 23 always in the watershed?

A. All of 23 is not in the watershed.

Q. If I have a raindrop that falls on that section of 23 which is shown on Exhibits 1 and 2 as being within the watershed, if it falls within the watershed area of section 23, is it your testimony then that the water would eventually tend to go towards No Name Creek?

A. Yes. I think that it might be helpful for you also to--

MR. VEEDER: I object to any gratuities here.

MS. ECKERT: I don't.

MR. VEEDER: Well, I do.

Q. (By Ms. Eckert) Well, let me ask you this then, if water falls on that area in sections 23 and 26, which are within the boundary that you have drawn as being the watershed boundary, is there a small creek or stream to which that water would eventually flow?

A. Water falling in section 23 and 26?

Q. That's correct.

A. In that portion of those I have no knowledge of the migration of water falling in those portions of the sections within the watershed.

Q. Okay.

A. I have no knowledge of where that water--whether or not that water shows up in a defined stream rather than eventually into No Name Creek.

Q. Okay. Would those waters go into No Name Creek or directly into Omak Lake, do you believe, waters falling on sections 23 and 26 within the watershed boundary that you've drawn?

A. I don't know how you can distinguish between the two.

Q. Well, my question is--

MR. VEEDER: If you can't respond, just say you can't respond.

Q. (By Ms. Eckert) My question is, is there a secondary stream or creek which is yet another No Name

feature which is not shown on Exhibits 1 and 2 which would be in the vicinity of sections 23 and 26 within the watershed boundary?

A. I have no knowledge of any.

Q. Have you ever walked the areas of section 23 and 26 that you have marked for the watershed bounday in that area?

A. Yes, I have.

Q. And can you physically describe physically what it looks like, what kind of terrain is that general area of section 23 and 26?

A. It's an extremely rugged terrain, very steep, walls on the--granite walls on the sides, a U-shaped bottom, no defined stream channel, considerable debris, rock debris having fallen in from the sides is visable in the bottom, extremely rough, very difficult to traverse.

Q. Now turning to another portion of the watershed boundary that you've described by the heavy outline on Exhibits 1 and 2, the portion of the watershed boundary shown in section 9 on those exhibits, basically is a looped-shaped area, and can you explain for us how you came to determine the shape of the watershed boundary in section 9?

A. In referring to Deposition Exhibit 2, and referring to that portion of the watershed boundary that

traverses through the eastern half of section 9 and into the western portion of section 8, that watershed boundary was determined in consultation with Mr. Kaczmarek regarding the geology of this particular area.

Q. Okay. I'll ask him, then.

Did you do any field studies in the vicinity of section 9 to determine where the watershed boundary was?

A. Mr. Kaczmarek has made extensive field investigations. I've accompanied him on those investigations.

Q. But Mr. Kaczmarek was the principal person then responsible for that description of that area?

A. That's correct.

Q. Okay. What role, if any, did you play in relation to the watershed boundary description in section 9?

A. Principally the role that I played was in continuing into section 9. The eastern boundary of the watershed in section 9 is presently defined by topographic feature from the topographic maps.

Q. Okay. Now, in determining these watershed boundaries you basically, as I understand, use topographic maps. Were there any field instruments or measurements taken to verify the line that you had determined from the topographic maps?

A. No.

Q. And just for sake of clarity on the record,

I take it that the watershed boundary refers to surface water and not to ground water, is that correct?

A. It refers--

MR. VEEDER: I object to the question.

MR. MACK: Go ahead and answer it.

MS. ECKERT: On what grounds?

MR. VEEDER: On the grounds that you're asking him to speculate in regards to the overall issue. He is not the groundwater hydrologist, Mr. Kaczmarek is.

Q. (By Ms. Eckert) I'm simply asking him to what waters the watershed boundary refers. Can you answer that question? If you're not qualified say no, but if you can please answer it.

A. I don't understand your question.

Q. Well, it's a watershed boundary. What exactly does a watershed boundary mean?

A. Watershed boundary means that water falling within the boundary eventually ends up in the stream system or in the groundwater system.

Q. You're referring to an entire system and there may, in effect, be interrelationships of ground and surface water, is that correct?

A. That's correct.

Q. Turning to another subject, in the course of assisting the Colville Indians develop the irrigation

systems that you've testified went into operation in May and August of '76 and also August of '77, did you have occasion to perform or have performed the engineering studies for the design of those systems?

A. Yes.

Q. Was that done under your direction or was there somebody else principally responsible for the design of irrigation systems?

A. That was done under my direction.

Q. Now, referring to the system which is located in allotment S-526, can you describe for us what the system was that you designed and what would it look like? If I went out into the field what would I see?

MR. VEEDER: I object to the question. I don't know what you'd see and neither does he.

MR. PRICE: What was the question?

MS. ECKERT: Well, the question was, what would Mr. Kaczmarek see. I will withdraw that question.

Q. (By Ms. Eckert) Let me ask you again, with reference to allotment S-526, would you describe the irrigation system which you designed for use on that parcel of land for irrigation?

A. Yes. The irrigation system on allotment 526?

Q. That's correct.

A. I was responsible for designing--consists of

an aluminum pipe connected to a buried steel pipe in the north half of allotment H-892. The connection is made there to a buried steel pipe, and the portion of the system that I designed was the aluminum pipe, which was approximately 6 inches in diameter extending in a westerly direction across the north half of allotment H-892, equipped with connections to which 40 foot sprinkler lines are attached, and irrigation is accomplished by connecting 40 foot sections of three inch irrigation pipe equipped with a sprinkler nozzle.

Q. Do you know what size nozzle?

A. It's a three-sixteenth inch nozzle.

Q. Do you happen to know the brand name?

A. Rain Bird.

Q. The source of water for the irrigation system in allotment 526 is what?

A. There the source of water is the No Name Creek Aquifer.

Q. How do you get water from the No Name Creek Aquifer to the system? Is it by a well?

A. Yes.

Q. And is that well referred to by any particular name?

A. Yeah. The well is--there are two wells, actually. The first well that can supply water in allotment 526 is located near the center of allotment S-526 and is

referred to on Deposition Exhibit No. 2 as Arabic No. 1, which is Paschal Sherman irrigation well. The second irrigation well is located near the north boundary of allotment S-892 and is referred to in Deposition Exhibit 2 as well number two, which is the Colville number one irrigation well.

Q. Does the sprinkler system serving allotment 526 draw waters from both the Paschal Sherman well and the Colville number one well?

A. It can.

Q. An ordinary operation, that is, under ordinary operation would the sprinkler system in 526 draw from both wells?

A. In an ordinary operation the sprinkler system would draw from one or the other.

Q. Now, the Paschal Sherman well number one, was that drilled as a part of the irrigation system program that you and your firm developed for the Colville Indians?

A. That was drilled as a part of that program.

Q. When was that well drilled?

A. I know the year, I don't know the precise date.

Q. Which year was it then?

A. 1975.

Q. Okay, and the same question with reference

to Colville No. 1 well, do you recall when that well was put in?

A. That was also drilled in 1975.

Q. Okay. Now, are you familiar with the construction features of the Colville well and the Paschal Sherman well?

A. No.

Q. Do you know who performed the actual drilling work for these wells?

A. No, I really don't.

Q. Okay. Is there in addition to the two wells that you've described, the Paschal Sherman well and Colville No. 1 well, is there another well which serves Allotments 526 and/or 892?

A. Yes. A well located--

Q. Which well is that then?

A. A well located on Deposition Exhibit No. 2 near the south boundary near Allotment H-892 referred to on the exhibit as Well No. 3 named Colville No. 2 irrigation well.

Q. Okay. Do you happen to know when that well was put into production?

A. That well was put into production in May, 1976.

Q. Now, returning to Allotment 526 and the sprinkler system that you have there, let me ask you, are you familiar

with the irrigation uses of water in the year of 1977 on Allotment 526?

A. Yes, I am.

Q. Okay, and from which of the wells that you have testified about did Allotment 526 draw its principal source of water?

A. I can't answer that question specifically.

Q. Okay. Let me ask you this, do you happen to know if the Colville No. 2 well was ever used for irrigation of land in 526 during the 1977 irrigation season?

A. Yes, I do know.

Q. And was it in fact used?

A. No.

Q. Okay. Was Colville No. 1 well used for irrigation of land in 526 during the '77 irrigation season?

A. Yes, it was.

Q. And the Paschal Sherman well was also used for irrigation of land on 526, is that correct, during this year?

A. That's correct, yes.

Q. Do you have any idea of the relative breakdown of usage between Colville No. 1 and the Paschal Sherman well, that is, do you know which one was used more as a source of water for the irrigation of land in 526?

A. No, I don't.

Q. Okay. Do you know who might know that information?

A. I'm not aware of anyone that would.

Q. Okay. Were there records of the water usage from each individual well during the 1977 irrigation season? Were records of quantities of water applied kept?

A. Yes, there were.

Q. Okay, and by whom were those records kept?

A. The records were kept by the U. S. Geological Survey in Tacoma.

Q. And you or your firm had no occasion to make any records of your own, I take it?

A. We did not make records of our own with regard to the operation of those wells.

Q. Okay. With reference to the irrigation season of 1977 on Parcel 892, again let me ask you, do you know which wells were used as the principal source of water for the irrigation of that Allotment 892?

A. Yes.

Q. And which wells were those?

A. The wells were--the wells previously referenced as Well No. 2 in the north half of Allotment H-892, and Well No. 3 in the south half of Allotment H-892, Colville No. 1 and Colville No. 2 respectively.

Q. Okay. Do you know if both of those wells were

used this summer to irrigate 892?

A. Yes, both wells were.

Q. And do you know if one of those wells was used as a primary well for the irrigation of Allotment 892?

A. Again, I have trouble answering that question.

MR. VEEDER: Don't answer it then.

Q. (By Ms. Eckert) Let me ask you this then, do you know from which well, that is, Colville No. 1 or Colville No. 2, the principal portion of the water used to irrigate 892 came from?

A. The principal water, the principal amount of water for the irrigation on Allotment 892, I believe, came from Well No. 3.

Q. Okay. Now, do you happen to know on the wells what kind of pump each of the wells had? Let me start with Paschal Sherman Well No. 1. Do you happen to know what sort of pump that well has installed in it? I'm not asking brand names, I'm asking capacity, basically.

A. Would you state the name of the well again?

Q. With reference to the Paschal Sherman Well No. 1 on Exhibit 2.

A. I don't know the capacity of that pump.

Q. Okay. Is it an electric pump?

A. Yes, it is.

Q. And again with reference to Colville Well No. 1,

which is marked No. 2 on Exhibit 2, that again is an electric pump?

A. (The witness nodded his head affirmatively.)

Q. Do you know the horsepower rating by any chance?

A. I don't know that.

Q. And the same question with reference to Colville Well No. 2, again it's an electric pump?

A. It's an electric pump.

Q. Okay. Do you know the rating of horsepower of that?

A. No, I don't.

Q. Okay. Do you happen to know if on the Paschal Sherman well there is any casing in place in that well?

A. Yes.

Q. Okay. Can you describe what you understand the amount and depth of casing to be for the Paschal Sherman well?

A. I can't answer that specifically.

Q. Okay. Well, then don't. With reference to all three wells and the electric pumps, do you know the source of electricity for those three wells, Paschal Sherman No. 1, Colville No. 1 and Colville No. 2?

A. The source of electricity is the local electrical co-op, Nespelem Valley Electric, something on that order.

Q. Now, with reference to the irrigation of Allotment 526 this summer, was the full area that you shown in green as irrigated acres on Exhibits 1 and 2 in production from the beginning of the irrigation season in 1977?

MR. VEEDER: Would you please read that back?

(The court reporter read back the pending question.)

MR. VEEDER: I object to the question, I don't understand it. Why don't we start again.

Q. (By Ms. Eckert) Let me ask you this, in 1977, I take it--

MR. VEEDER: Are you withdrawing the earlier question?

MS. ECKERT: Yes, I'm going to go back to it but I'm withdrawing that particular question.

Q. (By Ms. Eckert) In 1977, I take it, there were lands in S-526 that were irrigated, is that correct?

A. That is correct.

Q. Can you tell us what crops were grown in 1977 on S-526?

A. The crop was exclusively alfalfa.

Q. Can you tell us when the alfalfa crop is planted with reference to S-526?

A. The alfalfa crop was planted prior to the beginning of the irrigation in August of 1976.

Q. When was the first date, if you know, that water

was applied to that crop for irrigation purposes in 526?

A. I believe I had previously stated August, 1976.

Q. Okay. So then it's your testimony that the wells were not used or that there was no irrigation until August of 1976 on 526?

A. I have no knowledge of irrigation prior to 1975.

Q. Okay, I'm sorry, I have confused that question. I was talking specifically with reference to this season and the patterns of water use in this season on 526. It's your understanding that water was first applied in this season in August of '77, is that correct?

A. No.

MR. VEEDER: No, no, I object to that. He didn't say that.

Q. (By Ms. Eckert) Well, the witness was just about to correct it, and if you would, please, correct what I have just stated.

A. The irrigation on Allotment 526 was initiated for the first time in August of 1976. The irrigation in 1977 was initiated at the start of the irrigation season.

Q. Okay, I am sorry if I've confused everyone, and when does the irrigation season start then?

A. The irrigation season this year began in April.

Q. Okay. Now, with respect to 526 then you started applying water in April of 1977 to alfalfa crop, is that correct?

A. That is correct.

Q. Okay, and how long did the water use extent when you did stop applying water?

A. The water use extended until September, 1977.

Q. Now, I take it from that period of time from April of '77 to September of '77 you didn't have water on all the time, is that correct?

A. That's correct.

Q. Do you have any breakdown of when water was actually being used for irrigation purposes between April, 1977 and September of '77 on 526?

A. Yes.

Q. Do you have those records with you?

A. Yes.

Q. Could I see them, please?

A. Yes.

(Deposition Exhibit Nos. 3 and 4 marked for identification.)

Q. (By Ms. Eckert) Mr. Watson, I believe that before we went off the record I had asked you about the patterns of water application on Allotment 526 during the irrigation season of 1977. We have had marked now two exhibits,

additional exhibits, 3 and 4. Would you please identify for the record what Deposition Exhibit 3 is?

A. Deposition Exhibit 3 is entitled Accumulation of Water Pumped from Paschal Sherman Irrigation Well for Irrigation of Allotments S-526 and H-892.

Q. Okay, and by whom was this chart prepared?

A. I prepared the chart.

Q. And the underlying data that you used to prepare the chart, where did you obtain that data?

A. The underlying data was the records collected by the U.S. Geological Survey.

Q. Okay. Now, drawing your attention to Deposition Exhibit 3, can you explain for us what the chart purports to show?

A. The chart shows the accumulation of water pumped from the Paschal Sherman irrigation well for irrigation on the two northern allotments, namely, S-526 and H-892.

Q. When you say the accumulation, you mean in terms of the total what, water amount used?

A. The total amount of water pumped--

Q. Is that expressed in acre feet?

A. It's expressed in acre feet on the scale on the right-hand side of the exhibit.

Q. Okay, and then--that's the left-hand side?

A. On the left-hand side.

Q. And then on the right-hand side of Deposition Exhibit 3 you have a total figure. Could you explain what that is?

A. The total on the right-hand side of the exhibit is the total amount of water that was actually accumulated during the 1977 irrigation season.

MR. VEEDER: How do you word that, Mr. Watson?

THE WITNESS: It was actually, it's the total accumulation of the water pumped from the Paschal Sherman well for irrigation on the two northern allotments.

Q. (By Ms. Eckert) It's the accumulation of, a final tabulation, is that correct?

A. The tabulation is presented on the right-hand side of the exhibit.

Q. When you talk about accumulation, you're not talking about the water physically accumulating?

A. It's a totalizing.

Q. Okay. Now, on the upper portion of the graph there are two heavy black bars, horizontal, what appears to a caption that says, periods of operation. Can you explain what that purports to show?

A. In explaining that it should be explained that the scale running from left to right across the bottom of Deposition Exhibit 3 is a calendar day grid beginning in January and ending in October of 1977. The period of operation

referred to in the upper left-hand corner of the exhibit and the subsequent black bars depict the period that the Paschal Sherman irrigation well was pumping for the purposes of irrigation on these allotments.

Q. Now, the black bars that you've just described, where is the data that that was used to draw these black bars? Was that also U.S.G.S. data?

A. There are several sources of the data used to accumulate that.

Q. Okay. What are those sources?

A. One source is the U.S. Geological Survey, records kept by representatives of the Colville's including myself as to dates and observations.

Q. Okay, and so I take it, looking at it, I'm a little bit nearsighted, apparently there was pumping from the Paschal Sherman irrigation well starting on approximately April 15th until about May 20th, and then there is a cessation starting up again in approximately July what?

A. First.

Q. First?

A. That's correct.

Q. And running through about the end of August the 28th?

A. August the 25th.

Q. Twenty-fifth?

A. Uh-huh.

Q. Okay. In the period from May 21 to June 30th where there is no pumping shown, does that reflect a lack of data or was there in fact no irrigation pumping during that period?

A. There was no irrigation pumping on Allotments S-526 and H-892 from the Paschal Sherman irrigation well.

Q. Okay, and do you have any knowledge of why there was no pumping during that period?

A. There was no pumping during that period because of the rotation of water for irrigation throughout the No Name Creek Basin.

Q. Okay. Now, Deposition Exhibit 3 refers to both Allotments 526 and 892.

A. That's correct.

Q. I have been asking a series of questions specifically directed toward 526, but is it my understanding from that photograph that in fact the irrigation of 526 and 892 is run as an integrated project?

A. It is run as an integrated project. The entire irrigation in the No Name Creek Basin by the Colville Confederated Tribes is integrated.

Q. Okay. Let me ask you this, between 526 and 892 is there a fence or physical barrier between the fields in each allotment?

A. Yes, there is a fence.

Q. All right. Are the fields in 526, that was an alfalfa crop in 1977, is that correct?

A. That's correct.

Q. And the fields in 892 were what, what crop was grown in 1977?

A. Exclusively alfalfa.

Q. Okay, and do you know if the fields in both allotments, that is, 526 and 892, were planted in approximately the same time?

A. The fields in H-892 and 526 were planted at the same time?

Q. Yes.

A. No. As previously testified the fields in the south half of Allotment 892 and in the east half of the north half of 892 were irrigated first in May, 1976.

Q. Okay. My question was simply with reference to the 1977 irrigation seasion, and the crop that was grown in 1977. Were the fields in 526 and 892 planted at approximately the same time?

A. They had been planted the previous year.

Q. Okay, fine. Now, with respect to the alfalfa crop in the 1977 season in 526, did you have more than one cutting of alfalfa, do you know?

A. In 1976?

Q. In '76, that's correct.

A. I do not have personal knowledge of the number of cuttings.

Q. In 1977, do you have any knowledge of the number of cuttings of alfalfa on 526?

A. Yes, I do.

Q. And how many cuttings were there on 526?

A. There were three cuttings of alfalfa on 526.

Q. And then with reference to 892 in the 1976 irrigation season, do you have any knowledge of the cuttings, number of cuttings of the crops on 892?

A. No, I don't, in 1976.

Q. Do you have any knowledge with reference to 1977 for 892?

A. Yes.

Q. And how many cuttings were there in 1977?

A. There were three cuttings in 1977 on Allotment H-892.

Q. Okay. Now, on the three cuttings that you obtained in 1977 do you have any knowledge of the yields of the first cutting in terms of bales or tons with reference to Allotment 526? Do you know how much they got from the first cutting in 1977?

A. Yes, I do.

Q. Okay, and how much did they get from the first

cutting in 1977?

A. I have to refer to an additional exhibit.

Q. Feel free then. Mr. Watson, to save time perhaps you could review that over the lunch period and I will ask the question again then after lunch.

A. Fine.

Q. Because I wanted to follow up then with what we have marked as Deposition Exhibit 4.

A. Fine.

Q. Now, with reference to that Exhibit 4, could you briefly explain what that is and who prepared it?

A. Yes. This is an exhibit similar to Deposition Exhibit 3. I'm referring to Deposition Exhibit 4.

Q. And that also is prepared by you?

A. The exhibit was prepared by me. The exhibit is entitled, accumulation of water pumped from Colville No. 1 irrigation well for irrigation of Allotments S-526 and H-892. There is an error on that exhibit. The exhibit says, 894. It should be 892, and delivery to No Name Creek.

Q. Again, on the right-hand side of Exhibit 4 there is a number that says, total, and that represents what?

A. On the right-hand side of that exhibit the total is given as 118.8 acre feet, which is the total amount of water pumped from that well during 1977.

Q. I see there is a breakdown then, and what does

the breakdown of that total acre footage as shown on the right-hand side of Exhibit 4 indicate?

A. The breakdown separates the total amount of water pumped from the well into that portion that was pumped to No Name Creek and into a second portion that was used for the irrigation of Allotments S-526 and H-892. Again, the exhibit says, 894.

Q. The heavy black bars on the upper portion of the exhibit indicate those periods in which the well was being used for irrigation pumping?

A. That's correct.

Q. Now, you previously testified that there was three wells used in the general area of the Paschal Sherman Well and the Colville No. 1. Do you also have a similar chart for the Colville No. 2 well?

A. I do.

Q. And can we have that put up and marked also?

A. Yes.

(Deposition Exhibit No. 5 marked for identification.)

Q. (By Ms. Eckert) You have just put up on the board what's been marked as Deposition Exhibit 5, and could you again briefly explain what that is, and who prepared it?

A. Deposition Exhibit 5 is similar to Deposition Exhibits 3 and 4. The title of Deposition Exhibit 5 is

accumulation of water pumped from Colville No. 2 irrigation well for irrigation of Allotment H-892 and delivery to No Name Creek.

Q. Okay.

A. The exhibit was prepared by myself.

Q. Again, on the right-hand side there is a figure shown which represents what?

A. On the right-hand side the total amount of water pumped from the Colville No. 2 irrigation well is shown as 104.8 acre feet. It is broken down into an amount of 18.3 acre feet delivered to No Name Creek, and a quantity of 86.5 acre feet delivered for irrigation of Allotment H-892.

Q. Okay. On the upper portion of Deposition Exhibit 5 there are again, as in the case of 3 and 4, heavy black bars. However, in this case, that is, in the case of Exhibit 5, on one portion there are parallel black bars. Can you please explain for us what is the meaning of the black bars on Exhibit 5?

A. There are two sets of black bars on Deposition Exhibit 5. The first upper black bar set represents the period of time that water was delivered for irrigation on Allotment H-892. The lower bar represents the period of time during which water was being delivered to No Name Creek between the dates of July 15th, 1977 and August 22, 1977. Water was being delivered both to No Name Creek and for the

irrigation of Allotment H-892 from Colville No. 2 irrigation well.

Q. Okay. Now, in reference to all three exhibits, that is, Deposition Exhibits 3, 4, and 5, on the left-hand side, the scale marked in acre feet, does that bare any relation to the black bars?

A. No.

Q. In other words, do the black bars indicate an amount, or is that off the scale at that point?

A. The black bars are an explanation of the period of operation and have no bearing to the quantity in acre feet listed on the left-hand side.

Q. Okay. Now, with reference to--let me just pick a specific day that you were pumping out of, say, Colville No. 2. May 5th, apparently, you were pumping out of that. Do you have any knowledge of how much water was being pumped on that particular day for irrigation uses?

A. I do not.

Q. Do you know if those records are available?

A. I do not know if those records are available on that date.

Q. Okay. Do you know if records were generally kept for amounts of pumpage on each particular day from the Colville No. 2 well?

A. Yes.

Q. Were they kept?

A. No.

Q. No, they were not kept?

A. No.

Q. So the only record that was kept was whether or not the well was pumping, not how much it was pumping, is that correct?

A. No, that's not correct.

Q. On a daily basis?

A. The information that is available is the total amount of flow, the total amount of water that was pumped from the well as of a particular date. The U. S. Geological Survey was collecting the information and they do not collect the information on a day-to-day basis on Colville No. 2 irrigation well.

Q. So there is a total season figure, but there is no day-to-day quantity figures, is that correct?

A. There is not, that's not correct.

Q. Okay.

A. That is not entirely correct. There is not a day to day accumulation, but there is information more frequently than just for the period.

Q. I see. Was that taken on a regular basis then? If it was not taken on a daily basis was it taken on some regular basis?

A. It was not taken on an exactly regular basis.

Q. Okay. Approximately what basis was that information taken?

A. It varied considerably throughout the year ranging from day to day observations during some of the period to a period perhaps of as long as a week.

Q. And the observations that you are referring to are the U. S. G. S. observations or your observations?

A. These are the U. S. G. S. observations.

MS. ECKERT: I'll ask them about it then.

I've come to a good breaking point, shall we break for a brief lunch period? Okay.

(Lunch period was taken from 12:00 to 1:00 p.m.)

Q. (By Ms. Eckert) We're back on the record and the witness has already been sworn.

Following up on some questions before lunch, the three wells, that is, the Paschal Sherman Well, the Colville No. 1 Well, and the Colville No. 2 Well, do those represent the only sources of irrigation water for irrigating 526 and 892?

A. Yes, they do.

Q. Okay. Are there any other wells that you are aware of located in Allotment 526?

A. In Allotment 526, yes, there are other wells.

Q. How many other wells are there besides the Paschal Sherman Well on 526?

A. Three.

Q. And what's the nature of those wells, do you know?

A. They are observation wells.

Q. Okay, and do you know by whom those wells--or why were those wells drilled, the three observation wells?

A. For the purpose of observing water levels.

Q. Was that by observation by the U. S. G. S. or the Tribe or both?

A. Both.

Q. Okay. Now, same question with reference to 892, are there other wells besides the Colville 1 and Colville 2 well in 892?

A. Yes.

Q. And how many of those wells are there?

A. There are three.

Q. And are those wells in 892 also observation wells?

A. Those are observation wells at the present time.

Q. Okay. When you say at the present time, were they something other than observation wells before they were used as observation wells?

A. Not to my knowledge.

Q. Okay. Are there any, to your knowledge, any domestic wells located in 526?

A. No.

Q. Are there any domestic wells in 892?

A. There is one well in Allotment 892 that has been used for domestic purposes.

Q. Is that one of the three observation wells?

A. Yes.

Q. Do you know if the well that was used for domestic purposes is now being used for domestic purposes?

A. No.

Q. Okay, and the three observation wells in 526 and the three in 892, the observations on those were made by whom and when? Was that part of a general program?

A. They have been made by the U. S. Geological Survey since the initiation of the court order.

Q. Okay. Now, in 526 are there any diversion of surface waters?

A. No.

Q. And also in 892, are there any diversions of surface waters?

A. No.

Q. Now, referring to Exhibits 3, 4, and 5 and the total amounts shown on the right-hand side of those three

exhibits for the total acre feet for the season, have you made a tabulation of the total water usage out of Wells 1 and 2 and the Paschal Sherman Well? In other words, do you have any tabulation adding up what is shown on Exhibits 3, 4 and 5?

A. No, I do not.

Q. Okay. Have you made any determination of the total amount of water that was used in the 1977 irrigation season out of those three wells?

A. I have made a determination.

Q. And do you know how much water was used in the 1977 irrigation season out of those three wells?

A. I'd have to refresh my memory on that.

Q. Okay, and how could you do that, do you have notes?

A. I believe I have some notes that I could refer to.

Q. Okay. Would you do that, please?

A. Yes.

MR. PRICE: Your question is total volume of water taken from the wells?

MS. ECKERT: That's right.

(Discussion off the record.)

THE WITNESS: Would you repeat your question?

Q. (By Ms. Eckert) Okay. I believe my question

was, how much water was used for irrigation purposes, the three wells, that is, the Sherman, Colville No. 1, Colville No. 2, in 1977?

A. I don't have it broken out specifically that way, the information given on the exhibits.

Q. If the information given on the exhibits were totaled up, if you had a calculator and you totaled those three pieces of paper, would that be the total amount that was pumped over the season from these three wells?

A. Yes, it would be.

Q. Are there any other figures that would increase the total amount? In other words, is there information which is not shown on Exhibits 3, 4 and 5?

A. There is no information not shown on Exhibits 3, 4 and 5.

Q. That would go to the total acre footage out of those three wells?

A. That's correct.

Q. So what we need is somebody just to calculate that, okay.

Now, referring you to Exhibit 5, for example, where it says the 18.3 acre feet was diverted over to No Name Creek, did any portion of that 18.3 acre feet get used for irrigation of either, what is it, 526 or 892 during 1977?

A. No.

Q. Okay, and again that same question with reference to Deposition Exhibit 4 where there is 43.3 acre feet going to No Name Creek, did any portion of that 43.3 acre feet, as shown on Exhibit 4, go to the irrigation of lands in 526 or 892?

A. No.

Q. Now, the documents that you have up there, 4, 5, and 6, all relate to the 1977 irrigation season, and I believe you've testified earlier that at least on a portion of 892 there was some irrigation in 1976, is that correct?

A. That is correct.

Q. Do you have any records for times of usage of water during the 1976 irrigation season on 892?

A. I have information on the period of use.

Q. Okay, and can you tell us when water was first used for irrigation in 1976 on Allotment 892?

A. On Allotment 892 water was first used for irrigation in 1976 in May.

Q. Okay, and do you recall when in 1976 the irrigation season was over?

A. Where are you referring?

Q. Allotment 892.

A. I do not recall.

Q. Do you recall in 1976 the alfalfa crop, how many cuttings there were in 1976 on 892?

A. In 1976--

MR. VEEDER: I think that question was asked, and I think that he didn't answer it.

MS. ECKER: I don't recall his answer.

MR. VEEDER: I know the question was asked before but he said he didn't know. He's already answered the question.

THE WITNESS: The question was asked previously and I indicated I did not know.

Q. (By Ms. Eckert) I asked you also before lunch on the yields on the alfalfa crop for 1977, and you indicated to me that you would check on that. My question, I believe, at the time was, how much yield was there either in terms of tons or bales or however you have it broken down, from the first cutting of alfalfa in 1977 from 526?

A. From the first cutting of alfalfa in 526 I do not have that information.

Q. Okay. Do you know who might have that information?

A. No.

Q. Do you know if that information exists?

A. No, I do not.

Q. Okay. For the second cutting of alfalfa, 1977, 526, do you have any yield breakdown?

A. No, I do not.

MR. VEEDER: Are you still speaking about the single allotment now?

MS. ECKERT: I'm talking about Allotment 526, yes, sir.

MR. VEEDER: All right.

Q (By Ms. Eckert) Again, for the Allotment 526 for the third cutting in 1977, do you have any yield figures on that?

A I do not.

Q Okay. Do you know if those figures exist?

A I do not know that they do.

Q And you wouldn't know who had them even if they did exist?

A No.

Q Okay. Now, with reference to the same series of questions to 892 on the first cutting of 1977, do you have any figures showing the yield from the first cutting?

A No, I do not.

Q Okay. Do you have any figures for the second cutting of--

MR. VEEDER: We can save some time here by telling you that the combined alfalfa acreage above the Walton place can be broken down, is that not right?

THE WITNESS: That's correct.

Q (By Ms. Eckert) Okay. Up until now we have

been talking about two very specific areas. Let me then ask you about the combined acreage. I would take it then 526 and of 892?

MR. VEEDER: Right, right.

Q (By Ms. Eckert) Let me ask that series of questions. The first cutting in 1977 for the acreages in 526 and 892, do you have a breakdown of the yields?

A The first cutting on Allotments 526 and 892 for 1977?

Q That's correct.

A Produce 5700 bales.

Q Okay, and a bale is a standard unit of measurement, I take it?

A It's a standard unit of measuring hay.

Q Okay, and for the second cutting, if you have those figures for 1977?

A The second cutting for 1977 on the Allotments 526 and 892 was 2162 bales.

Q Okay, and then for the third cutting, if you have that figure, please.

A The third cutting on those same two allotments, 526 and 892, was 1815 bales.

Q Do you happen to have the dates of the first cuttings?

A No, I do not.

Q. And the dates of the second cutting?

A. No.

Q. And the dates of the third cutting?

A. No.

Q. Okay. Now, in relation to the alfalfa crop and the irrigation systems you have up there, you testified you're using 40-foot lines, and what was it, three-quarter-inch sprinklers? I'm not trying to put words in your mouth, I'm just refreshing myself. How many sprinkler heads were used in 1977 while you were irrigating Allotment 526?

A. I don't have any remote idea.

Q. Do you know who might know that information?

A. No, I don't.

Q. Okay. From May of 1977 until September of 1977, how many times were you in the vicinity of Allotments 526 and 892?

A. Between May and September?

Q. That's correct.

A. I have no recollection.

Q. Was it one time?

A. It was not one time.

Q. Was it more than ten, can you estimate?

A. I believe it was more than ten.

Q. Okay. So you were there at various times throughout the irrigation season?

A. Yes.

Q. But do you have any control over the irrigation practices themselves, that is, the decision to turn on a particular set of sprinklers?

A. I have no control over the--

MR. VEEDER: Over what?

MS. ECKERT: Over the actual day-to-day management of the sprinkler system. Mr. Watson, I asked, didn't have the authority to say turn on that sprinkler, turn off that sprinkler.

MR. VEEDER: That wasn't your question. You didn't ask that question, I'll tell you that.

MS. ECKERT: That was the answer, and I'm amplifying on both our question and our answer.

MR. VEEDER: If you don't want to ask him--well, it's up to you, I'm objecting to the form of the question. If you're asking him about his authority to do it, that's one thing. Did he do it is something else, I'll tell you.

Q. (By Ms. Eckert) Let me ask you, did you have the authority to do so, that is, to order to turn on and shut off a particular portion of a particular sprinkler system in either 892 or 526?

A. I had considerable discussion with Colvilles about the management of the irrigation system, and I was

given the authority to make those kinds of decisions.

Q. But apparently you did not exercise that authority?

A. I exercised the authority on occasion, but I did not--

MR. VEEDER: Did not what?

THE WITNESS: Personally operate the system.

Q. (By Ms. Eckert) Okay. By whom was the system operated or managed then, do you know?

A. The system was operated by the Colville Confederated Tribes and the Pasco Indian School there.

Q. Was there a particular person who was doing that for the Indians?

A. There was not a particular person.

Q. Do you know the names of the people who were responsible for the management of the sprinkler system?

A. Were responsible for--would you repeat your question?

Q. Okay, strike that. On the yield figures that you testified to, would you tell me the source of the data for that information?

A. The source of the data was the bale counts that I personally made as well as bale counts given to me by the farmers.

Q. Okay. When you say bale counts, explain that

to me. Are you out in the field counting each individual bale before it's piled, or what?

A. Is that a hypothetical question or--

Q. Well, tell me, when you say you went out and made a bale count, tell me what you did.

A. I went to each one of the haystacks where the hay was stacked and performed and independent count of the bales in that stack.

Q. Okay. I'm sorry, it may sound like an exceedingly dumb question, but how can you count bales if they have already been stacked?

A. You count the number across on both sides.

Q. Okay, and that's the procedure you followed then?

A. I counted--

Q. You count the number across and then the number up and you figure the volume?

A. Yes.

Q. You performed bale counts, and who else, you said that the farmers--

A. The actual farmers.

Q. Okay. Were these two separate counts that you were conducting, that is, the farmers counted once and you came out and counted again?

A. That's correct.

Q. Okay, and where is the source of the raw data? You have field notes from these bale counts?

A. I do.

Q. Okay, and where is that data located?

A. That data is located in--

Q. It's not here?

A. It's not here.

Q. Okay. Now, are you familiar with the disposition of the various bales of hay that were obtained from the cuttings were? For instance, on the first cutting were the bales of hay sold?

A. I have no knowledge of that at the present time.

Q. Okay. Do you know who might know that information?

A. I do not know at this time who would have that information.

Q. Okay, fine. Let's see. Now, in the course of your duties for the Colvilles since mid-75 have you had the occasion to perform any pump tests on any of the three wells that you've testified about, that is, Paschal Sherman well, Colville No. 1, and Colville No. 2?

A. I have not.

Q. Okay. Have any such tests been performed to your knowledge?

A. Yes, they have.

Q. And by whom have those tests been performed?

A. By Dr. Robinson and Mr. Kaczmarek.

Q. Were those tests performed in connection with Morrison Maierle's contractual obligations to the Tribe?

MR. VEEDER: I object to that, that's a legal question. I think it's irrelevant.

Q. (By Ms. Eckert) Let me ask, were the pump tests all part of the project that Morrison Maierle had been engaged to do?

A. They were a part of our work.

Q. Okay, but you personally did not participate in the tests themselves, is that correct?

A. I personally did not participate in the tests.

Q. Have you seen any of the results from those tests?

A. I have seen the results.

Q. Now, in determining the watershed boundary for No Name Creek, did you also have the occasion to consider precipitation records for this area of the Colville Indian Reservation, that is, the No Name Creek area?

MR. VEEDER: I object to the question. I think it's a non sequitor in regard to the watershed boundaries, the precipitation records--

Q. (By Ms. Eckert) Well, I'm trying to narrow

down the geographic area. I'm saying, for that particular area did Mr. Watson consider any precipitation records.

MR. VEEDER: Is that part of the watershed study or is it--

MR. MACK: He can certainly answer whether he's ever considered them or not.

MR. VEEDER: Go ahead and answer.

THE WITNESS: I did not consider precipitation records.

Q (By Ms. Eckert) That's very simple.

Have you ever made a determination of what the watershed boundary of Omak Lake is?

A. I have not made a determination of the watershed boundary of Omak Lake.

Q. Do you know if anyone connected with Morrison Maierle has made any such determination?

A. I am certain that someone from Morrison Maierle has made that determination.

Q. Okay. Do you know who that person would be?

A. Doug Dusek.

Q. And he is not present here today, but what can you tell me, who Mr. Dusek is?

A. He is a former employee of Morrison Maierle assigned to the water resources department.

Q. For the record, please would you spell Mr. Dusek's

name, if you could?

A. D-u-s-e-k.

Q. Okay. When you say that you are certain that Mr. Dusek had conducted some sort of study of the watershed boundary of Omak Lake, what makes you certain about that? Did you see his studies or reports?

A. I was responsible for his work.

Q. Okay. Deposition Exhibits 1 and 2 show the watershed boundary for No Name Creek. Was there a similar line drawn for Omak Lake? Have you prepared any exhibit which shows the watershed boundary of Omak Lake?

A. No.

MS. ECKERT: I don't think we have anymore questions at this time. I would like to reserve the right to recall Mr. Watson after having Mr. Kaczmarek's testimony.

MR. PRICE: I have just a few questions, please.

EXAMINATION

BY MR. PRICE:

Q. Did you assign any weight value to a bale of hay?

A. Did I assign a weight value to a bale of hay?

Q. Yes.

A. I'm not sure I understand what you mean by

assign.

Q. Well, in terms of calculating how much tonnage you took off did you ever employ a figure for the weight of a bale of hay?

A. I did.

Q. And what was that figure?

A. It varied depending on the cutting and depending on the measurements that I had made in the field at that time.

Q. Do you have notes of that?

A. Yes, I do.

Q. Could you produce those, please?

A. Yes. Do you have a specific question?

Q. Do your notes relate to both the years 1976 and 1977?

A. No.

Q. Which year?

A. 1977.

MR. PRICE: Okay. Could we have that marked as an exhibit, please?

MR. VEEDER: Sure.

(Deposition Exhibit No. 6 marked for identification.)

Q. (By Mr. Price) Could you read back the exhibit number to me and briefly explain what is exhibited on

that document, please.

MR. VEEDER: I think the document speaks for itself.

MR. PRICE: I would like to be able to understand it when I look at it.

MR. VEEDER: That's going a long ways, Dick, but go ahead.

THE WITNESS: The exhibit is marked, Deposition Exhibit No. 6. It's titled, Colville irrigation project, hay inventory, 1977.

Q (By Mr. Price) And there are, I can see from here, figures have been broken down. Can you explain to me how their broken down?

A There are a number of figures broken down on the exhibit, and you are interested specifically in--

Q What is depicted on Exhibit No. 6, please.

A There are various column headings on the exhibit beginning on the left-hand side of the exhibit with cuttings, and the second column is bales, and the third column is pounds per bale, the fourth column is tons, the fifth column is acres, the sixth column is tons per acre, and the seventh column is dollars per ton, and the eighth column is dollar value.

Q Good, thank you.

In addition to Allotments 892 and 526, this also

has records regarding Allotment 901, apparently, is that correct?

A. That is correct.

Q. Do you have yield records for 1976?

A. No, I do not.

Q. You started to refer to a document in answer to a question about the total volume of water taken from the wells and applied for irrigation purposes in 1977 on Allotments 526 and 892. You then put that document down. Can you explain to me what that document refers to? Apparently it wasn't in response to the question that was posed to you, but did relate to volume of water taken from the wells.

MR. VEEDER: If you don't understand the question Mr. Price can make it more specific than that.

THE WITNESS: Would you do that, please, Mr. Price?

Q. (By Mr. Price) You had in your hand a few moments ago a one-sheet document which you handed to Mr. Kaczmarek.

A. Yes.

Q. And I would like you to produce that and explain to me what those notes relate to.

A. Okay.

MR. VEEDER: Just a moment. I want to see that myself before we go too far on that.

MR. PRICE: Mr. Reporter, could you mark that, please.

(Deposition Exhibit No. 7 marked for identification.)

Q (By Mr. Price) Mr. Watson, could you indicate what exhibit number that's been marked as?

A This is Deposition Exhibit 7.

Q Could you describe to me what it is, please?

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

Q I might take a look at that, please.

MR. VEEDER: May I have a copy of that, please?

THE WITNESS: Yes.

MR. SWEENEY: I can make copies for you if you want.

MR. VEEDER: Would you do that?

MR. SWEENEY: Yeah.

Q (By Mr. Price) With respect to Exhibit No. 7, Mr. Watson, you've indicated that document segregates--first of all, it quantifies the amount of water used in the No Name Creek Basin by the Tribe for the year 1977?

A That's correct.

Q And it also segregates it by particular property upon which the property is applied?

A To the extent that that's possible.

Q. Okay. According to Exhibit No. 6, as I read it--

A. Seven?

Q. Seven, pardon me, you applied 1,019 1/2 acre feet upon 208.8 acres.

MR. VEEDER: I object to that question. 1,019.5, that's a misstatement, isn't it?

MS. ECKERT: I think Mr. Watson can probably testify to that unless you want to be sworn.

MR. VEEDER: Go ahead and answer the question.

Q. (By Mr. Price) Is that a correct statement or not?

A. That is not a correct statement.

Q. All right. Would you put it in what you consider to be correct form?

A. Would you tell me what you're referring to?

Q. The two total figures of 208.8 and 1019.5, what those two figures relate to?

A. These figures represent the total irrigated acreage in the No Name Creek Basin. The 208.8 acres is the total irrigated acreage in the No Name Creek Basin in 1977 including Colville Allotment 526, 892, Walton Allotment 525, 2371, 894, and Colville Allotment 901 and 903, and Lahonton Fishery.

Q. All right. So it includes, according to your

calculations, total water use, not just limited to the Tribe?

A. That's correct.

Q. And does it or does it not include water use for the Lahonton Fishery?

A. It does include water used for the Lahonton Fishery.

Q. When did you obtain the figures for acreages and water applied on the acreages denominated as Walton property?

A. Where did I obtain the acreages?

Q. Right.

A. And water use figures?

Q. Right.

A. I obtained the acreages from the delineation of the Walton acreage that was given to me by you in your office, and by performing my independent measurements on these delineations; and the water use figures come from the records at the U. S. Geological Survey.

Q. Okay. The acre foot figure of 1,019.5, does all of that represent water that was taken out above the granite lip or does some of that incorporate water that may have been taken below the granite lip?

MR. VEEDER: Don't respond to that. Are you speaking of the Walton diversion too, or not?

MR. PRICE: I don't understand your question,

Bill.

MR. VEEDER: Well, I'm interposing an objection. If you are asking in regard to where they were taken, that's one element. If you're regarding to the combined, then that's another question, and all I'm saying to you is that I don't want the witness to respond until it's very very clear as to the subject matter of your inquiry. What's above and below the granite lip, that's not been identified in this record. There is nothing to indicate a breakdown that you're distinguishing between Walton and the Tribe's property. This is my objection. I think it's too general a question as presented.

Q. (By Mr. Price) Where did the water come from that's represented by the 1,019.5?

A. The water came from the No Name Creek Aquifer and the No Name Creek stream.

Q. And specifically from where in the No Name Creek Aquifer and No Name Creek stream, what wells, what surface water, what what?

A. The water came from the Paschal Sherman irrigation well, the Colville No. 1 well, the Colville No. 2 irrigation well, the Walton irrigation well, the Walton surface diversion, and spring discharge of No Name Creek.

Q. You know what I have reference to when I speak of the granite lip, do you know, of No Name Creek Basin?

A. I believe I do.

MR. VEEDER: If you don't know what the granite lip is, and if he wants to define it, he can go ahead and define it.

Q. (By Mr. Price) The water sources, as you have described them, that make up the 1,019.5 acre feet were withdrawn or obtained from above the granite lip, is that correct?

A. I don't understand that question, Mr. Price.

Q. Okay. So far I think in previous questioning we came up with 254.3 acre feet of water applied on Allotments 526 and 892, is that correct, to the best of your knowledge?

A. I don't recall that summary.

Q. Is that not a correct summary?

A. You said 254.3?

Q. Right.

A. On Deposition Exhibit 11 I see 254.8.

Q. All right. Taking for the moment 254.8 plus Walton's water that you assigned for his water usage, would you add those up for me?

A. Would you describe specifically Walton's water usage, what you mean by that?

Q. Figures in column two--actually in column three starting from the left-hand side, reading from the

left-hand side to the right you have Walton S-525, Walton S-2371, and Walton H-894. I would like you to add the water in column three assigned to those particular properties, add them to the 254.8.

A. The number I get is 522.7.

Q. Okay. The balance of the water then--that figure was 522.7?

A. That's correct.

Q. The balance of the water then would be applied either on H-901, S-903, or be used in connection with the fishery?

A. That is correct.

Q. All right. Do you have a chart here that breaks down or depicts similar to this 3 and 4 and 5, water that may have been pumped from the Paschal Sherman well, Colville No. 1 and Colville No. 2, that relate to water other than for irrigation purposes?

A. No, I do not.

Q. Exhibits 3, 4 and 5 do not add up to 1,019.5, that is safe to say, isn't it?

A. That's correct.

Q. And yet you're telling me you pump a lot more water than that from those three wells. Don't you have a chart that shows where that difference is?

A. I'm not sure what difference you're talking about,

Mr. Price.

Q. The difference between 254.3--or .8, and 1019.5.

A. The difference between 254.8 and 1019.5 is made by the diversions of Mr. Walton and by the water use on Allotments 901, 903 and for the Lahonton Cutthroat Fishery.

Q. Okay, but that water you have already indicated came from one of the three wells that we have already described, Paschal Sherman well, Colville No. 1 and Colville No. 2, didn't it?

A. What water are you talking about when you say that water?

Q. The water applied on Colville No. 901, 903, and Lahonton Fishery.

A. And also Walton?

Q. No, I'm not concerned about Walton at this point.

A. If you can summarize that question, I can answer it.

Q. All I'm doing is looking for calculations to where the water that was pumped out of any of those three wells that was pumped into the creek during the season during the year 1977.

A. You would like to see, if I understand your question, you would like to see the water pumped from specific

wells to No Name Creek?

Q. Correct.

A. And whether those specific wells--

Q. Paschal Sherman, Colville No. 1, Colville No. 2.

A. I can provide that information.

Q. Yes. Would you do so, please.

Mr. Watson, with respect to what's been marked as Deposition Exhibit No. 8, could you identify that for us, please?

A. Deposition Exhibit No. 8 is entitled, accumulation of water pumped to No Name Creek by date and source. The axis on the left-hand side of the exhibit is in acre feet. The scale on the bottom of the exhibit is in calendar days beginning in January and ending in October. The exhibit shows, in graphical form, the accumulation of water pumped from the Paschal Sherman irrigation well, the Colville No. 2 irrigation well, and the Colville No. 1 well. The three wells are located on Allotments 526 and 892. The exhibit also shows the period of operation of the Paschal Sherman irrigation well, the Colville No. 1 irrigation well, and Colville No. 2 irrigation well during those periods that water was being pumped directly to No Name Creek. It does not show the periods that these wells were used for other purposes.

Q. Why do we have a different level of black marking at the top of the exhibit then?

A. The Paschal Sherman irrigation well, for example, pumped to No Name Creek from April 6th, 1977 to October 7, 1977.

Q. That's this designation then of the separate wells?

A. Yes.

Q. The different wells?

A. That is correct.

Q. And that does not indicate whether the wells might have been also operating at the same time for irrigation purposes?

A. This does not indicate that.

Q. Do you have an overlay or do you anticipate an overlay where those two can be compared?

A. No, I do not.

Q. Are your other Exhibits 3, 4 and 5 set up such that if they were overlayed with Exhibit No. 8 they would correspond?

A. They would.

Q. Okay. In that manner then, assuming that we could see through them, in effect we could have an overlay situation?

A. That is correct.

Q. From Exhibit 8 can you tell me how much water was pumped in total from the wells to the creek?

A. The total amount of water pumped from the Paschal Sherman irrigation well, the Colville No. 1 and the Colville No. 2 irrigation wells to No Name Creek was 589.3 acre feet as shown on the extreme right-hand side of the exhibit.

Q. There is a reference on there of accumulated flow measured at flume above the Walton north boundary. Would that line, diagonal line on the exhibit, indicate to me as of any given day as to how much water actually was being pumped out of any given well to the creek?

A. No.

Q. I assume those records, that there had to be such a record in order to reach an accumulation record, achieve an accumulation record?

A. Such a record--when you refer to such a record, what do you mean?

Q. Are there daily records?

A. No.

Q. Measuring flow being pumped to the creek?

A. No.

Q. How did you arrive at the accumulated flow documented on Exhibit 8 then?

A. Using the records of the U. S. Geological Survey.

Q. And those records were kept on what kind of basis?

A. The records of the Geological Survey are kept on a irregular basis.

Q. We have already heard you discuss that earlier?

A. Correct.

Q. Can you tell me why Paschal Sherman irrigation well operated throughout the entire period of April up to October as opposed to Colville No. 1 and No. 2 being on at separate intervals?

A. The Paschal Sherman irrigation well is the principal source of water supply to No Name Creek. The Colville No. 1 irrigation well and Colville No. 2 irrigation well were used to supplement water from the Paschal Sherman irrigation well.

MR. VEEDER: Could I have the answer of that question read back?

(The court reporter read back the answer.)

MR. VEEDER: Thank you.

Q. (By Mr. Price) By describing the Paschal Sherman well as a principal source of No Name Creek you don't mean that literally. I take it in terms of the testing program, I assume, that's what you have reference to?

A. No, not in terms of the testing program, in terms of the delivery of water to No Name Creek by the

Colville Confederated Tribes, the Paschal Sherman irrigation well was used as the principal source of water to the creek during 1977.

Q. All right, and you were trying to achieve a certain flow of water in the creek at a certain point in the No Name Creek Valley, is that not correct?

A. That is correct.

Q. What was the amount of water flow you were trying to achieve and at what point was that being measured?

A. That's an extremely difficult question to answer because it was--it was a variable kind of thing depending on the water requirements at any particular point in time.

Q. You had a specific goal in mind that you were trying to achieve a certain water flow, whatever it was, I don't even care what it was at that point, I assume you had a certain goal in mind to try to achieve a certain water flow at a certain point in the creek?

A. That is correct.

Q. Were you able to achieve that based on the records in Exhibit No. 8?

A. No.

Q. When were you not able to achieve that, can you be more specific?

A. I cannot be specific.

Q. Do you know when you were able to achieve it?

A. Not specifically.

Q. Who was in charge of dictating how much water was to be pumped at any given time into No Name Creek?

A. I was responsible for the operation of the water and the delivery of water to No Name Creek.

Q. Would there then not be some record of designation by you as to how much volume of water to be pumped at a given time into No Name Creek?

A. Would there be a record, is that your question?

Q. Yes.

A. No.

Q. Isn't there a record?

A. No.

Q. How did you do that, on a day-to-day basis, on a weekly basis, monthly basis?

A. On an irregular but frequent basis.

MR. PRICE: That's all I have for right now on this chart, you can go ahead and sit down, Mike, if you want to.

MR. SWEENEY: I had a question.

MR. PRICE: Bob, I'm not done yet. I'm sorry, I didn't mean to indicate I was done.

Q. (By Mr. Price) Mr. Watson, did you make use of precipitation records in connection with your studies of

the No Name Creek?

A. Yes, I did.

Q. And do you have those available?

A. I do have precipitation records available.

Q. Have you used those records in preparing any kind of exhibit that you intend to use at the trial?

A. Yes, I do.

Q. Do you have those exhibits with you?

A. Yes.

Q. Would you produce those, please?

A. Yes.

(Discussion off the record.)

(Deposition Exhibit No. 9 marked for identification.)

Q. (By Mr. Price) Mr. Watson, with respect to Exhibit No. 9, can you identify that for us, please?

A. Deposition Exhibit No. 9 is entitled precipitation, Omak 2 Northwest.

Q. Can you identify the exhibit on there? What is exhibited on there?

A. The exhibit depicts the inches of rainfall during 1977 recorded at the U. S. Weather Bureau station located two miles northwest of the town of Omak.

Q. Would that be on what's referred to as Pogue Flat?

A. I'm not familiar with that local terminology.

Q. Go ahead andccontinue.

A. The scale on the left-hand side of the exhibit, the vertical side is in inches. On the scale on the bottom of the exhibit in days running from January through December, 1977. The vertical bars shown on the exhibit represents the amount of precipitation in inches that was recorded on any particular day. Where a bar does not appear there was no precipitation on that day.

Q. All right. Do those figures have any relationship to assisting you in attempting to quantify the water available in the No Name Creek Aquifer in any manner?

A. Yes.

Q. Can you explain how they would be so employed?

A. They are employed in a qualitative sense. By that I mean that the quantitative information is not of any particular value, but the qualitative information such as knowing that precipitation occurred on a certain day or group of days and the general magnitude of that precipitation is of value.

Q. In what respect?

A. In determining, for example, the contribution from the watershed portions of No Name Creek between measuring points established by the U. S. Geological Survey.

Q. Have you calculated any figures based on these

precipitation figures?

A. No, I have not.

Q. You used weather records. Did you limit yourself to records for 1977 or did you go back before 1977?

A. I went back before 1977.

Q. From your analysis of those precipitation records do you have an opinion as to whether the precipitation in 1977 could be referred to as a normal year precipitation-wise or an abnormal year?

A. Yes, I have an opinion.

Q. What is that opinion?

A. The opinion is that first your terminology is somewhat vague in terms of knowing--

MR. VEEDER: Then I object to your answering the question. If it's vague you shouldn't answer the question.

Q. (By Mr. Price) What do you mean by vague? Would you like to be more precise in framing your answer?

A. I don't precisely know what a normal or an abnormal precipitation year is.

Q. Well, let's put it this way, how does 1977 compare with your analysis of other records in other--

A. It compares lower than the average precipitation recorded at the Omak 2 Northwest Weather Station.

Q. Are you familiar with the average precipitation figure recorded at Omak Weather Station?

A. Yes, I am.

Q. And what is that figure?

A. That figure is, from memory, 11.8 inches per year.

Q. And whether or not Exhibit No. 9 takes in the whole year, what is the precipitation for 1977?

A. I do not know specifically, Mr. Price.

Q. All right. Can you tell by looking at Exhibit No. 9?

A. Not readily.

Q. Can you give me a ballpark figure with the understanding that you are not being asked for a specific figure?

A. In the absence of records for October and November and December, a ballpark figure is approximately eight to and eight and a half inches.

Q. Did you make an analysis with respect to the irrigation periods, let's call that April up to October, in any given year? Did you make a breakdown or comparison of the year 1977 precipitation during that period of time with previous years?

A. A qualitative comparison.

Q. And what was the result of that comparison?

A. I noted that precipitation during some months during the irrigation season was below the average monthly

value for other years during the 1948 to 1977 period of records.

Q. Okay.

A. I also noted that in some months the precipitation was above the average in that same period.

Q. All right. Is it a fair statement that the average during that period would have--well, was the average during this period of April to October of 1977, the aggregate higher or lower than the precipitation in the '47 to '76 period?

A. I did not make that determination.

Q. That's all I have with respect to No. 9. I'd like to go back to No. 3 if I could. With respect to Exhibit No. 3, Mr. Watson, this relates to the Paschal Sherman irrigation well, is that not correct?

A. Yes, it does.

Q. And you previously testified that according to this exhibit there were periods of time when the irrigation well was purposely shut down, is that correct?

A. That is correct.

Q. And if I understand you correctly it was shut down in connection with the rotation of water, and from that I take that to mean that water wasn't required during these periods of time for irrigation purposes?

A. Are you asking that as a question?

Q. Yes.

A. I don't think it could be taken that water was not required.

Q. Okay. We have a period of operation at the top of Exhibit 3 which starts on April 15th and runs to May 20th. Then I assume it is runoff during the blank period through June 30th?

A. That is correct.

Q. Can you tell me the reason for that shutoff, please?

A. The reason for that shutoff was a discontinuance of delivery of water to Allotment 526 and 892 from the Paschal Sherman irrigation well.

Q. Those allotments could have been irrigated from Colville No. 1, let's say, during that period of time?

A. That is correct.

Q. And do you have any specific explanation as to why the Paschal Sherman was shut down and Colville No. 1 was used if in fact it was used?

A. I do not know if your assumption is correct.

Q. No, I wasn't making an assumption. I was asking you a question as to why the Paschal Sherman was shut down and Colville No. 1 was used if in fact it was used?

A. Because of your last part of your statement I don't understand how to answer that.

Q. Can you look at another exhibit and see if Colville No. 1 was operating during this period of time?

A. Yes, I can.

Q. Okay. Could you do that for me, please?

A. Referring to Deposition Exhibit No. 4, it is evident from Deposition Exhibit No. 4 that water was not pumped from that well between the period May 20th and between some period in--between August 5th and August--excuse me, August 4th and August 9th, 1977.

Q. If you recall correctly then it would appear to me that there was a period of time when there was no water being applied for irrigation purposes on either 526 or 892 Allotments, is that correct?

A. That conclusion cannot be drawn from these exhibits.

Q. Is there some other place water could have been coming from?

A. Colville No. 2.

Q. Colville No. 2?

A. Yes.

Q. All right. Could you look at Colville No. 2, please, and tell me if water was pumped from there?

A. Referring to Deposition Exhibit No. 5, water was not pumped from Colville No. 2 irrigation well from May 19th, 1977 to June 22nd, 1977.

Q. Okay. From your being involved in the operations can you tell us why Paschal Sherman and Colville No. 1 were shut down at a period of time when the Colville No. 2 was being used both for purposes of irrigation, both for irrigation and to pump to No Name Creek simultaneously?

A. Could you read that back, please.

(The pending question was read back.)

THE WITNESS: Colville No. 2 was being used for purposes of irrigation. It was also being used for the purposes of--it was not being used for the purposes of delivery to No Name Creek during the period that you are asking me about.

Q. (By Mr. Price) Can you tell me why Colville No. 2 was used in lieu--first of all, is it not correc that Colville No. 2 is situated in close proximity to Walton's northern irrigation well, northernmost irrigation well?

A. Depending on your definition of close proximity. It is closer than either Paschal Sherman irrigation well or Colville No. 1 irrigation well.

Q. Maybe you can clarify that, but just estimating can you tell us how many feet away it is?

A. I do not know precisely how many feet it is.

Q. I would like a guesstimate, please, understanding that I am not asking you for a specific figure.

A. One hundred feet.

Q. Can you tell us why Colville No. 2 was being used to irrigate at a time when Paschal Sherman and Colville No. 1 were shut down?

A. Paschal Sherman irrigation well was being used during this period exclusively for delivery of water to No Name Creek. Election was made at that time to deliver water to No Name Creek from Paschal Sherman exclusively.

Q. During this period of time?

A. During the period of time that were--what period of time are you talking about?

Q. The blank period on the one we started with, Exhibit No. 3.

A. Between May 20th, 1977 and June 30th?

Q. Correct.

A. Water was being delivered to No Name Creek from the Paschal Sherman irrigation well. Water was not being delivered to either Allotment 526 or 892 for irrigation purposes during that period. Colville No. 1 was not being operated during that period because the water level in that well had reached a point where the pump could not be operated and it was necessary to remove the pump.

Q. Okay. Did you testify earlier as to the relative, the respective depth of each of the wells?

A. No, I did not.

Q. All right. Can we start with Paschal Sherman

No. 1, please?

A. I can't give you that information off the top of my head.

Q. Do you have that information here?

A. I believe I do if I could step aside for a moment.

Q. Fine.

MR. VEEDER: May I inquire, Mr. Price, on some of those questions where the material isn't available, could you ask the question and we'll get the stuff out for you,it might save some time.

MR. PRICE: If I could I'd like a general answer and then we could go on.

MR. VEEDER: Fine, but give me a check of what you want and I'll get it for you. It may be that it will be available tomorrow morning.

Q. (By Mr. Price) Mike, for right now could we just go ahead with the understanding that you will look for that information?

A. Yes.

Q. And could you for now give me your best estimate, with the understanding that we'll get the actual figures at a later date, as to the depth of the Paschal Sherman well.

A. The depth of the Paschal Sherman well, to the

best of my recollection, is a hundred and five feet.

Q Does that indicate how far down the pump actually is placed?

A No, it does not.

Q All right. How far down is the Paschal Sherman well capable of--how far down are you capable of pumping with the Paschal Sherman well?

A I'm a little reluctant to answer that in a general sense because we do have very very specific information on that, and I don't recall those right now.

Q And is that specific information that you think have available that might be provided later?

A It can be provided.

Q You have it with you here somewhere?

A It is here in Spokane.

Q All right. How deep is Colville No. 1?

A Colville No. 1 is, to the best of my recollection, a hundred and forty to a hundred and sixty feet in depth.

Q Colville No. 2?

A I don't have a good recollection of that one at all, Mr. Price.

Q I'm not trying to put words in your mouth, but is it a fair assumption that Colville No. 2 is not as deep as Colville No. 1?

A. Yes, that is correct.

Q. Who made the actual decisions as to when the three respective wells, to which we have been referring, would actually be put into operation at any given time?

A. You're talking about the initiation of operation or the day-to-day operation?

Q. The day-to-day operation.

A. The day-to-day operation of the wells, the decisions in regard to the day-to-day operations were mine in conjunction with the farm laborers and in conjunction with various representatives of the Colville Tribe throughout the year.

Q. I would like to know if you can give me a specific reason why with these three wells, why some may or may not be running at any given time when others are at any given point in time from April up to October of '77?

A. Can I give you examples of reasons?

Q. Yes.

A. A lot was dependent on the day-to-day operation of the irrigation project and the cropping. Ordinarily the Colville No. 2 irrigation well was discontinued first before an individual cutting of hay, and that field was cut, and then water was discontinued going to the north, and that influenced the time that the wells were turned off. They were turned back on depending on a number of factors also. The

time that it took to get the hay done, get it back up, sometimes the hay was rained on during the period of the year, and that may have caused a couple days difference in the normal operation that we would have expected. There may have been slight equipment problems not necessarily with the pumps but with some of the farm machinery that may have influenced the time the pumps were turned off or turned on. There were a number of factors. There was no devised plan ahead for the turning on and off of the pumps, and we did operate on a day-to-day basis depending on the factors that were encountered.

Q. Were you able to apply the water that you wanted to to Allotment 892 and 526 during the year except for these factors that you've been referring to?

A. No.

Q. And why not?

A. There was insufficient water in the Aquifer to apply water to those allotments.

Q. Would you tell me when that occurred and how it occurred and what well, if it occurred?

A. I don't know that you could become that precise to identify a well, Mr. Price, that that particularly occurred. I think that it occurred beginning in 1976, and the experience of 1977 when the Aquifer was substantially depleted was a combination of many factors beginning in 1976

with expanded development in the basin.

Q. Okay. Can you give me an example in 1977, for instance, a specific example of a time when there was a field that went without water and a time when you desired that it be irrigated?

A. Allotments 526 and 892 were desired to be irrigated through August and September, and there were sharp reductions in the amount of water in August that were delivered to those two allotments, and there was a discontinuation of water to both of those allotments in September.

Q. Exhibit No. 5 indicates you were irrigating out of Colville No. 2 as late as August 25th, 1977?

A. That is correct.

Q. And Exhibit No. 3 indicates you were irrigating out of Paschal Sherman as late as August 25th, 1977?

A. Please note that those bars do not represent the magnitude of delivery.

Q. Do you have a graph or chart that depicts the magnitude of delivery?

A. Yes.

Q. I'm still looking for the others, bear with me for just a moment.

Exhibit No. 4 indicates that you were irrigating through August 25th from Colville No. 1 and that you continued to deliver water from Colville No. 1 to No Name Creek

throughout the entirety of the month of September, 1977?

A. That's correct.

Q. Okay. Going back to my question, do you have a chart that depicts the volume of water that you were pumping from the various wells involved?

A. Yes, I believe you can get a--yes.

Q. Okay. That's depicted on the diagonal lines, basically, on the exhibits that have already been marked?

A. That is correct.

Q. Whose decision was it to continue pumping water to the creek in lieu of applying it for irrigation on Allotments 892 and 526?

A. It was a decision of the Colville Confederated Tribes.

Q. Do you know by whom, what body? Was it a particular committee or was it an individual person?

A. It came from the Tribal Council of Colville Confederated Tribes.

Q. Who delivered that decision to you?

A. I'm sure that the decision to operate in the manner that we did in late 1977 came from the Tribal Chairman.

Q. Would that have been Mel Tonasket?

A. Mel Tonasket.

Q. Did he consult with you before giving you that directive?

A. We had considerable consultations with the Tribal Council, the Colville Confederated Tribes, and their representatives.

Q. Did you make a recommendation prior to his reaching that decision or the Colville Tribal Council making that decision? Did you make a recommendation to them on how to allocate the water?

A. I did not make a recommendation in the sense that you state that. Certainly we were faced with having to make decisions very quickly in a period of extreme water shortage in the No Name Creek Aquifer.

Q. You say these shortages started appearing in '76 and continued into '77, is that correct?

A. Certainly.

Q. And you said this was because of the development of water uses in the No Name Creek Basin?

A. That is correct.

Q. And apparently this development had nothing to do with Mr. Walton, did it?

A. It certainly did.

Q. It did?

A. Are you talking about the development of facilities or the development of water?

Q. Development of the increased use of water is what I'm talking about.

A. The increased use of water may have been attributable to Mr. Walton as well as to the Colvilles.

Q. In what respect, please?

A. He may have used more water than he had in the past. I have no knowledge of that.

Q. You have no documentary information at this point whatsoever that indicates that Walton could have increased his use in 1976 or 1977 over what it was in 1975, do you?

A. Over what it was in 1975?

Q. Correct.

A. Documented evidence?

Q. Right.

A. I do not have specific documentation to that effect.

Q. Are you prepared to testify with any basis on any information of your own personal knowledge that he in fact increased his use of water in the years '76 and '77?

A. In '76 and '77?

Q. Yes.

A. I am prepared to testify that he increased his use in 1977.

Q. Okay. In what respect, please?

A. He pumped more from the Walton irrigation well and he diverted for a longer period of time at the Walton

surface diversion.

Q. How much more did he pump in '77?

A. In 1977, I can't tell you specifically how much he did pump.

Q. Generally?

A. I would say about 50 percent.

Q. On what do you base that?

A. On the records of the U. S. G. S.

Q. And diversion time, when did he lengthen his diversion time in 1977?

A. In 1976 Mr. Walton discontinued his surface diversion in late August or early September, I have a recollection of that, and it also appears in the records of U. S. Geological Survey. In 1977, Mr. Walton continued diverting water to his sump into late September.

Q. Do you know if his diversion times were continuous through the years '76 and '77?

A. In 1977 I know the period of operation within the limits of the U. S. G. S. data collection. Also, in 1976 I have records of observations made of Mr. Walton's diversion as well as the U. S. G. S. observations and records.

Q. And from that have you made any calculations on whether or not the total diversion time was more or less in '77 than in '76?

A. Yes, I have.

Q. And your opinion?

A. Is that in 1977 he diverted for a longer time than in 1976.

Q. Okay, and if I understand you correctly you're alleging that he pumped 50 percent more water in '77 than he did in '76?

A. From the Walton new irrigation well.

Q. What I want to know is if he used more water in '77 pumping than he did in '76, not from a particular well but total volume.

A. And in my opinion, yes.

Q. Can you explain that to me?

A. I thought that I answered that question previously in citing the U. S. G. S. records and the personal observations.

Q. U. S. G. S. will substantiate that 50 percent increase in total volume pumping by Walton in 1977 versus 1976?

A. Their records substantiate that, I believe.

Q. Okay, thank you.

Did the Tribes' use of water have any influence on the shortage of water in 1977 and 1976?

A. I don't know if you could specifically cite the Tribe.

Q. Can you specifically cite Mr. Walton?

A. I don't know that you can specifically cite Mr. Walton as a single entity. He certainly did divert more water than he had in previous years.

Q. Did not the Tribe in 1976 use more water in No Name Creek Basin than it had ever used before?

A. I have no knowledge of that.

Q. You don't. You were part of this project in 1976, were you not?

A. Yes.

Q. And you have no knowledge of whether the Tribe increased its use, total volume use of water in 1976 over 1975?

MR. VEEDER: May I have that again? I think there is confusion there as to year.

(The court reporter read back the pending question.)

MR. VEEDER: All right.

THE WITNESS: The Tribe did increase its water use in 1976 over its water use in 1975.

Q. (By Mr. Price) Do you have facts and figures that would quantify that?

A. Yes, I do.

Q. Okay. Are those available here today?

A. No.

Q. Where are those figures?

A. They are with us in Spokane, but I don't have

them here today.

Q. Okay. I would ask that they be produced and possibly look at them tomorrow.

MR. VEEDER: All right.

Q. (By Mr. Price) You do admit that the Tribe increased its total volume use of water in 1977 over that of 1976, is that not correct?

A. That's correct.

Q. Do you have those figures?

A. Yes, I do.

Q. Again, are those in Spokane but not here?

A. No, those are the figures that are summarized on Deposition Exhibit No. 7.

Q. Okay. Those don't tell us what the use was in '76, though, does it?

A. No.

Q. Are you familiar with whether or not No Name Creek dried up in its entirety so far as its surface flow goes at the latter part of the irrigation season in 1977?

A. Whether No Name Creek dried up in its entirety?

Q. The surface flow.

A. The surface flow of No Name Creek dried up entirely at what point in time?

Q. I'll change that, at any point in time during 1977?

A. It did not dry up entirely at any point in time during 1977, to my knowledge.

Q. In terms of there may have been some pools of water standing here or there, or there was actually a streamflow throughout the entirety of the year?

A. There was actually a streamflow during all periods of the year.

Q. Okay. From your observations of that creek in previous years was that different in 1976 than 1975?

A. In 1976 than in 1975?

Q. Right. I guess what I'm asking you is, is it not correct that the creek reached the lowest level you'd ever seen it near the end of the irrigation season of this year?

A. No.

Q. When have you ever seen it lower?

A. I saw it lower in June, 1976.

Q. Okay. At what point in the creek?

A. No Name Creek at the crossing of the granite lip.

Q. Okay. I would like you to now refer to the Walton's northern boundary line with the southern boundary line of Allotment 892. Did you make a relative comparison of the amount of water in this year, the end of the irrigation season, versus '76 and '75?

A. In 1975 at the end of the irrigation season you're asking me what the flow of No Name Creek was at Walton's north boundary?

Q. I am just saying, was it more or less than this year.

A. Was it more or less than this year--I do not recall.

Q. '76?

A. The same.

Q. You don't recall?

A. No, the same. In 1976, in 1977, the flow of No Name Creek at Walton north boundary was the same at the end of the irrigation season.

Q. And you are saying the flow over the granite lip was actually better or more this year than it was in '76?

A. That is correct. At what point in time are you referring, Mr. Price?

Q. At the end of the irrigation season.

A. No, the previous question that I had responded to was, you had asked me in 1976 if I had seen any periods of no streamflow at the crossing of the granite lip.

Q. No, I didn't ask that.

A. That's my response to your question.

Q. Okay. I think we have got lost enough on that one.

MS. ECKERT: Just to make that clear on the record, is the granite lip to which the witness just testified, is that--well, where is that, where are you talking about?

Q (By Mr. Price) Mr. Watson, could you describe for us on Exhibit No. 1 the location of the granite lip.

MS. ECKERT: It's Exhibit 2, Dick.

Q (By Mr. Price) Exhibit 2, pardon me, the large--

A. Referring to Deposition Exhibit No. 2, the granite lip is an outcropping of rock over which No Name Creek flows in the northern end of Allotment H-901.

Q Thank you.

Mr. Watson, you testified that you designed the water system that's employed by the Tribe at the present time, is that correct?

A. Part of that system.

Q Okay. Did the design include Paschal Sherman well, the Colville No. 1, and Colville No. 2?

A. No.

Q Who was responsible for that portion of the system.

A. Mr. Corke is the man that had the authority and responsibility for that. He's here today.

Q You're not familiar then with how it came about, the design of the location of the wells down the middle of the--

A. No.

Q. Are you familiar with whether or not the location of wells in proximity to one another can influence the efficiency of the respective wells in terms of how close they are to one another?

A. No.

Q. That's not in your field of expertise?

A. No.

Q. That's in Mr. Corke's?

A. It's not in Mr. Corke's.

Q. All right. Whose field of expertise does that fall?

A. That falls in the expertise of Mr. Kaczmarek and Dr. Robinson.

Q. Have you calculated how much land area is involved in the parameters designated as a boundary of the watershed by acres?

A. You're asking if I have determined which is-- restate the question.

Q. How much land area is involved within the parameters of the watershed as you have outlined them?

A. Yes, I have.

Q. And how many acres are involved or what is the land area?

A. Approximately 4,990 acres.

Q. Four thousand nine hundred and ninety?

A. Correct.

Q. And referring to Exhibit No. 2 again, I believe at one time you referred to the, well, what I'll call the northern boundary of the watershed line lying in the eastern portion of Section 9, and in my judgment then appears to lie in the western portion of Section 9, is that correct or incorrect?

A. It's the eastern boundary of the watershed in the western portion of Section 9.

Q. Okay. You're calling it the eastern boundary?

A. Distinguishing the boundary on the right as east from the boundary on the left as west.

Q. All right, but only of this little--

A. That's correct.

Q. --end section?

A. That's correct.

Q. How did you arrive at the parameters in Section 9? In other words, the high point of the ground, is there a ridge there that you actually took into consideration?

A. There is a ridge on the eastern boundary.

Q. Is it not true that in terms of sea level the surface, land surface slopes downward away from No Name Creek Valley in the area that is depicted in Section 9?

A. I can't answer that question.

Q. Does the watershed take in ground water as opposed to just surface precipitation?

A. The watershed boundary is the boundary that collects precipitation which has the opportunity to eventually end up in No Name Creek.

Q. Okay. Omak Creek has a surface flow I guess I should say most times during the year, is that a fair statement?

A. During portions of the year.

Q. Have you made any judgment whether there is a subsurface flow that accompanies Omak Creek particularly down through the portion that would intersect within the parameters of your watershed boundaries?

A. Would you define, subsurface flow?

Q. I'm not a hydrologist, I don't know how to, Mr. Watson. I'm asking you whether or not there is any. Have you calculated or determined whether there is any water that would come in within the parameters of the watershed boundary other than what you can see on the surface of Omak Creek?

A. Yes, I believe that--

Q. And have you calculated how much volume of water that would be?

A. Transmitted in the subsurface flow--

MR. VEEDER: Just let him finish the question.

MR. PRICE: All done.

MR. VEEDER: What was the question then, please?

(The court reporter read back the question.)

MR. VEEDER: Go back then to the first question that preceded that then, please.

(The court reporter read back the preceding question.)

MR. VEEDER: Did you understand the question?

THE WITNESS: No, I don't. No, I don't.

Q. (By Mr. Price) You don't understand the question, Mr. Watson, is that correct?

A. No, I don't.

Q. Have you calculated, Mr. Watson, the total volume of water--have you made a net flow in connection with the No Name Creek Basin Aquifer?

A. I do not know what you mean by net flow.

Q. What does net flow mean to you, if anything?

A. It doesn't have any significance to me at all.

Q. Okay. What is the total water volume capacity of No Name Creek Basin?

MR. VEEDER: I object to that question. I don't believe that there is a--I believe it's unclear, certainly, and I think that it could be made much more clearer by more precise language, and I ask the witness not to respond

until it is a clear statement as to what you mean.

Q. (By Mr. Price) It is a fair statement at this point that you are unclear as to what I mean, Mr. Watson?

A. Yes, there is.

Q. Did you try and arrive at a determination of how much water that might be available in No Name Creek Basin Aquifer?

A. How much water might be available?

MR. VEEDER: In the No Name Creek Aquifer.

THE WITNESS: That question is not clear either, Mr. Price.

Q. (By Mr. Price) Have you made any calculations with regard to the coefficient of storage in No Name Creek Aquifer?

A. I have not.

Q. And who has done that, if anybody, to your knowledge?

A. To my knowledge Mr. Kaczmarek has made that computation.

Q. You or Mr. Kaczmarek would know about the coefficient of transmissivity, allowing for mispronunciation?

A. I have no knowledge that Mr. Kaczmarek has any knowledge of that.

Q. You don't have any knowledge?

A. I do not.

Q. That goes without saying that I don't.

MR. VEEDER: Are you saying transmissivity, Mr. Price? The word is something new to me, and I just wanted to get educated.

Q. (By Mr. Price) Have you calculated what water--do you have an opinion as to the firm annual water supply in the No Name Creek Basin?

A. Yes, I do.

Q. Good, because that's what it says in your answers to interrogatories. Would you give me that figure, please?

A. Five hundred and fifty acre feet.

Q. What does that figure signify?

A. That figure represents the amount of water that can be drawn from the No Name Creek Aquifer without causing continuing shortages during periods of flow, stream-flow or recharged cycles.

Q. Based on your records of precipitation and whatever other water sources there are for the No Name Creek Aquifer, do you feel it could recharge itself to the extent of 550 acre feet a year? It's capable of recharging itself, is that--

A. I did not say that.

Q. Okay. In your opinion is the No Name Creek Aquifer capable of recharging itself to the extent of 550 acre

feet a year?

A. That's a question that can't be answered in a general sense.

MR. VEEDER: So don't answer it.

Q. (By Mr. Price) Answer it in a very specific sense.

MR. PRICE: Read it back, please--forget it, strike that.

Q. (By Mr. Price) What are the sources of water supplies to No Name Creek Aquifer.

A. The sources of water to No Name Aquifer are precipitation and contributions from Omak Creek.

MR. PRICE, Yeah, my goodness, he said it.

MR. VEEDER: Is there any doubt about it?

Q. (By Mr. Price) Tell me about the contributions from Omak Creek if you would, please.

A. I would require--

MR. VEEDER: I object to this. I don't want him to make a narrative. I insist that this be questions and answers. I will not pay him to make a speech.

MR. PRICE: His your witness.

MR. VEEDER: This is a question and answer, Mr. Price--

Q. (By Mr. Price) What is the contribution of water to No Name Creek Basin from Omak Creek, Mr. Watson?

A. That question cannot be answered in a general sense.

Q. It wasn't a general question, Mr. Watson, it was a very specific question. What is the amount of water that is contributed by No Name Creek?

A. At what point in time?

Q. I don't care what point in time.

MR. VEEDER: I'm directing the witness not to answer that because it's a variable.

Q. (By Mr. Price) Well, then apparently you have not been able to reach a calculation that you'd be able to testify to at trial, is that correct?

A. That's not correct.

Q. Well, what calculations have you made then as to the contribution of No Name Creek in a very specific sense?

A. I've made computations of the contribution from Omak Creek during certain periods of time.

Q. What periods of time?

A. I've made calculations of the contribution of No Name Creek during the periods when Omak Creek is dry.

Q. Is that the only time?

A. No.

Q. Okay. Would you tell me the times you made them and the amount of contribution at that specific period

of time, please?

A. I made a computation of the contribution from Omak Creek in March, 1976 and in March of 1977, and for a period between January 31st and the middle of April, 1977.

Q. And the amount of contribution of those specific periods of time, please, starting with March of 1976?

A. In March, 1976, contribution from Omak Creek was less than .66 CFS.

MR. VEEDER: .66 CFS?

THE WITNESS: .66.

Q. (By Mr. Price) You wish to stand by that answer?

A. Yes.

Q. In 1977? Apparently in 1976 that's the only time you made that calculation, such a calculation?

A. That's correct.

Q. In 1977, please?

A. In March, 1977, greater than .50 CFS.

Q. And from January 31 to the middle of April, 1977, please?

A. .54 CFS.

Q. Are you familiar with whether or not there is a spring runoff associated with the Omak Creek?

A. Yes.

Q. Is it not true that during the spring Omak Creek

is supplemented depending on the precipitation during the winter from snow, rain, whatever, that creek is augmented by substantial water supply in the spring of any given year, is that not correct?

A. I don't understand your question.

Q. Okay. Any other sources of water supply besides precipitation and Omak Creek?

A. No.

Q. Are you familiar with whether there are acceptable ways of augmenting, increasing the source of water supply to a particular basin by sinking dry wells, for instance, and allowing spring runoff, say, from Omak Creek to run into those, would that be a means of augmenting the water supply in No Name Creek?

A. I have not done any investigations of that type.

Q. Okay. Have you made any calculations as to the quantity of water--well, strike that. In terms of the contribution of Omak Creek, the calculations that you made on these given dates, are you able to convert that into how many acre feet a year that would add to the Aquifer, or in your language, how do you convert that so that we can calculate what contribution it actually makes to the Aquifer?

A. How did you start that question?

Q. Well, from the measurements that you made in

March of '76 and March of '77, I take it you just don't leave it at .66 CFS, for instance, in March of 1976. I'm asking, is there a method whereby you convert that to determine how many acre feet of water that adds to the system?

A. It would be very--there is a method for converting that amount during the period that it was measured.

Q. Did you make that conversion?

A. No, I didn't.

Q. Okay. Have you prepared any charts or graphs or documentation with respect to this contribution of Omak Creek?

A. No.

Q. How about precipitation? Did you quantify that for any given period of time the contribution precipitation makes to No Name Creek Aquifer?

A. Yes, I did.

Q. And did you put that in chart form or anything of that nature?

A. That will be in chart form.

Q. Can you give me the figures if you are familiar with them at this point?

A. Yes. The contribution from precipitation runoff during the period from January 31, 1977, to April 19th 1977, was approximately--and I'm recalling from memory--18 acre feet.

Q. Based on your analysis previously I assume we could expect in an average year that it would be somewhat more than that?

A. During that period of time?

Q. Yes.

A. It's a very complex question that can't be answered that simply.

Q. Okay. I don't want to ask a complex question.

(Discussion off the record.)

Q. (By Mr. Price) Would it make any difference if I asked you what a flow net system was, flow net analysis as opposed to a net flow analysis?

A. I've heard of hair nets but flow net, yes, I know what a flow net is.

Q. What is a flow net?

A. A flow net is graphical illustration of the lines of equal potential of a subsurface system.

Q. Okay. Is not that something that could be used to demonstrate the interrelationship of wells such as we have in the No Name Creek Basin?

A. I don't know how that would apply.

Q. Okay. Have you done a flow net analysis for the No Name Creek Aquifer or Basin?

A. No.

Q. Is that not one of the tools that could be

employed to assist in determining the amount of water available from the system?

A. I don't think it's an appropriate tool.

Q. Why not?

A. I don't believe that the physical system that actually exists can be made adaptable to a very theoretical type of approach while predicated on assumption.

Q. Why not?

A. You can't measure all the things that are necessary to provide us input into that kind of an analysis.

Q. What's necessary under a flow net analysis?

A. There are a number of parameters such as the transmissivity.

Q. Hold it. What was that?

A. Transmissivity.

Q. Would you spell that?

A. T-r-a-n-s-m-i-s-s-i-v-i-t-y.

Q. Super, okay. Do you have--that would be one of the factors that might go into it, and what is that transmissivity?

A. It's capability of material to carry given amounts of water through a unit of wet.

Q. Okay. That could be calculated for No Name Creek Basin, could it not, that particular element? Without Mr. Kaczmarek commenting by the shaking of his head?

A. Well, I don't know what--

MR. KACZMAREK: I don't know that I know one way or the other.

THE WITNESS: Are you asking if it could be calculated or if it could be determined?

Q. (By Mr. Price) First of all, I guess, can that be calculated in the No Name Creek Basin?

A. It could be calculated.

Q. Okay. What other element might go into the flow net analysis?

A. The dimensions and the boundary conditions that exist in the Aquifer.

Q. What do you mean, dimensions?

A. The dimensions of the Aquifer.

Q. Have you not testified to those here today?

A. No, I haven't.

Q. Okay. What goes into the dimensions of an aquifer?

A. The length, approximate width, the breadth, the depth.

Q. You're saying you don't have those figures available today?

MR. VEEDER: He didn't say that.

THE WITNESS: We have those figures available.

Q. (By Mr. Price) You do?

A. To the extent that they can be measured.

Q. You do have them available to the extent they can be measured, okay. What's the next element that might go into this formula?

A. I think that these are the principal elements in the analysis.

Q. All right. As I understand you, you say that there are figures available for both of these elements. Now, why can't a flow analysis--flow net analysis be prepared?

A. I did not say that there are figures that were available. I said that there are calculations that could be made.

Q. Which calculations could be made that haven't been made, to your knowledge?

A. Which calculations could be made that have not been made?

Q. Right. I don't want to play games with you, all I'm saying is, why can't a flow net analysis be made, that is all I'm asking you.

A. Because I don't think the information that quantifies transmissivity and quantifies dimensions of the aquifer and quantifies the other physical parameters that are involved can be measured and combined in a theoretical approach that can be used for useful purposes.

Q. We're operating on a lot of assumptions and

theories in respect to quantifying water in an aquifer, are we not? You're not suggesting that your figures are exactly precise, are you?

A. Well, I'm certainly not--not saying that they're not well prepared using the accepted--

Q. That wasn't my question, Mr. Watson. I'll give you an A for effort. That wasn't my question.

With respect to the three wells, Paschal Sherman, Colville No. 1, and Colville No. 2, are you familiar with the efficiency of the wells?

A. No, I am not.

Q. Who would have that information?

A. No one, to my knowledge.

Q. Would it not be important to know the efficiency of the wells in determining whether or not the most efficient use is being made of the water available?

A. I don't think the two are related.

Q. In terms of the water put into the creek from the wells, the three wells north of Walton, what were the requirements or what were the intended uses of that water by the Tribe?

A. The intended uses were the irrigation of Allotments 901 and 903, and the use as in streamflow for the Lahonton Fishery.

Q. Do you accept the U. S. Geological Survey data

that's been supplied to all of the parties in this case as competent figures for making calculations?

A. You'd have to be more specific than that, Mr. Price.

Q. Are there any areas where you differ or take issue with in connection with the figures obtained by the U. S. Geological Survey?

A. Yes, there are.

Q. Could you specify those for me, please?

A. One measurement point that I recall is a measurement point on No Name Creek below Mr. Walton's surface diversion.

Q. And in what respect do you take issue with the figures that have been supplied to you?

A. The only disagreement in their figures and the figures that I have developed are with respect to the relationship of converting the depth of water in the measurement flume to an amount of discharge, and the difference in our two figures is somewhat small.

Q. Not very great?

A. That is correct.

Q. I take it this business with the flow nets, it's not going to do me any good to ask if you've developed any hydrographs, is that correct, or whether hydrographs are developed in connection with the flow net analysis or not?

A. No.

Q. Have you developed any hydrographs?

A. Yes, I have.

Q. Do you have those available?

A. Would you be more specific?

Q. What is a hydrograph?

A. A hydrograph is a trace, a time-related distribution of rate of flow in a stream showing at any instant in time or on a daily basis. For example, a hydrograph could be developed on a daily basis to show the daily streamflows at a particular location.

Q. Would this relate only to a streamflow or to pumping from a well, say, volume of--

A. No.

Q. Just streamflow?

A. It could be defined, a hydrograph could also be defined as a running observation of water levels. That would be another definition of hydrograph.

Q. Have you prepared, in connection with this litigation, hydrographs?

A. We have prepared hydrographs of the streamflows at Walton's north boundary on No Name Creek, on Walton's surface diversion, and on No Name Creek at the crossing of the granite lip. We have also provided hydrographs on each of the wells in the No Name Creek Aquifer and to the north and

south of the No Name Creek Aquifer that would be established by the U. S. Geological Survey and for which the U. S. Geological Survey has been collecting and accumulating records.

Q. Do you have those hydrographs with you?

A. Yes, I do.

Q. Here in the room?

A. Yes.

MR. VEEDER: Would you like to see them, Mr. Price?

MR. PRICE: I will reach that decision momentarily.

Q. (By Mr. Price) If I ask you whether or not you determined the decrease in storage volume in the No Name Creek Aquifer in 1977, that is a question you could answer?

A. Have I determined the decrease in the storage volume--would you repeat the question?

Q. Have you determined the decrease in storage volume in the No Name Creek Aquifer for the year 1977?

A. No.

Q. Could I see the hydrographs, please?

A. Yes.

MR. SWEENEY: Why don't we take a break at this point?

(A short recess was taken.)

Q. (By Mr. Price) I'm going to start, I don't care if Mr. Sweeney is here. He's not too excited about this, I think, anyway.

Mr. Watson, do you have records that would give us gallons per minute being pumped out of the three respective wells, Paschal Sherman, Colville 1 and Colville 2 at any given time?

A. Yes.

Q. Okay. Are those records with you?

A. No.

Q. Where are those records?

A. In Helena.

Q. In what form do those records appear?

A. Hand notes.

Q. Is this on a day-to-day basis?

A. Not necessarily.

Q. Would be at sporadic intervals?

A. Yes.

Q. Okay. I would request that those notes be made available as part of this deposition.

MR. VEEDER: I didn't hear you.

MR. PRICE: I would request those notes be made available as part of this deposition.

MR. VEEDER: Notes of gallons per minute from each well?

MR. PRICE: Correct, for any days that the records exist.

That's all I have. Thank you, Mike, for bearing with me.

THE WITNESS: You bet.

MS. ECKERT: I have a few followup questions, if I might, and I think I'll ask some because I know Bob had one or two.

EXAMINATION

BY MS. ECKERT:

Q. When you say that you took water from the Paschal Sherman well and pumped it to the creek, how, physically, was that accomplished?

A. To the creek?

Q. That's correct.

A. Referring to Deposition Exhibit No. 2, water is transferred from the Paschal Sherman irrigation well labeled as Well No. 1 in the center of Allotment 526. It is conveyed by means of a steel pipe to--in a generally southwesterly direction. At that point it joins plastic pipe buried, and water is conveyed by the plastic pipe for the remainder of the distance across Allotment 526, across--almost the full extent of Allotment 892, and is discharged to No Name Creek above the measurement site as Mr. Walton's

north boundary.

Q. Okay. Now, through the Walton property then there is no piping or culverting of that water, is that correct?

A. There are culverts.

Q. Okay.

A. But not--

Q. But they were not installed by you as part of this project?

A. They were not installed by the Confederated Tribes.

Q. In reference to your answers on the precipitation records you showed in exhibit which I believe was Deposition Exhibit 9, precipitation records for 1977, and you had on that marked precipitation for October or November or December of 1977?

A. That is correct.

Q. Do you have the precipitation figures for those months available?

A. No, I don't.

Q. Okay. Do you anticipate that by the time of trial Deposition Exhibit 9 will be remodeled to include that information?

A. I hadn't intended to do that.

Q. Okay. Now, the precipitation records, as I

understand it, that's from a weather service monitoring station that was not established specifically for this project?

A. That is correct.

Q. Okay, and do you happen to know far back or do you happen to know when that weather service monitoring station was established at that point?

A. It was established at that point, to the best of my knowledge, in 1948.

Q. And in considering the precipitation records in the way as you testified in response to Mr. Price's questions, you then consider back to that first date, to 1946?

A. '48.

Q. '48, excuse me. So you considered records back to 1948, is that correct?

A. Yes.

Q. Okay. Now, Mr. Price asked you a question, could 1977 be considered a "normal" year, and we had some problems with what normal meant and so on. Let me phrase it in a slightly different way. In your studying of the precipitation records from Omak--whatever it is, to, the weather station, weather patterns which became apparent over the years, times at which precipitation was heavier than other times.

A. Yes.

Q. And is there some way you can describe when the precipitation generally is heaviest in the No Name Creek area or at that weather station, I should say?

A. What do you mean by when?

Q. Well, what months of the year, for example, could one expect to find high precipitation, and what months of the year would one expect to find virtually no rainfall?

A. The months of high and low rainfall or precipitation in the No Name Creek Basin vary depending on the year, and in looking at a long period of years and the average monthly values for a long period of years there is no pattern demonstrated in the records that was useful in the work that I performed.

Q. Okay. Now, those 1977 precipitation records, you stated that one of the sources of water for the No Name Creek system is precipitation, water that falls as rainfall, let's say, in the fall of 1976. Is that immediately available for pumping from the Paschal Sherman well?

A. I made no determination of that.

Q. Well, let me ask it this way, is there a time lag?

A. There is if rainfall falls in one year.

Q. Do you have any opinion as to whether it becomes available in the system for appropriation later that

year?

A. Yes.

Q. And what's that opinion then?

A. The opinion is that rainfall falling on No Name Creek Watershed generally is available in the No Name Creek Aquifer or in the No Name Creek stream shortly after.

Q. What do you mean by shortly after?

A. Within a month.

Q. And what do you base that opinion on?

A. The size of the watershed and the estimated travel time from points in the watershed to the aquifer and stream.

Q. Just to make sure that I'm absolutely clear on this point, Deposition Exhibits 3, 4 and 5, I believe, yes, it shows up on all three of them, but I think for purposes of illustration we can do it on 5, referring to Deposition Exhibit 5, the heavy line on the lower portion of the exhibit which then results in a total, is the line an accumulated total?

A. Yes, it is.

Q. Okay, fine. So it accumulates as it goes along?

A. That's correct.

Q. Okay, but the line does not represent a magnitude of pumping at any given time?

A. No, it does not.

Q. Okay. With respect to the subsurface contribution from Omak Creek to No Name Creek that you and Mr. Price were discussing, you came up with some figures of .66 CFS and so on. Can you tell us--you apparently made a determination in March of '76 and March of '77 and from the period of January 31 to mid-April of '77. Can you tell us why those periods of times were chosen to make that calculation?

A. Yes.

Q. And why?

A. The periods that were chosen were times in the watershed when the least problem existed in trying to identify water that might be contributed.

Q. Well, you're going to have to explain that a little bit more. What do you mean, the least problems existed in terms of identifying--

A. For example, during the period in March, 1976, this was approximately six months after the close of the 1975 irrigation season. All effects of the 1975 irrigation season were no longer apparent, and there were water levels in the No Name Creek Aquifer available in March, 1976, and the rate of increase and decrease in those water levels was available. There was also measurements made by the U. S. Geological Survey in 1976 on No Name Creek below the spring zone, and that measurement, coupled with the observations of the water

levels in the aquifer, allowed for a determination of the contribution of inflow at that point in time. A similar situation existed in March, 1977, precisely the same conditions existed in 1977.

Q. Okay. Now, in making those calculations in March of '76 and March of '77, please tell me how you arrived at that figure? Did you have observation wells, did you use observation wells to arrive at that figure?

A. Yes.

Q. Which observation wells did you use to arrive at that figure?

A. The specific observation well that I used in both cases was the Peter's Observation Well located on Allotment 892.

Q. And when you say you used the Peter's Observation Well, I'm a layperson, tell me, how did you use the observation well to determine in March of '76 what you come out with, less than .66 CFS?

A. The observation well in 1976 showed a declining water level from August, 1975 through--at least a part of April, 1976, and the declining water level in the aquifer as monitored by the water level at Peter's Observation Well indicated that more water was coming out of the aquifer than was going in. If the reverse had been true the water levels would have been rising. The U. S. G. S. made a measurement of

the streamflow of No Name Creek, which is a measurement of discharge from the aquifer, in March, 1976, and therefore that measurement becomes the estimate of the quantitative water being contributed to the No Name Creek Aquifer at that time.

Q. Okay.

A. And it should be pointed out that I did not use specific numbers in those cases, but in March, 1976, I stated that it was an amount of .66 CFS or less, and in March, 1977, .50 CFS or more.

Q. I'm sorry, I was trying to use sort of a short-hand, I didn't mean to suggest that you had stated those precise figures.

Now, you made a comment to Mr. Price which I want to follow up on. We have been talking a lot about the water-shed boundary. Is there also such a thing an aquifer boundary for the No Name Creek area?

A. Yes.

Q. Okay, and do you have any maps or charts--let me ask you this, have you determined what that aquifer boundary is?

A. I have participated--

Q. Okay. Is that Mr. Kaczmarek's area?

A. Mr. Kaczmarek and Dr. Robinson.

Q. Okay. Assuming that the Paschal Sherman well

and Colville No. 1 and Colville No. 2 wells were not operating this summer, could you have irrigated in Sections 901 and 903?

A. No.

Q. Okay, and why not?

A. Because the entire flow of No Name Creek would have been diverted in its entirety by Mr. Walton.

Q. And in what sense would it have been entirely diverted by Mr. Walton?

A. If Mr. Walton operated in 1977 as he had in 1976 the natural flow of No Name Creek would have been sufficient to supply his demands only.

Q. I see, okay. When you say his demands, are you referring to his demands, his total demands, or his demands only for surface water diversion?

A. His surface water diversion demands for the lands that were irrigated by Mr. Walton in 1977.

Q. Okay. Now, Mr. Price asked you about whether you generally used the U. S. G. S. figures, and you indicated there were some areas of disagreement, and you gave an example that there was a measurement point below the Walton place. Is that a fair statement of what your testimony was?

A. With minor corrections.

Q. Okay, well, make the minor corrections, I'm not trying to put words in your mouth.

A. The location is No Name Creek below Walton's

surface diversion, and the measurement device is a flume.

Q. Okay, and you stated that the difference between your figures and the U. S. G. S. figures was "a small difference"?

A. That is correct.

Q. Can you tell us what's that small difference?

A. I can't tell you percentagewise.

Q. Is it within the magnitude of error of any such calculation?

A. It's within the magnitude of the error of the U. S. Geological Survey current meter measurements.

MS. ECKERT: Okay. That's all the questions I have. Mr. Sweeney may have one.

MR. SWEENEY: No, I don't have any questions.

MR. VEEDER: I have about two or three very short questions.

EXAMINATION

BY MR. VEEDER:

Q. Mr. Watson, you indicated that in regard to the operations of the Colville Irrigation Project you made the determinations in regard to the location of the systems you installed. During that period did you consult or confer with anybody in the Department of Interior?

A. Yes.

Q. And who was that?

A. Mr. Corke.

Q. And what was Mr. Corke's function in regard to the construction of the irrigation system, the operation of the irrigation system, the financing of the irrigation system? Did you get involved with that with Mr. Corke?

A. Yes. Mr. Corke was principally responsible for all of these functions on behalf of the Bureau of Indian Affairs working with Colville Confederated Tribes.

Q. Would you state in the record the extent of your consultation in regards to each one of these phases including the operation of the Colville irrigation system pursuant to the order of July 14th, 1976?

A. I've had extensive consultation with Mr. Corke throughout the entire project in every aspect and phase of the project.

Q. Would you state whether that was a day-to-day operation or how was that?

A. We had very frequent telephone conversations when we were apart. When we were together, which was frequently, we had extended conversations.

Q. And you accepted his direction, is that correct?

A. I most certainly did.

Q. Now, in regard to the planimetering of the acreages as appears on what we call Deposition Exhibit No. 2,

did you use the standard method in the determination of acreages?

A. Yes, I did.

Q. Now, may I ask one last question, did you or did you not distribute to all parties the map showing the Colville irrigation project some weeks back?

A. Yes, I did.

Q. And would you provide for the record tomorrow morning when you made that distribution?

A. Yes, I will.

MR. VEEDER: I have no further questions.

(At this time the deposition was adjourned and reconvened on January 6, 1978, at 9:45 a.m.)

EXAMINATION

BY MS. ECKERT:

Q. I believe you've already been sworn?

A. Yes.

Q. Mr. Watson, yesterday you testified about the firm annual water supply, and just to start us off, would you repeat again what your opinion was as to the firm annual water supply available in the No Name Creek Basin?

A. The figure that I gave yesterday was 550 acre feet.

Q. Okay. Now, let's start from the beginning on this. How did you determine this figure?

A. I determined this figure based on intensive investigations in the No Name Creek Basin.

Q. Which investigations are you referring to, what kinds of investigations?

A. I performed investigations of the records of the U. S. Geological Survey.

Q. Okay. Now, which U. S. G. S. records are you using?

A. I'm using the records of the U. S. Geological Survey collected prior to the court order of July 14th, 1976, and subsequent to the court order of July 14th, 1976.

Q. And then you have the records, and the records, as I understand it, are simply measurements of various water levels and various wells, is that correct?

A. That is partially correct.

Q. In what respect is that statement not totally correct?

A. The U. S. G. S. has collected additional records other than water levels.

Q. Did you use those records in addition to the water level records?

A. Yes, I did.

Q. Okay. Now, you're still baffling me how you

records of water levels and other U. S. G. S. records, how you come to a figure of 550. How did you calculate that figure?

A. The figure was calculated by the techniques that I outlined to you yesterday, and for the periods that I'd outlined yesterday.

Q. Okay. Well, would you run through that again because I still have some questions on it.

A. Yes. I took water level observations in March, 1976. I also took U. S. G. S. water level measurements. I also took a current meter measurement by the U. S. G. S. in March, 1976, and I testified yesterday that the current meter measurement in March, 1976 was taken by the Geological Survey at Walton's driveway, at the crossing of Walton's driveway on No Name Creek, and that the current meter measurement was .66 CFS.

I also testified yesterday that the water level in the No Name Creek Aquifer at that period of time was declining. I also testified that in March, 1977 I used similar observations of the Geological Survey, namely, the water level in the Peter's Observation Well, which was increasing, and the U. S. G. S. measurements of discharge at the flume that had been placed by the Geological Survey on No Name Creek below Walton's surface diversion, and that the discharge on that date was .54 CFS.

Q. I believe, as I recall, looking through my notes, that--

A. Excuse me, was .50.

Q. That's correct, yeah, I was going to correct you on that just to see if you wanted to stand by that.

Now, you got those numbers then. How do we get from those numbers to 550 acre feet?

A. I also testified yesterday about the period between January 31, 1977 and the middle of April, 1977, during which time it was determined that Omak Creek was producing .54 CFS of recharge to the No Name Creek Aquifer.

Q. Well, then what, in fact, does the 550 acre feet represent? Is that the addition during the year of 1977 to the--

A. Those are points of observation during 1976 and 1977 at which time the amount of water discharging from the No Name Creek Aquifer could be determined.

Q. So basically you knew the inflow and the outflow, is that what you're telling me?

A. That's correct.

Q. Okay. Then, how do you use that information to come up--you're still about three steps, I think, from the 550.

A. Okay. I don't have a calculator with me to go through the details of the computations. However, if you

were to take, for example, .5 CFS and extend that through the year that would result in a discharge of approximately 375 acre feet.

Q. So basically what you did is you performed a conversion from the CFS to the acre foot number, is that correct?

A. That's accepted practice, yes.

Q. I didn't question whether it was accepted practice, I just said, did you perform that conversion?

A. Yes.

Q. Okay. Now, when you say that it was a firm annual water supply, I take it your testimony is based on these calculations from March of '76, March of '77, and then the period from January until mid-April of '77?

A. Yes.

Q. Would you anticipate that your figure, the firm annual water supply, would be greater if precipitation this year had been greater than what we actually received?

A. Absolutely not.

Q. Why not?

A. The computation of discharge, as I have just testified, during this year was--which was a dry year, resulted in a computation of 375 acre feet as given in the example previously. Therefore, in a year of more precipitation there would be a larger amount of water in terms of

firm annual water supply, and I believe that I testified earlier that the firm annual water supply computation is 550 acre feet, which is larger than 375.

Q. Well, are you telling me then that there are some seasons or periods when rainfall is high that No Name Creek is--the system is gaining more water than it's losing, in your opinion? Has that ever happened?

MR. VEEDER: I'm going to suggest you don't answer that because I don't believe that it's properly put. I think that the question cannot be answered other than along the lines he's saying. He's saying you figure out a firm annual average water supply of 550 acre feet. To get that average he necessarily has some highs and some lows.

Q. (By Ms. Eckert) Well, let me ask you this, when you're talking about a firm annual supply, are you talking about a firm annual average water supply?

A. I'm talking about firm annual water supply.

Q. Would you define what you mean by that term then?

A. A firm annual water supply is the amount of water that can be withdrawn for beneficial purposes during consecutive years without concern with regard to shortages.

Q. Okay, one other question. Did you determine water requirements which might be anticipated for growing crops in the No Name Creek Basin?

A. Yes, I did.

Q. Okay, and were you determining water requirements for any specific crop in No Name Creek Basin?

A. Yes, I was.

Q. Which crop were you determining those water requirements?

A. I determined water requirements for alfalfa.

Q. Okay, and how did you go about determining water requirements for alfalfa growing in the No Name Creek Basin?

A. I determined water requirements in the No Name Creek Basin first by considering the soil properties of the lands in the No Name Creek Basin, and that was based on considerably consultation with Mr. Kaczmarek with regard to the soil property. I also considered the kinds and types of crops that could be grown in this climatic region. I also considered the temperature and the precipitation characteristics of this particular region that are specifically related to the determination of water requirements. I considered the latitude at which the No Name Creek Basin is located, which is a factor affecting the water requirements. I considered the percentage of daylight hours at this latitude, which is a parameter in determining water requirements.

I determined the kinds and types of conveyance systems and delivery systems and application systems that

could be used in this particular area for applying water for beneficial purposes of irrigation. I also considered the unique characteristics of this particular basin with regard to conveyance losses and efficiencies of irrigation in this particular area.

(Discussion off the record.)

Q. (By Ms. Eckert) Mr. Watson, in considering conveyance systems and, as you put, unique characteristics and so on the No Name Creek area, did you assign a particular efficiency value to the conveyance systems involved?

A. I did not assign a specific efficiency.

Q. Okay. Well, did you consider the efficiencies of conveyance systems in the irrigation system?

A. Yes, I did.

MS. ECKERT: Okay. I don't have any further questions at this point. Do you have any?

MR. SWEENEY: No.

MS. ECKERT: Okay, you may step down.

(Deposition concluded.)

STATE OF WASHINGTON)
) SS: REPORTER'S CERTIFICATE
COUNTY OF SPOKANE)

I, David Caviezel, a notary public in and for the State of Washington;

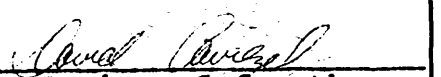
DO HEREBY CERTIFY:

That the foregoing is a true and correct transcription of my shorthand notes as taken upon the deposition of Mike Watson on the date and at the time and place as shown on page one hereto;

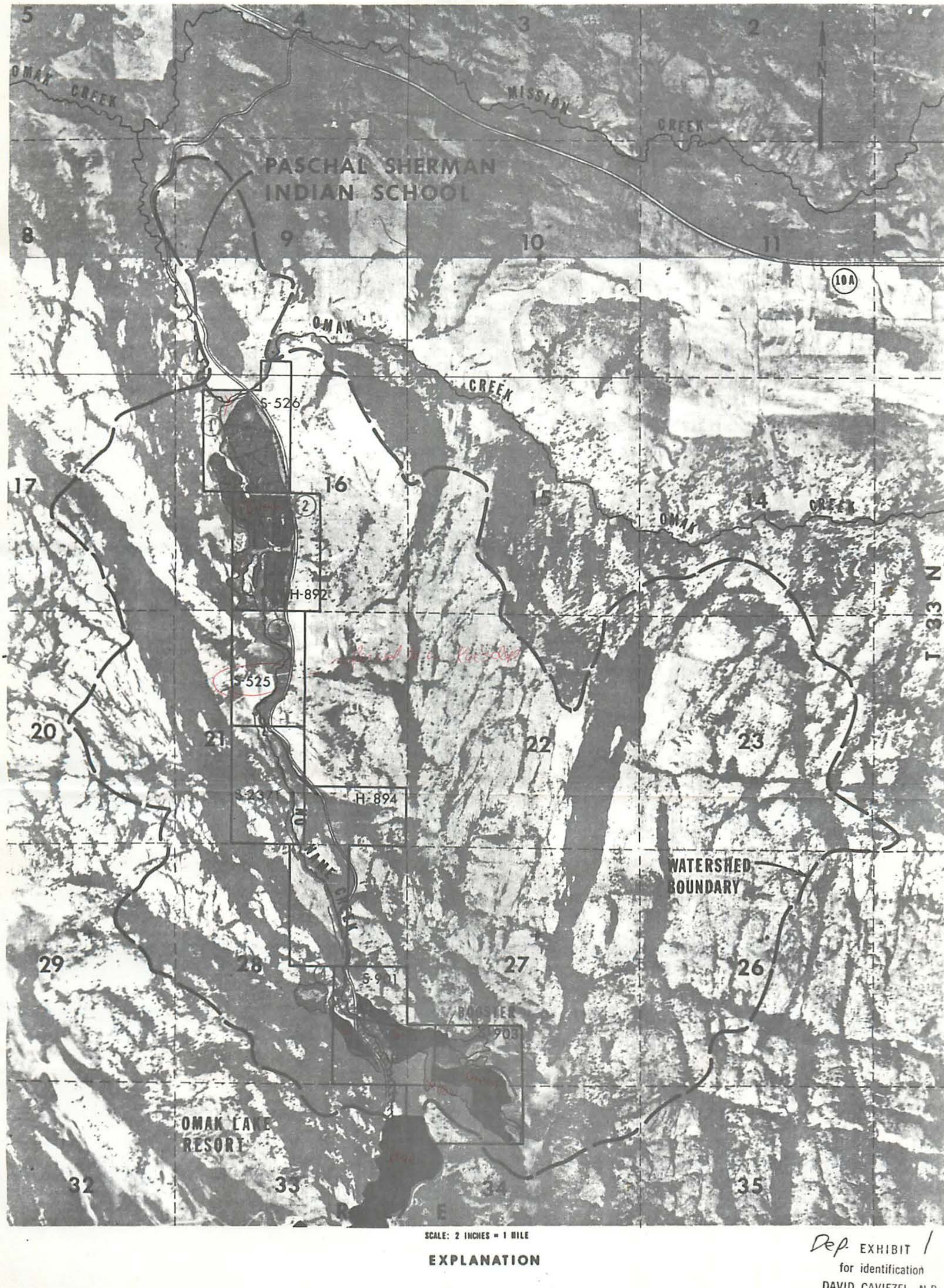
That the witness was sworn upon his oath to tell the truth, the whole truth and nothing but the truth, and did thereafter make answers as appear herein;

That I am not related to any of the parties to this litigation and have no interest in the outcome of said litigation;

WITNESS my hand and seal this 23rd day of February, 1978.



NOTARY PUBLIC in and for the State of Washington, residing at Spokane



SCALE: 2 INCHES = 1 MILE

EXPLANATION

IRRIGATION WATER DEVELOPMENT, DELIVERY, AND APPLICATION SYSTEM

WELLS

(1) PASCHAL SHERMAN IRRIGATION WELL

(2) COLVILLE NUMBER 1 IRRIGATION WELL

(3) COLVILLE NUMBER 2 IRRIGATION WELL

SURFACE DIVERSION

(4) DIVERSION POINT FOR "SOUTH UNIT" COLVILLE IRRIGATION PROJECT

DELIVERY SYSTEM

PORTABLE ALUMINUM SPRINKLER PIPE

BURIED STEEL PIPE

BURIED PLASTIC PIPE

NATURAL CHANNEL FOR CONVEYANCE

APPLICATION SYSTEM

PORTABLE ALUMINUM HAND-MOVE SPRINKLER LINE

AUTOMATED CENTER PIVOT SPRINKLER LINE

LAHONTON CUTTHROAT FISHERY

RENOVATED SPAWNING AND REARING CHANNEL

TYPICAL SECTION

IRRIGATION LAND DEVELOPMENT

Green — IRRIGATED ACRES (1977)

Yellow — UNDEVELOPED IRRIGABLE ACRES

IRRIGATION SUMMARY			
ALLOTMENT	IRRIGATED ACRES (1977)	UNDEVELOPED IRRIGABLE ACRES	TOTALS
S-526	50.7	11.1	61.8
H-892	43.6	14.3	57.9
WEST OF H-892	.8	.7	1.5
S-901	30.4	10.7	41.1
WEST OF S-901	-----	8.8	8.8
S-903	32.4	24.9	57.3
TOTALS	157.9	70.5	228.4

Dep. EXHIBIT 1
for identification
DAVID CAVIEZEL, N.P.
Jan 5, 1978

S-525 –

COLVILLE IRRIGATION PROJECT

OCTOBER, 1977

PRELIMINARY

DOP EXHIBIT 6
for identification
DAVID CAVIEZEL, N.P
Jan 5, 1978

COLVILLE IRRIGATION PROJECT
HAY INVENTORY, 1977

CUTTING	BALES	#/BALE	TONS	ACRES	TONS PER ACRE	$ PER TON	$ VALUE
ALLOTMENT S-901							
1	2400(1)	40.0	48.0	24.0	2.00	60	$ 2,880
2	808(1)	60.0	24.2	24.0	1.01	60	1,452
3	937	55.5	26.0	24.0	1.08	60	1,560
TOTAL	4145	47.4	98.2	24.0	4.09	60	$ 5,892
ALLOTMENTS 526 & 892 & TRIBAL TRUST WEST OF H-892							
1	5700(1)	55	156.7	94.3	1.66	60	$ 9,402
2	2162(1)	55	59.5	94.3	.63	60	3,570
3	1815	55	49.9	94.3(a)	.53	60	2,994
TOTAL	9677	55	266.1	94.3	2.82	60	$15,966
TOTALS	13822	52.7	364.3	118.3	3.08	60	$21,858

(a) Approximately 30 acres of Walking 40 not cut

(1) BALE COUNT COMPARISON

Allotment	Cuttings	M-M*	Farmer	Difference
901	1 & 2	3481	3208	+ 273
526 & 892	1 & 2	7741	7862	- 121
TOTAL	1 & 2	11222	11070	+ 152

* Counted by Mike Watson

Dep EXHIBIT 7
for identification
DAVID CAVIEZEL, N.P.
Jan 5, 1978

SUMMARY 1977 WATER USE
NO NAME CREEK BASIN

ALLOTMENT	1977 ACRES	WATER USE (ACRE-FEET)	WATER USE (ACRE-FEET PER ACRE)	AVERAGE ANNUAL SPRINKLER WATER REQUIREMENT (ACRE-FEET PER ACRE)
Colville S-526	50.7	254.8	2.68	4.24
Colville H-892	44.4			4.44
Walton S-525	29.0	152.5	5.26	4.44
Walton S-2371	9.9			3.66*
Walton H-894	12.0	115.4	5.27	3.66
Colville H-901	30.4	161.6	5.32	4.90
Colville S-903	32.4	12.5	.39	5.71
Lahonton Fishery	-	322.7	-	-
TOTAL	208.8	1019.5	-	-
Total Walton	50.9	267.9	5.26	4.10
Total Colville				
Irrigation	157.9	388.4	2.46	4.72
Fishery	-	363.2	-	-
	208.8	1019.5	-	-

Information Provided to Court During
December 20-21, 1976 Hearing

Total Walton	105	300.0	2.86
Total Colville			
Irrigation	120	400.0	3.33
Fishery	-	360.0	-
Total	225	1060.0	-

* Lower water requirement based on grass as crop (28 inches per year consumptive use) rather than alfalfa as crop (34 inches per year consumptive use).