2-24-1978

Deposition of Mike Kaczmarek

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UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF WASHINGTON

COLVILLE CONFEDERATED TRIBES,

Plaintiff,

v

BOYD WALTON, JR., et ux, et al,

Defendants,

and

STATE OF WASHINGTON,

Defendant Intervenor.

Civil No. 3421

UNITED STATES OF AMERICA,

Plaintiff,

v

WILLIAM BOYD WALTON, et ux, et al,

Defendants.

Civil No. 3831

DEPOSITION OF MIKE KACZMAREK

Deposition upon oral examination of Mike Kaczmarek, 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 4:05 p.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

MIKE KACZMAREK

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. Kaczmarek, will you state your full name for the record, please?

A. Michael B. Kaczmarek, and Kaczmarek is spelled K-A-C-Z-M-A-R-E-K.

Q. Mr. Kaczmarek, where do you presently reside?

A. In Helena, Montana.

Q. And are you presently employed?

A. Yes, I am.

Q. By whom?

A. By Morrison Maierle,Incorporated, consulting engineers.

Q. In what capacity with Morrison Maierle?

A. I am a chief geologist with Morrison Maierle.

Q. Would you briefly tell us your educational background since high school?

A. Since I left high school I went to school at Montana State University in Bozeman, Montana where I received a bachelor's degree in geology in 1968. Following that degree I spent four years with the U. S. Army Corps of Engineers as a commissioned officer. Following that I returned to graduate school at Montana State University where I received a master's degree in geology. During that time I worked for the State of Montana as a graduate

teaching assistant and also as a consultant for the Montana Power Company. Following receipt of that degree in 1974 I began work for Morrison Maierle where I've worked since.

Q. Okay. Now, in the course of your employment with Morrison Maierle have you had occasion to become familiar with the area known as the No Name Creek Basin on the Colville Indian Reservation, Washington State?

A. Yes, I have.

Q. Okay. Would you briefly explain to us how you came to be familiar with that area?

A. Well, I became familiar with that area through the course of conducting very intensive geologic investigations in that area for approximately the last two and a half years.

Q. Okay. That would be from what, mid-'75?

A. I believe that's correct. I believe from the end of July, 1975.

Q. Okay, and those studies were performed on behalf of the Colville Indian Nation, Tribes?

A. On behalf of the Colville Confederated Tribes, that's correct.

Q. Now, let's see. When you say you've done intensive geological studies, are you referring to field studies in the No Name Creek Basin?

A. In part.

Q. Okay, and what else do you have reference to?

A. Well, my responsibilities to the Colville Confederated Tribes has been to perform investigations relating to the distribution and availability of ground water in No Name Creek Basin as pertains to the water supply.

Q. Okay, and that relates to both ground and surface water supplies?

A. My responsibilities relate primarily to ground water as it affects surface water.

Q. Now, you were present this morning when Mr. Watson testified about how the watershed boundary that's shown on Exhibit No. 1 and 2 was developed?

A. Yes, that's right.

Q. And do you disagree with any of his testimony in relation to how that line was developed?

A. No, absolutely not.

Q. Now, in addition to the geologic study that you performed, were you also responsible for the determination of what additional acres could be irrigated in the No Name Creek Basin, specifically, on Allotments 526, 892, 901, and 903?

A. I was responsible for determining the total amount of irrigable acres within those allotments.

Q. Okay. Now, in determining irrigable acres

can you explain to us--let's start with Allotment 526, how you determined, for example, on Exhibit 2 here the areas that are now shown in yellow, how did you go about making that determination which eventually led you to draw in portions in 5 to 6 in yellow?

A. How did I determine the location of those boundaries?

Q. No--well, okay, yes. How did you determine the location of those boundaries?

A. Well, by examining the soils in the field and plotting the boundaries between the soil units on an aerial photo base.

Q. When you say by examining the soil or soils in those areas, what do you mean? What did you do in that process?

A. Well, you actually go into the field and take samples of the soil and examine their physical properties in the field and record those properties and map the soil types. Now, let me restate that. You map similar soil samples as mapping units which show on the aerial photo base, and mapping units are areas which have soils with physical properties that are relatively the same within that mapping unit, and which are different from the properties within the other mapping units.

Q. Okay. When you take samples of soil how do

you take the sample? Is it a core sample?

A. In this case we took the samples with a, what we call a Perrin bucket, auger.

Q. When you take these samples then approximately how deep into the earth's surface do you go?

A. Oh, in this case we took samples ranging from 60 to 120 inches in depth.

Q. And approximately how many samples did you take, do you recall?

A. There are quite a few.

Q. Well, let me ask you then if this is more meaningful, did you take them at any--on any regular basis, that is, say every five feet, every ten feet and so on?

A. No. The frequency of sampling is based on things that we can observe as we map the soil. For example, the shape of the topography, the lay of the land in other words, and changes that we witness in the soil properties as we place our holes, and then as we detect, for example, the contact between one soil mapping unit and another we may place quite a number of holes along that contact in order to delineate it. So the shape of it and its extent pretty well dictates how many holes we put, and our endurance within the day, but there is no standard traverse or set frequency of holes that we try to follow. We just put in what's necessary to adequately delineate the soil sample

mapping units of the soil that we're mapping.

Q. We're talking about the boundary of what's shown in yellow. You've said you made field observations and also soil samples. Were there any other factors that used, took into account?

A. Yes, there were.

Q. What are those factors?

A. Once we determined what the physical properties of the soil are then we apply various criteria to the soil properties in order to determine the suitability of the soil for irrigation management practices.

Q. Okay. Do you look at all at the topography of the area that you're considering?

A. The topography is looked at in terms of the percent slope of the land; in other words, how steep the slope of the land is.

Q. And do you look at the relative degree of vegetation cover on the land in determining irrigable acreage?

A. In this particular instance that was not a factor that was considered.

Q. Why not?

A. Because in this particular area we're not constrained by the amount of vegetation as to whether the land is irrigable or not. In other words, we do not

consider the necessity to clear vegetation from the land as a factor affecting irrigability of the land.

Q. Okay. When you're talking about this particular area I want to make sure we're precise. Are we still talking about specifically 526?

A. I'm referring to the Allotments 526, 892, 901, and 903.

Q. Okay. Let me ask you this, the present condition, that is, let's say as of October 1, 1977, could you describe the present condition of the vegetation on S-526 in the area that you've marked as yellow?

A. Oh, I think I can. In the area--let's see. We're talking about Allotment S-526?

Q. That's correct.

A. In the area that I marked as yellow, which was located west of the road traversing the east side of the allotment and in between that road and the area delineated in green as irrigated acres, the vegetation there consists, to the best of my knowledge, of grasses which haven't been identified, and I believe there may be a certain amount of low shrub growing there, but it's very sparse, whatever it is, they're less than a foot high.

Another area which is delineated in yellow is located north of Omak Creek and south of the north boundary of Allotment S-526. In that area, as of 1 October, 1977,

is a plowed field. Similarly, the area south of Omak Creek and running in an arc form along the west side of the irrigated area on the west side of the allotment is vegetated with grass for the most part, and I believe there are, down towards the southern extremity of that arc, there are some bushes in there that are some type of low shrubbery, and I don't really know what it is.

Q. Okay. Then can you continue with that same description with respect to 901 and 903 for the yellow areas in there?

A. In 901 and 903?

Q. Yes.

A. The vegetation in Allotment 901, S-901, in the area located between Omak Creek, which forms the west boundary of the yellow area, and the irrigated field in the central portion of that allotment which forms the east boundary of the yellow shaded area which is the irrigable soil area, that's vegetated with timber in some portions which I think you can see on the aerial photograph. Approximately 50 percent of the area is vegetated in native grasses.

Let me continue on. On that same allotment across on the west side of Omak Creek and on the west side of the main road running down to Omak Lake there is a small area of soil which is irrigable but not in irrigation. That's

vegetated primarily with ponderosa pine.

In Allotment 901, again, on the extreme southeast portion of the allotment running right along the south boundary in the southwest quarter of the southwest quarter of Section 27 there is an area that's vegetated with some type of deciduous tree. I believe it's probably alder or something similar to that.

In Allotment 903, did you ask me to describe that?

Q. That's correct, yes.

A. In Allotment 903 in the north one-half of that allotment there is an area shaded in yellow which is vegetated by a combination of deciduous trees in some areas, I'd say for approximately, oh, 60 percent; 30 percent is native grasses. There is a similar area on the extreme southwest portion of Allotment 903 which is also vegetated with deciduous trees and a small amount of native grasses.

There are two other small areas bounding the irrigated area, one on the north part of 903 and one on the extreme southeast corner of Allotment 903 which is vegetated primarily in grass and sagebrush.

Q. Okay. Now, do you take into consideration the potential crop which could be used in determining the irrigable acres?

A. No, you don't.

Q. I'm trying to get what your definition of

irrigable encompasses. Does that mean that I could use that land which you have marked as irrigable to grow any crop?

A. Well, we didn't take climate, for example, into consideration in this. We were looking at the specific suitability of the soil from its physical standpoint to be managed under irrigation practices without regard to the type of crop. Obviously you're going to have to take that into consideration if you're going to grow the crop in an area.

Q. I think we better go back to that. In what sense are you considering the suitability of soils?

A. We're looking at the soils' suitability to receive irrigation water and transmit that to a growing plant.

Q. Now, when you made your soil classification and investigations with respect to the Colville Irrigation Project did you make any reference to any other systems of soil classifications, specifically, for example, the Soil Conservation Service classification?

A. We didn't apply that in our analysis, no.

Q. And why not? Can you explain?

A. Well, yes, I can explain that. The Soil Conservation Service, to the best of my knowledge, did not perform any soil classification in that area. There were some soil--there was a soil survey that I'm aware of

performed there. I don't recall the date, it was quite some time ago, and it was performed by a soil scientist from the Bureau of Indian Affairs. The classification was not directed specifically at determining irrigability and did not provide the types of information we needed to make that determination.

Q. Okay. Do you use basically the same method as the SCS, the Soil Conservation Service uses in coming up with soil classifications?

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

Q. Well, let me ask you this, are the methods that you use in classifying the soils as part of this investigation, did you use standard and commonly accepted practices to make those classification?

A. We used conventional practices to examine the soils. That isn't to imply that we used SCS method of classification.

Q. When you're considering irrigable acres do you take into account any of the costs involved in turning that irrigable acre into an irrigated acre?

A. No, we don't.

Q. Now, in that same line then, have you--well, looking at Exhibit 2, for example, there are large areas in green which are presently being irrigated, and then your areas in yellow, particularly in Allotment 526 or closely

around those green areas. Do you have any opinion as to why the irrigable acres have not yet been turned into irrigated acres?

A. No, I don't.

Q. Okay. Is there any physical reason why those irrigable acres have not been turned into irrigated acres?

A. I don't know what the reason is.

Q. Okay. Now, let me see if I can get this in the record. If you were to add up all of these portions which you have marked as yellow on Exhibit 2, what is the total amount of irrigable acres that you can ever contend exist in the No Name Creek Basin?

A. Are we referring to any specific areas?

Q. No. I was referring to the entire basin.

A. I don't have a figure for that.

Q. You don't have it for the whole basin, okay. Do you have it, though, broken down for specific allotments?

A. Yes, we do.

Q. Is that the chart on the bottom of Deposition Exhibit 2, is that what that purports to show?

A. Yes, that's correct. There is a column there entitled, undeveloped irrigable acres.

Q. Okay. Now, turning to a slightly different area, as a geologist did you perform or have performed under your direction any geological cross sections of the No Name

Creek Basin?

A. I haven't performed one in a long time. We have developed some geological cross sections from the information available to us.

Q. When you say you have developed, that's more summarily?

A. Myself personally in collaboration with Dr. Robinson.

Q. Okay, and can you then explain to us what is involved in the development of a cross section?

A. Certainly. The cross sections that we developed at the No Name Creek Basin are based on the surface geology which we have mapped, and they are based on subsurface information available from logs of test holes and wells that have been constructed in the No Name Creek Basin.

Q. And in what respect then did you use the geologic cross sections which you have developed in this area?

A. Could you be a little more specific?

Q. Okay. Did you use the cross sections that you developed in providing advice to the Colville Indians in the design of their irrigation system?

A. No, not really directly.

Q. Okay. Well, then what did you use the cross

sections for?

A. Well, we used them in providing a visual representation of the geology as pertains to analyzing the interrelationship between geology and the supply of water in the No Name Creek Basin.

Q. Okay. You referred to logs from the well drilling. Was the well drilling--did you oversee the well drilling which resulted in the logs?

A. You mean was it done at my personal direction or supervision?

Q. Yes, that's correct, or were you--

A. Some of it was.

Q. And which wells are you talking about there, do you know?

A. Yes. I don't believe it's shown on this exhibit. Well, let me stop to consider for a moment.

The wells which I had personal responsibility to direct the drilling operation were test holes T-1 and T-2, and really I can't even say I had personal responsibility for all of that because that was done in collaboration with the U. S. Geological Survey and other team people that were participating in this investigation.

Q. On the logs that you got from the wells, how deep did those wells--well, what's the deepest that you obtained?

A. The deepest test pump?

Q. That's right.

A. Oh, approximately 231 feet, as I recall.

Q. Okay, and do you recall what the shallowest--

A. About 4 feet.

Q. Did any of the observation wells from which you got these logs penetrate to bedrock?

A. Yes, they did.

Q. And at about what level did you reach bedrock?

A. It varies depending on the location.

Q. Okay. Are you familiar with the log from, say, the Paschal Sherman well?

A. No, I'm not, I'm not aware of a log from that well.

Q. Are you familiar with the log from the Colville No. 1 well?

A. No, I'm not.

Q. And the Colville No. 2 well?

A. No, I'm not.

Q. So your logs were basically observation wells?

A. They were based on test holes some of which were complete as observation wells, yes, that's correct.

Q. Now, when you say you reached bedrock in some of the holes, can you give me a specific example of--well,

for example, the test hole T-1, do you recall if you reached bedrock in that hole?

A. We did not.

Q. Did not. Do you recall how deep T-1 was?

A. I think, to the best of my recollection, it was about 231 feet deep.

Q. Okay. Now, what about T-2?

A. T-2 is, again, to the best of my recollection about 229 feet deep. I may have the depth turned around on those two, but I don't believe I do.

Q. And in T-2 did you reach bedrock?

A. No.

Q. Okay. Can you go to Exhibit 2 and show me where the test holes were that you reached bedrock?

A. Certainly. One test hole I reached bedrock was test hole which we labeled as M-3, and that's located in the southeast quarter of the southwest quarter of Section 9, Township 33 North, Range 27 East, and have I described it sufficiently close enough for the record?

Q. That's right.

A. I'll point to it here on the exhibit at that location, and this test well which I referred to as test well M-3 penetrated bedrock at, I believe the total well depth was in the neighborhood of 92 feet, and actually bedrock was probably penetrated for at least a couple of

those feet.

Another well which penetrated to bedrock is that test hole--which we have labeled as W-1, and that test hole is located in the northeast quarter of the northwest quarter of Section 21 on Allotment, formerly Indian owned, S-525, which is now the Walton property, and that test hole penetrated to bedrock at a depth, as I recall, of about 51 feet. There were actually two test holes there very closely, you know, within eight feet of each other, one 55 feet and the other one was 51 feet. I don't recall which one was finally completed as an observation well.

Q. When you're talking about bedrock what exactly are you referring to?

A. The basin is filled with unconsolidated sediment, and these rest in a trough that's cut into a very dense crystal and hard granite rock, and that's what we're referring to as bedrock.

Q. Okay.

A. There was one other well drilled which I was not personally present which the U.S.G.S. drilled so I can't testify to that.

Q. Okay. Now, I asked Mr. Watson this and he referred me to you so here I am. We were talking about the watershed boundary, and I asked if that is the same as aquifer boundaries, and--

A. No, it's not.

Q. Okay, and in what respect with relation specifically to No Name Creek is it different?

A. Well, the aquifer boundary is confined to the materials within the No Name Creek watershed which has the capability to store and transmit ground water to water wells in sufficient amounts to be used for domestic purposes and in larger demands. That's a very small area compared to that area which we have defined as the watershed boundary within which all of the precipitation and runoff ultimately is discharged through No Name Creek.

Q. Okay. Now, when you're talking about the aquifer, maybe--just so we're all clear on this, would you define what you mean by aquifer?

A. Okay. I think I just did. An aquifer is a sedimentary material--well, an aquifer is a geologic material which has the capacity to store and transmit ground water to wells. In this case we're defining it more strictly. We're saying that it has that capacity to transmit ground water to wells in sufficient volumes to support uses in excess of 200 gallons per minute.

Q. Okay. Now, let me ask you this, we have talked about a granite lip which I believe Mr. Watson testified is roughly in the vicinity of the northern boundary of 901?

A. Yes.

Q. Do you know what is referred to as a granite lip?

A. Yes, I do.

Q. What in fact is the granite lip?

A. The granite lip is simply an area where the No Name--the course of the stream, which we're calling No Name Creek, flows over granite bedrock.

Q. Okay, and would you then say that the area of No Name Creek Basin that's above the granite lip is a different aquifer from the area that's below the granite lip?

MR. VEEDER: I object to that.

THE WITNESS: It's a senseless question.

MS. ECKERT: He answered it better than you did.

MR. VEEDER: What?

MS. ECKERT: I said, he answered it better than you did. He said it was a senseless question.

MR. VEEDER: Well, Mike is not as civilized as I am.

Q. (By Ms. Eckert) Well, let me ask you this then, is an aquifer the same as a body of ground water?

A. No, it's not necessarily.

Q. Are there two different bodies of ground water above and below the granite lip in No Name Creek

Basin?

A. I'm presuming you don't mean, are there four bodies of ground water out there. There is only one body of--I wouldn't even say that. I can't answer that question the way you've stated it.

Q. All right.

A. I'm really not trying to be--

Q. I realize that. What I'm really trying to get at is, does the granite lip basically enclose water north of that area, ground water? What my ultimate question is, if I were pumping from a well in S-903 or 901 would I--I'm going to have to qualify this. Would I eventually be drawing ground water from above the granite lip, in your opinion?

A. In my opinion you would not.

Q. I would not, and why not?

A. Well, notwithstanding the fact that in my opinion there was no availability of ground water in Allotments 901 and 903 to pump, the granite lip in the adjacent areas of granite bedrock on the north edges of 901 and 903 form a hydrologic barrier.

Q. Now, you say that the waters of No Name Creek flow over the granite lip towards Omak Lake. Are there any other areas in the Omak Creek Basin in which waters leave the aquifer?

A. That's a very complicated question to answer. Could you be more specific or--

Q. Well, what I'm asking is, generally speaking No Name Creek flows in a southerly direction. Do you have any reason to believe that there are any waters moving in any other direction? In other words, are there any waters in the No Name Creek Basin which are moving north?

A. No, not in my opinion. Now, I may reserve the right to expand on that later on.

Q. Now, you mentioned that No Name Creek Basin is underlain by granite and filled up by unconsolidated materials. What's the source of the unconsolidated materials? Were the unconsolidated materials deposited by glacial action, for example?

A. Are you asking for the agency of the deposition or the source of the materials?

Q. The agency of deposition.

A. Oh, there are a number of agencies involved.

Q. What are those?

A. Fluvial deposition from fluvial waters resulting from several sources, lacustrine deposition--lake sedimentation, in other words.

Q. When you say lake sedimentation, are you saying that No Name Creek Basin used to be a lake?

A. Oh, no, I didn't say that.

Q. How do you get lake sedimentation? How does that eventually contribute to the unconsolidated materials?

A. There is a small portion of the boundary to the No Name Creek aquifer which is bound by lacustrine materials which were deposited by a lake, and certainly does not encompass No Name Creek Basin.

Q. Where is that small portion then?

A. It's located in the, oh, approximately along the easternmost boundary of the northwest--excuse me, the northeast quarter of the southeast quarter of Section 8, and in the southeast quarter of the northeast quarter of Section 8. Let me point that out to you.

Q. Would you, please?

A. That would be located here, as I've just described it.

MR. VEEDER: Would you please state the map to which you're pointing?

THE WITNESS: I'm pointing to the areas I just alluded to on Deposition Exhibit 2.

Q. (By Ms. Eckert) Now, would you describe these unconsolidated materials in terms of--well, let me ask you this, are all of the unconsolidated materials in the No Name Creek Basin of relatively similar size?

A. No, they're not.

Q. And what has created the differences in sizes

in materials?

A. Sorting, by primarily sorting by flowing water.

Q. Okay. Is there a pattern so that you have, say, coarser material in one portion of the basin as opposed to finer materials in other portions of the basin?

A. Yes, there definitely is.

Q. Could you describe that pattern then?

A. Well, I think I can. I'm referring here to Deposition Exhibit 2, and the area beginning in the southwest quarter of the northwest quarter of Section 9 running through the central valley of the No Name Creek watershed southward through the southwest quarter of Section 9, and through the northwest quarter of Section 16, and the east one-half of the southwest quarter of Section 16 are all underlain by relatively coarse sand and gravel-type of materials.

Continuing downstream along No Name Creek in the central valley portion of the No Name Creek watershed into the Walton property in the east half of the northwest quarter of Section 21 in the--approximately the east half of the southwest quarter of Section 21 and into approximately the east--no, excuse me, the west one-half of the northeast quarter of Section 28 to the points that we described as the granite lip, the central valley consists

relatively of fine grain materials, predominately silty sands and some clay.

Q. In the areas of Allotments 901 and 903 can you tell us what the unconsolidated materials there consist of?

A. Without referring to the exhibit, the areas exclusive of the bedrock consist predominately of silty sands, silt, and subordinate amounts of clay material. There were also deep in that sequence some gravels and cobbles set in a very dense compact clay matrix.

MS. ECKERT: I'm at a good breaking point, if you want to break.

MR. SWEENEY: I'll second that.

(Deposition continued to 9 a.m., January 6, 1978.)

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 Kaczmarek 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 16th day of February, 1978.

David Caviezel

Notary Public in and for the State of Washington, residing at Spokane