

A Searles. W. B. Searles.

Q When was he in charge?

A 1885.

Q What?

A 1885 or '95, I should say.

Q 1895?

A Yes.

Q Did you assist in making those surveys?

A Yes, sir.

Q What was done in the way of surveying at that time?

A We ran survey line from the present dam site to ~~the~~ Nunn station with Mr. Searles.

Q Did you assist Mr. Buckler in making any further surveys in the year 1896?

A Yes, sir.

Q What was done in the way of surveys at that time?

A Run a flume grade from the continuation of the Nunn line down to Olmstead.

Q Do you know when work of construction was begun on the flume leading from the high flume grade from the dam down to the old Nunn plant?

A I think it was '87, I am not just certain, or '97, I should say.

Q Do you remember what work was done at that time?

A On the flume, you mean?

Q Yes, in regard to the construction work?

A A half circle flume built from the present dam site down to the Nunn station.

Q Do you remember anything about the construction of flume or pipe line from Lost creek?

A Yes, sir.

Q Connected with the flume leading to Nunn's station?

A Yes, sir.

Q Who was in charge of that work?

- A I put in the temporary pipe line from Lost creek to the flume.
- Q Can you tell approximately when that was built?
- A I think it was 1903, I am not certain as to that time.
- Q Do you remember the extension and the work which was done in the way of extending the flume from the old Nunn station to the present Olmstead plant?
- A Yes, sir.
- Q Did you take any part in that construction?
- A At the latter end of it I helped construct the lower portion of it.
- Q Do you remember about when that was constructed?
- A I think it was in 1904.
- Q Reverting for a moment to the construction of the flume, from lower Guardquarters springs, do you know anything about the flume being constructed from the Guardquarters springs connecting with the other flume?
- A Yes, sir.
- Q Who, if you know, had charge of that ~~flume~~ work?
- A I put in one flume there.
- Q Did you put in the first flume?
- A I don't think I did the first one.
- Q Do you know anything about the construction of a pipe line from Bridal Veil creek to the flume?
- A I know there is one there. I did not construct that.
- Q Do you know the size of the pipe?
- A The pipe running from the top of the falls down to the pump house is a ten inch and eight inch pipe, from the pump house up to the flume is a twenty-four inch pipe.
- Q Do you know anything about the operation of the pumps by the water from---operation of the pump lifting the waters from Provo river into the flume?
- A Yes, sir.
- Q When was that pump installed if you remember approximately?
- A I don't know when the pump was installed. At that time I was

away in Idaho.

Q Was that pump ever operated under your supervision?

A Yes, sir.

Q When?

A Pump was ran 19th July 1911 and 1910, from that time on at different times.

Q By the way, are you now employed by the Utah Power & Light Company?

A Yes, sir.

Q What is your present situation with the company?

A I have charge of the Olmstead flume.

Q How long have you held that position?

A Since 1909.

Q You say you have also been in charge of the pumping which was done by the use of the waters from Bridal Veil Falls?

A Yes, sir.

Q As I understand it, that pump lifted the waters out of Provo river and up into the flume?

A Yes, sir.

Q Do you know approximately the amount of water that was pumped in that manner?

A We have pumped as high as twenty second feet at different times.

Q In pumping that water, did you pump any part of the waters of Bridal Veil creek?

A Yes, sir.

Q And the other waters that happened to be flowing?

A Yes, sir.

Q In the river at that point?

A Yes, sir.

Q Where, if you know, did the waters in the river at that time, flowing in the river at that point, have their source?

A Considerable of it came from what is known as Upper Falls, and seepage water from the dam down to the pump house dam.

Q You say you have been in charge of the Olmstead flume since 1909?

A Yes, sir.

Q Have you during that same period been familiar with the condition of the station and machinery, particularly the station and machinery at Olmstead?

A Yes, sir, in a way.

Q What was the condition of the flume with reference to grade at the time you took charge of it in 1909?

A There was considerable number of places that were low and one or two places that were high.

Q And what were your duties then and since that time with reference to keeping or attempting that flume on grade?

A Yes, sir, and in repair.

Q I don't think you answered my question. What have been your duties in that respect?

A Keeping the flume in repair and up on grade as near as possible

Q Have you found it possible to keep it entirely on grade?

A No, sir, we have had quite a time, few particular places.

Q Has it been on a perfect grade any time since you took charge of it?

A No, sir.

Q What has been the condition of the machinery at the Olmstead station since you took charge of the flume and had personal knowledge of such matters?

A More or less at times late years there has been one or more machines out of commission being repaired on account of being worn out.

Q So that they could not operate to the full extent of their installed capacity?

A Yes, sir.

Q Have you ~~never~~ ever seen the water flowing from lower Guard-quarters springs into the flume concerning which you have just testified and into the main Olmstead flume?

A Lower Guardquarters?

Q Yes.

A Yes, sir.

Q I should say the upper Guardquarters.

A Yes, sir.

Q Just describe those springs.

A The upper Guardquarters, known as the upper Guardquarters seep or come out about half way between the flume and what is known as the Alta ditch, or spring, running down the gully into the small flume, which is about fourteen by twelve, running into a flume one hundred and fifty or two hundred feet in length.

Q Is the lower Guardquarter spring connected with the main flume in the same manner?

A Yes, sir.

Q Takes water from the spring run into this flume, to which you have testified?

A Very little of it now.

Q Do you know whether or not there is a weir installed in each of those flumes, small flumes?

A There is in Upper Guardquarter.

Q Describe that weir.

A It is a weir eight inches deep and fourteen inches wide.

Q Have you ever observed the height of the water flowing over that weir?

A Yes, sir.

Q What is the maximum amount of water that you have ever seen flowing over the weir and into the flume?

A I have seen as high as seven inches going over.

Q That is, you mean seven inches in depth?

A Yes, sir, fourteen inches in width.

CROSS EXAMINATION by A. L. Booth.

Q What would be the effect on the amount of water that the

- flume would carry having these inequalities in grade?
- A If there is a low place it would tend to make the flume over-flow there.
- Q Having it all on a uniform grade then would generally tend to ~~increase~~ decrease the capacity, wouldn't it?
- A It would, in a way; it would tend to cause that many more ripples.
- Q Now, the machinery down at the plant, also being out of order, or part of it, would make it, they could not use all the water they could if the machinery was in order, wouldn't it?
- A You couldn't use that much water if the machinery is out of commission, no, sir.
- Q During the last three or four months has there been any of the machinery out of order?
- A Yes, sir.
- Q How much of it?
- A One and two wheels.
- Q All the time?
- A Most of the time.
- Q Has there been any time during the last three or four months when there was not any of the machinery out of order?
- A Up until the last three or four days I think the last wheel was put in, wasn't put on the line until three or four days ago, what is known as the West Unit.
- Q The west unit?
- A Yes, sir.
- Q Is that one they never have had in before?
- A Oh, indeed they have had it in.
- Q But do you know when the period was last before the last three or four days they had all their machinery in the Olmstead plant in running order?
- A No, sir, I cannot answer that.
- Q Have you known it ever to be all in order?
- A Yes, sir.

Q Sir?

A In order, the wheels have run.

Q During 1915, was there any part of that year when the machinery was all in order, all running?

I don't know, I am sure.

Q Was there in 1914?

A No, sir.

Q Or 1913?

A No, sir.

Q Or any year back to 1907--1909 you said you had.

A 1909, sir.

Q There never has been a time then except the last three or four days you know of when they were running all of their machinery at the plant?

A Oh, yes, there have been times they have run all three wheels.

Q That is what I want to get at, if you know when those times were.

A No, I could not recall it.

Q Is all of the water from the--whenever they are all in order they would all be running, wouldn't they?

A When they were in order?

Q Yes.

A I imagine they would be, yes.

Q But you cannot remember any definite time when they were all in order and all running?

A No, I don't, for the reason any statement I can make tells how much water to give them account of one unit being out of commission and that has been nearly all the time last three or four years.

Q Would you give orders to turn some water in then?

A Yes, sir.

Q When one of the wheels was out of order?

A Yes.

Q When it got repaired, the word would come to increase the flow

in the flume?

A Yes, sir.

Q And you would always give them all they called for?

A Yes, sir.

Q Whether there was one wheel, two wheels or three wheels running?

A Yes, sir.

Q Do the waters of the Bridal Veil Falls and Guardquarters and Lost creek run into the flume all the time?

A Yes, sir.

Q So that you just take from the river what is necessary to make up what is lacking from the amount of these three streams?

A Yes, sir.

Q When you do the pumping for Bridal Veil Falls, then do you run the Bridal Veil Falls water into the flume?

A Yes, sir, use that water for pumping purposes and pick it up in a sump, same as we do the water out of the flume.

Q So that it all goes down the flume all the time, practically?

A Yes, sir.

Q Where do you get this twenty feet from you say you pump into the flume, from the Bridal ~~Falls~~ Veil Falls pumping plant?

A First diverted from the dam. What is known as the pump house dam and from there it is run into a flume about two hundred feet in length, two feet and three feet wide into a sump into the pump house.

Q Was there any part of this water flowing over the dam?

A No, sir, not at the ^{lower} sides we were pumping. That water was picked up in this pump house flume so the water I stated came from what is known as Upper falls and seepage water from the dam down.

Q Then, when there is any water running over the dam you don't pump into the flume?

A No, sir.

Q Do you know whether there has been any water running over the

dam for three or four months back?

A There is, yes, sir.

Q There has been?

A Yes, sir, it varies at different times, some times there is more than others.

Q You have not had to pump at all then in 1916?

A No, sir.

Q Did you have to use the pump in 1915?

A No, sir.

Q Or '14?

A In '14 I think we run the pump a little while.

REDIRECT EXAMINATION by Mr. Story.

Q Do you know whether the wheels in the Olmstead station have been receiving a general overhauling during the last four months, four or five months?

A Yes, sir, during the last six or eight months.

Q Do you know whether during the time this overhauling has been taking place whether or not the station has been operated to its full capacity, full installed capacity?

A I could not answer that; I don't think it has.

L. M. PHARIS, recalled.

DIRECT EXAMINATION by Mr. Story.

Q Mr. Pharis, you have testified that you were a hydraulic engineer for the company and that this concrete pipe at the upper end of the flume was installed under your direction; I will ask you whether you know--I will ask you if you know whether that installation was made as part of the--as the first unit of the general re-construction of the entire flume from the dam to the Olmstead station?

MR. JACOB EVANS: Wait a moment. Object to

that as incompetent.

THE COURT: I will hear from you; I don't just understand you.

MR. JACOB EVANS: As to whether or not it is the intention to go on and complete the balance of the construction.

THE COURT: No, that is not the question. As I understood this witness he was called upon to make plans, now he is asked whether this is part of the general plans which he made.

MR. JACOB EVANS: Maybe I misunderstood the question.

THE COURT: Yes, read the question; maybe I misunderstood it.

(Question read)

THE COURT: Objection is overruled.

MR. JACOB EVANS: We will take an exception.

A It was considered so, yes.

MR. JACOB EVANS: Move to strike out the answer, because he doesn't seem to know.

THE COURT: The answer may go out. It is not an answer to the question at all. You are asked whether you know: you must answer that yes or no.

Q Whether you know this is one unit of the general plan of construction?

A Yes, it was.

Q Your answer is, you do know?

A It was.

Q Was it or was it not?

A It was.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Did you work out any general plans for the balance of the

construction of this pipe line to conform to this unit you did work out?

A Yes, sir.

Q The whole thing was turned over to you to work out, was it?

A Yes, sir.

Q And has been worked out?

A Yes, sir.

Q By you to conform to this unit?

A Yes, sir.

Q Is that kind of construction feasible all the way down the concrete pipe line?

A We do not intend to make it concrete all the way down.

Q Then this unit you have already constructed is to be different than the balance of the line, is it not?

A Yes, sir.

Q What do you mean to say then when you say this unit is to be representative of the balance of the construction that you worked out the plan for?

A I don't believe I said it was representative. I said it was the first unit.

Q You don't mean to say then that the balance is to be--is to conform to this type of construction?

A No, sir.

J. C. IVEY called by the defendant,
having been first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Story.

Q State your name?

A J. C. Ivey.

Q Your residence?

A Provo city.

Q Your occupation?

- A Why, employed by the Utah Light & Power Company in regards to the head works of the water.
- Q Are you present custodian of the head works of the--and in charge of the gates of the Olmstead, what is known as the Olmstead flume in Provo river?
- A Yes, sir.
- Q I mean Provo canyon?
- A Yes, sir; that is, at one time; I am not at the present.
- Q When were you first employed in connection with the Olmstead flume?
- A 1902.
- Q By whom?
- A Why, by the Telluride Company.
- Q What was your employment at that time?
- A Looking after the water at the head works.
- Q Were you there at the time that the flume, extension of the flume from the old Nunn station to the present Olmstead station was constructed?
- A Yes, sir.
- Q You say that you took charge of the head works?
- A Yes, sir.
- Q Were you in charge of the head works before that extension was completed?
- A Yes, sir; that is the last of it.
- Q And did you continue in charge of the head works?
- A Yes, sir.
- Q How long?
- A Well, about seven years.
- Q As custodian of the head works, what were your duties?
- A Why, it was to see that they had water whenever they called for it in the flume.
- Q Did you have under your control the amount of water which was to go in or keep out of the flume?
- A Yes, sir, that was my business.

- Q In determining the amount of water to be allowed to flow into the flume from the dam you would follow the instructions which you would get from the operating department, would you?
- A Yes, sir.
- Q And from where would those instructions come?
- A Yes, sir.
- Q I say, from where?
- A From the plant of the Nunn station, also the Olmstead.
- Q In other words, you would get your orders from the superintendent of operation?
- A Yes, sir.
- Q I will ask you if you know whether or not---strike that out--do you remember a change having been made in the water wheel of the Olmstead station?
- A Sir?
- Q I say, do you remember a change having been made in the water wheels of the Olmstead station?
- A I have heard of it, but I didn't know it. I have heard of them saying it.
- Q Along about the time the change was made?
- A Yes, sir, somewhere along about the time.
- Q I will ask you whether or not in 1902 when you were in charge of the headworks you received any instructions in reference to crowding the water through the flume?
- A Yes, sir.
- Q And do you say you continued in charge of the head works for the next seven years?
- A Yes, sir.
- Q I will ask you whether or not in ~~1902~~ 1904 and succeeding years you received any instructions from the operating department to crowd water through the flume?
- A Yes, sir.
- Q To its capacity. I will ask you whether or not in 1904 and subsequent years you ~~received~~ have seen the--or you have

crowded water through that flume to its capacity at the headworks?

A Yes, sir.

Q Has that been an occasional condition or frequent occasion?

A Occasionally all the time, pretty regularly all the time.

Q When you say that you were crowding through the headworks ~~it~~ to its capacity, how far within the top of the boards on the sidew would you fill the intake?

A Well, I have had them right up close within two to three inches of the top of the flume, of the boards.

Q You mean at the intake?

A Intake and also all the way down for twelve or fourteen hundred feet.

Q Have you been familiar with the condition of the flume beyond the first twelve or four teen hundred feet from the intake?

A Well, not so much as I am farther above.

Q Have you been familiar with it? I am not asking you how much, have you been more or less familiar with it?

A Yes.

Q Have you had occasion to go over it?

A Yes, sir, at times.

Q Do you know what its condition has been for the last five or six years?

A Well, in a very little portion of it, I have not been over the most of it, I have been to the headworks most of the time.

Q And remained there at your station?

A Yes, sir.

THE COURT: Let me understand the period covered by your report as custodian of the headworks; I understood you to say it was seven years from 1902 to 1909; that would be. Now, since that have you been in the same capacity?

A Same capacity most of the time.

- Q You mean you had constant employment for seven years, do you?
- A Yes, sir, on the flume and head works.
- Q That would take you up to 1911. What has been your duties since then?
- A Well, I been on the flume part of the time and part of the time at the headworks. Mr. Dusenberry has had charge of it since then.
- Q In subsequent years, 1906, 7 and 8, did you crowd the flume to its capacity?
- A Yes, sir.
- Q Have you within the last four or five years crowded the flume to its capacity?
- A Yes, sir.
- Q Was that an ordinary condition or an occasional condition?
- A Well, it was mostly ordinary all the time that we could.
- Q Was that or was it not depending upon the amount of water in the river at all?
- A Yes, sir, a good deal; sometimes we did not have the water in the river to do it.
- Q Are you acquainted with what is known, has been testified to here by Mr. Buckler as the temporary flume?
- A Yes, sir.
- Q And the auxiliary flume?
- A Yes, sir.
- Q I will ask you whether or not you ever saw those flumes filled to their ~~name~~ capacity or nearly so?
- A Yes, sir, I have.
- Q Did you help construct those flumes?
- A Yes, sir.

CROSS EXAMINATION by Mr. A. L. Booth.

- Q Are you still in charge of those head works?
- A No, sir.

- Q And have been during this last summer?
- A No, sir, I aint in charge.
- Q Have you been where you could observe the amount of water coming down the flume?
- A Yes, sir, I have been there.
- Q How is the amount of water flowing in the flume during the last three or four months compared with the amount while you had charge?
- A Well, it has been going in pretty nigh---that is, in a portion--pretty nigh the same it did then.
- Q It has been crowded?
- A Yes, sir.
- Q Just the same as you crowded it?
- A Well, not hardly, no, sir; it is not crowded as hard.
- Q How much difference would you say has it been lately?
- A Well, two or three inches difference.
- Q In the flume?
- A In the flume from what we used to crowd it.
- Q When you crowded it did it run over the spillway?
- A We didn't have no spill way at that time where I was.
- Q There is a spillway down at the mouth of the tunnel?
- A Yes, there is a spillway down there.
- Q Don't you know whether it would run over that spillway when you were crowding it?
- A I have not been there to see whether it has or not.
- Q Haven't you travelled down to that spillway ever?
- A No, sir, not very often, very seldom.
- Q You have gone down there. Has it been running over, or hasn't it?
- A Sometimes a little bit, sometimes none.
- Q When you would crowd it and have been there, would it run over the spillway?
- A I have not been there when I was crowding it.

Q You don't know whether it has been running over the spillway of late then?

A No, sir, I couldn't say, not very much if any, only just once a month or may be something like that I pass down through the canyon.

Q About how near to the top of the flume would the water run when you crowded it to its utmost?

A I have had it in about two inches of the top of the flume many times.

Q And when it runs within two inches of the top of the flume you don't know then whether it would run over the spillway or not?

A No, I could not say, because I wasn't there.

Q Did you have a spillway near, also?

A No, sir, didn't have any spillway.

Q When you received these instructions to crowd the water did they tell you to turn so much water in or just to increase the water without specifying the amount?

A They didn't say the amount, crowd the flume as much as possible, because they needed all they could get.

Q And generally during the whole of the year you would do that?

A Yes, sir.

Q Was there any running over the dam?

A At times there was.

Q Have there been such during the last summer, running over the dam?

A There has been a little, yes, at times.

Q All the time?

A No, sir, not all the time.

Q When was the time there was none running over the dam during this last summer?

A Well, July, some in July and August, it didn't run over.

Q Would it be the latter part of July and fore part of August?

A Well, just exactly I don't know; sometimes it would over run

a little bit and other times it would slack down, according to the river.

Q You don't mean to say there was any time during this year when there was no water running over the dam?

A Yes, two or three times there wasn't any water running over the dam.

Q In this summer?

A Yes.

Q Well, you have a new concrete outlet, don't you?

A Yes, sir.

Q At the present time?

A Yes, sir.

Q There was water that came out of that?

A Sometimes.

Q Wasn't there always?

A No, sir.

Q When ^{was} there a time there wasn't water coming out of this outlet down the river?

A Oh, good many times, when they called for water I would shut that off.

Q In this present year, 1916?

A Yes, sir.

Q So that the water would be dry, or the river would be dry immediately below this dam except for what came up in the bottom of the river or springs?

A Yes, sir, across the apron there wouldn't be no water.

Q Nor, coming through this spillway either?

A At times.

Q When you say it was dry, then there was water neither coming from the dam nor from the spillway?

A No, not at the time.

Q You know that the Provo Reservoir Company has had a large stream coming out below, don't you?

A No, sir, I don't know what they had.

Q Were you there in 1914 in the fall of the year, two years ago?

A Yes, I was there.

Q Did you have charge of the gate then?

A Yes, sir.

Q Did you crowd the water during that time, do you remember?

A Yes, sir, I crowded the water several different times in the flume off and on all the time.

Q Did you crowd it as high during that time as you have done before and since that time?

A Yes, sir, at that place.

Q That is what I mean, at this place.

A At that place, yes, sir, I have.

5:00 PM RECESS TO 9:30 A.M. NOVEMBER 14, 1916.

FRANK DUSENBERRY recalled.

DIRECT EXAMINATION by Mr. Story.

Q Mr. Dusenberry, I believe you testified on this cause yesterday?

A How is that?

Q I believe you testified in this cause on yesterday?

A Yes, sir.

Q I believe you testified that you were in charge of the Olmstead flume at the present time?

A Yes, sir.

Q Your duties were to keep the flume on grade, as far as possible?

A Yes, sir.

Q I will ask you at what point you have your greatest difficulty in keeping your flume on grade?

A Our worst point is what is known as the mud slide; that is down eight thousand feet from what is known as the tunnel

or overflow.

Q Above the tunnel?

A Yes, sir.

Q Eight thousand feet, you say?

A Eighty-five hundred feet.

Q Above the tunnel?

A Yes sir.

Q Describe this slide, if you will.

A The slide is in length about five hundred feet, and the ground is slipping four or five hundred feet above the flume. It is necessary to raise the flume five and six and sometimes a dozen times a year to keep it up on grade.

Q How long has this condition existed within your knowledge, in your own knowledge?

A Since the flume was built.

Q You have always had more or less difficulty with it?

A Yes sir.

Q At that point?

A Yes sir.

Q Are there any measurements being taken at the present time by yourself or under your direction?

A Yes sir.

Q Of the volume of water in Provo river?

A Yes sir.

Q What measurements are you taking?

A What measurements are we taking, measurements in the flume?

Q No, what measurements are you taking of the flow of the river and for whom?

A We are taking them for the benefit of the company and also the Government at South Fork.

Q What point is the gauge?

A There is one gauge in the Provo river about fifty feet above the south fork bridge, and the gate in South Fork is about

quarter of a mile up from the river, up the creek.

Q What hour in the day are those readings usually made?

A Nine thirty in the morning.

Q What?

A Nine thirty in the morning, there is three months in the year we take two readings in the day.

Q Have you had occasion to personally observe the flow of water in Provo river at the dam of the Utah Power & Light Company during the summer of 1916?

A Yes, sir.

Q I will ask you whether or not you personally have known times when there was no water flowing over the flash boards on the dam?

A Yes, sir.

Q Tell the court when they were.

A In the fore part of August this year we tightened the dam, the flash board and there was for several days there was no water going over the flash board. In fact, the water was three or four inches down from the top of the flash board.

Q What water went--dropped by, got by in what manner?

A What water got by the dam would amount to about eighteen or twenty second feet, was seepage water. Something that has occurred ever since the dam was built, and at times be a small flow coming over our spill gate.

Q How does that condition compare with previous years?

A Well, it is about the same--as to the water running over the flash board?

Q Have there been times when all the water was taken by the Light Company?

A There has been nearly every year, the flash boards have been tightened up certain times of the year, July or August.

Q ~~When~~ When there was no water flowing over the flash boards?

A Yes, sir.

Q Was that an unusual condition?

A Not in the summer time; it is not; that time of the year.

CROSS EXAMINATION by Mr. A. L. Booth.

- Q How much water was going over the spill-gate?
- A Sometimes there would be an inch and a half, two inches, sometimes be four inches, great deal depends on the amount of water that was being used down below at Elmstead.
- Q Now, wasn't there quite a large stream going by all the time down the Provo Reservoir Company's headgate?
- A Going by what?
- Q Going by your dam, or over your spill-gate?
- A No, sir, not what you call a large stream; ~~xxx~~ there was some seepage water below the dam that ran through the dam and seepage water that came out of the springs down to the Provo reservoir, and might have been times four or five second feet come over the Spill gate.
- Q Did you go down the canyon to the headgate of the Provo Reservoir Company?
- A Indeed I did; I watched the whole business there.
- Q You would go along the flume?
- A Yes, sir.
- Q You didn't hear the witnesses testify on behalf of Provo City, did you?
- A No, sir, I did not.
- Q ~~Didn't~~ hear them say that Provo Reservoir Company had been taking a little more water this year than it ever had had before?
- A I did not, no, sir.
- Q And if they did testify to that you would disagree with them, would you?
- A I certainly would, as to the water that went by over the dam.
- Q You don't know of any place where a large stream gets into the river below the dam?
- A No, sir, not unless it broke out.

GEORGE L. SWENDSON, called by the defendant,
being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Story.

Q Mr. Swendson, state your name?

A George L. Swendson.

Q Your residence?

A Salt Lake .

Q Your occupation or profession?

A Engineer.

Q Do you make a specialty of any kind of engineering.

A Hydraulic engineering, particularly.

Q How long have you followed that profession?

A Since 1894.

Q Where did you receive your technical education?

MR. JACOB EVANS: We admit that the witness
is competent to testify as an expert without
qualifying him.

Q Are you familiar with what is commonly known as the Olmsted
Power Plant in Provo Canyon?

A Yes.

Q How long have you been acquainted with it?

A I beg your pardon?

Q How long have you been acquainted with it?

A Since 1899.

Q Where were you living at that time?

A At Logan.

Q I didn't hear you.

A At Logan.

Q By whom were you employed at that time?

A By the Agricultural College of Utah part of the time and the
Telluride Power Company and some other companies for the re-
mainder of my time.

Q Was the Telluride Power Company at that time the owner of the
Provo plant?

A Yes sir.

Q Did you subsequently move to Provo?

A Yes sir.

Q When?

A 1905.

Q While you were in the employ of the Telluride Power Company in 1899 did you have occasion to visit the Provo plant, - Olmsted plant any time?

A Yes, I v isited the Olmsted plant; Nunn's station in '99.

Q How long did you continue in that employment, by the way?

A Until the spring of 1904.

Q Do you know what the equipment of the old Nunn's plant was?

A Yes, sir.

Q Please describe it to the court.

A It consisted of two one thousand horse power, hydro-electric units.

Q Do you know what ~~the~~ effect the head under which the water was used at that plant had?

A Yes, sir.

Q What was it?

A 128 feet.

MR. JACOB EVANS: Second feet?

A 128 feet head.

Q Were you familiar with the old flume which has been described in this case as the Sterling flume or the Horseshoe flume?

A Yes, sir, I saw it twice.

Q Do you know about a change in that flume, any change being made in that flume from the flume to the---strike that out--- do you know whether or not that flume was changed and if so when?

A 1902, that was torn out and rectangular flume put in its place

Q Do you know anything about the ^{extension} ~~construction~~ of that flume to what is known as the Olmstead plant?

A Yes, sir.

Q When was that extension made?

A In the summer and fall of 1903 and early months of 1904.

- Q Are you familiar with the equipment in the Olmsted plant?
- A Yes sir.
- Q Is the equipment at the plant at the present time the same as it was in 1904?
- A No sir, the water wheels have been changed.
- Q Do you know what the original equipment was?
- A Yes.
- Q Will you please describe the original equipment of the plant to the court?
- A There were three 3600 Horse power Girard turbines made by Stillwell-Bierce Company, direct connected, each direct connected to a 2500 kilowatt generator.
- Q Do you know the effective head under which the water is used in that plant?
- A Yes.
- Q What is it?
- A 332 feet.
- Q What is the static head?
- A 340 feet.
- Q Did you take any part in the designing of those turbines or the designing of that original plant?
- A Yes.
- Q What part did you take?
- A In the discussions concerning the plant which were held at Logan. We never just completed the Logan station on which I was the Engineer and P. N. Nunn, who was the Engineer for our Company held conferences at Logan in which I participated in the discussion of ^{design of this} the plant, flume, dam, etc.
- Q Although you didn't take any active part in the construction I take it, then you acted in a consulting capacity?
- A Yes.
- Q I will ask you whether or not the use of turbines under effective head of that amount was a novel thing, novel installation at that time?
- A It was very unusual. It had never been undertaken before in the world.

Q In other words, it was a departure from the ordinary methods of construction to use turbines under that head, was it?

A Yes.

Q I believe you have testified regarding a subsequent change in the plant-that is in the turbines of the plant. I wish you would please state when approximately that change was made and the reason for making the change.

A In 1908. Winter of 1908 and the first month of 1909 the old Stillwell-Bierce turbines were taken out and replaced by 3600 horse power Allis-Chalmers turbines.

Q You called the old turbines the Stillwell-Bierce in your last answer. Are they the same as the Girard turbines?

A It was the Girard type of turbine I referred to not the manufacture.

Q When you say Stillwell-Bierce you mean the same as the Girard turbines?

A Yes.

Q State the reason for the change.

A The old Stillwell-Bierce turbines were so inefficient that they were not economical to operate, could not get the power out of the station and they were discarded and the Allis-Chalmers turbine put in their place.

Q Do you know what the efficiency of these old turbines was?

A One test gave sixty per cent, which I have in mind, in 1905.

Q You say that the Allis Chalmers turbines were substituted for the old turbines, are they still in the plant?

A Yes, sir.

Q Do you know what the efficiency of the AllisChalmers turbines was at the time of their installation?

A No, sir, no test was made; they were guaranteed for eighty per cent.

Q I will ask you if you have had occasion to investigate and ascertain the present ~~in~~ efficiency.

- A In a general way, yes, sir, not a fine test of efficiency, but a test to indicate fairly close the efficiency.
- Q From investigation which you have made can you give the approximate estimate of the present efficiency of those turbines?
- A Yes, sir.
- Q What is it?
- A Sixty to sixty five per cent.
- Q What is the reason, if you know, for the loss in efficiency?
- A Those turbines were under an extremely high head, and the gates seemed to be the weakest place in them, causing a good deal of leakage; the runners have also worn considerably and those elements combined do reduce the efficiency as stated.
- Q Is it an unusual thing for turbines to decrease in efficiency?
- A No, sir.
- Q I believe you testified that you remained in the employ of the Telluride Company, Power Company, or its predecessors, Telluride Power & Transmission Company until about 1904, what time in 1904?
- A In May 1904.
- Q And where did you go or by whom employed after that?
- A By the United States Reclamation Service.
- Q Where did you reside?
- A At Salt Lake for about a year and a half and then in Provo.
- Q While you resided in Provo did you keep more or less in touch with the station at the Olmstead plant?
- A Yes, sir.
- Q What was your--what was your employment with the United States Government?
- A District engineer for Utah and Southeastern Idaho.
- Q Do you know of any change which occurred in the flume at the Olmstead plant in 1907?
- A Yes, sir, I know it was taken out, part of it by a snow slide,

and necessitated reconstruction on a different alignment.

Q What part was taken out, what part of the flume was taken out?

A A section of about nine hundred to a thousand feet, immediately below the head works, including the head gate and the flume.

Q What provision, if any, do you know, was made at that time to carry water from the dam to the flume?

A A temporary flume and one that has become known as an auxiliary flume was constructed to take the place of the original section.

Q How long did you continue in that employ of the Government?

A Until May 1908.

Q And since then what has been your employment generally?

A I went back to the Telluride Power Company at that time.

Q How long did you continue in its employ?

A About a year and a half.

Q From there where did you go?

A I opened an office of my own in Boise, Idaho.

Q And did you subsequently accept an employment by the Utah Power & Light Company to come here in the interest of the Telluride Power Company?

A Yes, sir.

Q And are you employed by it at the present time?

A Yes, sir.

Q In what capacity?

A As an engineer of the company.

Q Hydraulic engineer.

A Yes, sir. I suppose I had better say all classes of engineering.

Q Includes hydraulic engineering, really, does it?

A Yes, sir.

Q Referring to the old Sterling flume which was---strike that out--I will ask you whether or not the old, the portion of

the old Nunn station was discontinued at the time the Olmstead station was completed?

A Yes, sir, early in 1904, the Nunn station was put out of operation.

Q And has not since been operated, I take it?

A No, sir.

Q Referring now to the old Sterling flume that was originally constructed for use in connection with the Nunn's plant, I will ask you if you know what the dimensions of that flume were, the grade, and the intake conditions, or, if you don't know them personally, if you heard Mr. Buckler's testimony, what they were.

A Yes, sir, I know it from Mr. Buckler's testimony. I never measured it.

Q Have you made any computations as to the carrying capacity of that flume based upon the conditions as testified to by Mr. Buckler?

A Yes, sir.

Q State what the carrying capacity of that flume was.

MR. A. L. BOOTH: We object to that, as not the best evidence. The water is shown to have been flowing in this flume for years and years, and a measurement of the actual flow, it looks to us is the best evidence of what its capacity is and not go to any theoretical calculations of the capacity.

THE COURT: That might be true with reference to the weight to be given to the evidence, but it is competent evidence to show the dimensions and theoretical capacity. That would be competent evidence. It might have little weight or great weight, I will not pass upon that, but it is certainly competent.

MR. STORY: In this connection, we wish to

say frankly to the court, we have no measurement of the water actually flowing in that old flume, and the only way we can arrive at its carrying capacity is in this theoretical manner.

THE COURT: The Court has ruled it may be received.

MR. BOOTH: Give us an exception to the ruling.

A Two hundred and ten second feet.

THE COURT: Let me understand what flume that is.

MR. STORY: That is the old Sterling flume, horse-shoe flume which was first built for the operation of the Nunn's plant.

Q Referring now to the flume which was constructed in 1902, in the place of the Sterling flume which has just been mentioned, I will ask you if you have person knowledge of the intake conditions which existed in that flume.

A No, sir, I have not.

Q Did you hear Mr. Buckler's testimony yesterday, what the intake conditions were, the size of the flume the elevation of the intake hill, the grade for the first section of the flume, and the subsequent--and the grade for the remainder of the length of flume; did you hear his testimony yesterday?

A Yes, sir.

Q I will ask you whether or not you have made any computation of the carrying capacity of that flume based upon the conditions, size and grade, etc., testified to by Mr. Buckler?

MR. A. L. BOOTH: To save the record we interpose the same objection, for the same reason.

THE COURT: Objection is overruled.

A Yes, sir, I have.

MR. STORY: It would be the carrying capacity of the whole flume.

Q State what the carrying capacity of that flume was under the conditions described.

A Three hundred and forty-five second feet.

Q In making your computations, what allowance have you made for free board?

A Three tenths of a foot.

Q At what point?

A Along the main flume, on the sides.

Q What co-efficient of friction have you used in making your estimate?

A .011.

Q Please explain to the court what the co-efficient of friction is.

A The co-efficient of friction is an element entering into the computation of the carrying capacity of structures in hydraulics which takes care of the element of friction due to the velocity of the water over the section in which it is contained.

Q Is the co-efficient which you have used in making your computations the co-efficient which is usually used in computing the carrying capacity of flumes of this kind?

A Yes, sir.

Q Referring now to the temporary flume which was constructed in 1907, after the snow slide took ~~place~~ out the upper part of the flume constructed in 1902, - Mr. Buckler, if I remember correctly, testified that the dimension of the flume was seven feet six, by five feet, eight, had a grade of one-tenth of one foot in a hundred, and except at the head of the flume which for a distance of approximately seventy-five or a hundred feet, had a grade of twenty-three one hundredths; have you made any computation of the carrying capacity of that flume based upon the dimensions, and grade,

as testified --dimensions--grade and intake conditions, as testified to by Mr. Buckler?

A Yes, sir.

MR. A. L. BOOTH: Which flume is that?

MR. STORY: The old temporary flume. You will remember the temporary flume is the one that is carried around to the right.

MR. A. L. BOOTH: Yes, I understand what you mean.

Q What was its carrying capacity?

A Two hundred and sixty-six second feet.

Q Referring now to the auxiliary flume that was constructed about--

A Mr. Story, I used different co-efficients in that flume.

Q I wish you would explain to the court what free board you allowed in those computations, and also what co-efficient of friction.

A I allowed a co-efficient of friction of .012 in this flume and free board of six-tenths of a foot.

Q Why did you make those, use those, that co-efficient of friction and make an allowance of six-tenths of a foot free board?

A Because of the character of construction. It had been built in the winter time when the conditions were not favorable, and material of which it was built was material that happened to be on hand by the company at that time and having seen the flume myself at the time it was built, I arrived at the co-efficient of friction, and having seen the portion of the flume which is now in existence, run levels over it and tested it, I concluded the free board should be at least six tenths and the co-efficient of friction 012 instead of 011, as used in the other case.

Q The higher co-efficient of friction would give a smaller carrying capacity, would it?

A Yes, sir.

Q Referring now to the auxiliary flume that was constructed about the same time, dimensions of which have been testified to by Mr. Buckler, as six feet wide, by three feet high, inside measurement, and testified to by Mr. Pharis, to have a grade approximately 1.1 feet--I mean a fall of 1.1 feet in eleven hundred feet of length, have you made any computation of the carrying capacity of that flume based upon the conditions as described by Mr. Buckler and Mr. Pharis ?

A I have.

Q In making your computations, what free board did you allow there?

A I allowed five tenths of a foot.

Q What co-efficient of friction have you allowed?

A 0.12.

Q What is the carrying capacity as you have figured it of that flume?

A Seventy second feet.

Q What would have been the carrying capacity of that flume when filled to a depth of one and one-half feet?

A I have not computed that, I will compute it, if you desire.

Q I wish you would.

A Forty-one second feet.

Q Did you hear Mr. Pharis testimony in regard to the change which was made in that flume in 1912?

A Yes, sir.

Q Are you personally familiar with that change?

A Yes, sir.

Q And with the conditions which have existed in the flume since that time?

A Since 1914 I have been familiar with it.

Q I will ask you to describe those--the present conditions at the point where the pipe line joins the flume and ask you to state,--describe what effect that installation has

upon the velocity of the water, referring to the exhibit?

A The water comes in from an eight foot concrete aqueduct at the point marked "A" on Exhibit 122. The concrete pipe having a cross section of 56.74 square feet which with 350 second feet of water passing through will require a velocity of 6.17 feet per second. It passes then into the large outlet which is fourteen feet wide and when in full operation has an effective depth of 7.37 feet, making a cross sectional area of 103.18 feet. For 350 second feet of water to pass through that section it will require a velocity of 3.39 feet per second. From that section the water travels through a section of flume into a regular flume between the ends of that section and the point marked "B" on Exhibit 122. The profile of that connection is shown from E. to C. on Exhibit 121. The minimum section through which the water has to pass in the change from the concrete outlet of the concrete pipe to the main flume is at the point D on Exhibit 121. At that point the effectual area of the flume ^{with} ~~is~~ 350 second feet in the flume is reduced to 37.03 square feet, requiring a velocity for that amount of water of 9.45 feet per second through the contracted section. The factors on that point for three hundred second feet capacity are using the same area of cross section 8.10 feet per second velocity. These conditions all combine to produce a considerable loss of head at the end of the concrete pipe, and through the outlet tank and in to the main flume, Figuring that out, that loss out, exactly into the losses due to velocity changes alone, the results aggregate ~~are~~ a fraction more than a four-tenths of a foot of head in passing from the point D. to E. on Exhibit 121. The water passes down the incline, having first been increased in velocity at the point D. From there increase in the velocity by the steep slope between D. and E., it

goes down that section with a search which causes cross current and back currents and standing waves, which add further to the losses in effectiveness and increases the loss in head, which is an element to produce velocity.

It is impossible to compute the amount of loss from that cause, but in this case by my personal observation in the flume in its operation my judgment is that at least two to three tenths additional feet of head, making a total loss of at least seven tenths of a foot head in passing from the concrete pipes to the main flume below, because of the changes in section and the conditions in construction at that point.

Q I will ask you whether or not, Mr. Swendson, the conditions which you have described create a limitation upon the carrying capacity of the entire flume?

A They do.

Q Explain to the court what you mean by that.

A We can only get into a flume the amount of water which we can get through the minimum section. In passing between the outlet of the concrete pipe and the point where the normal conditions are maintained, and before we can get the normal conditions, we must have overcome the head that is lost at this point by the water piling up, as it is forced through the concrete pipe, piling up, and producing additional velocity of the head behind the particle ahead of the second until finally it has been impelled to the velocity which is contemplated in the construction to be maintained by the grade, which the flume is given in its construction.

Q In other words, the loss of velocity at that point lessens the amount of water that can be put through the flume, does it?

A Yes, sir.

Q And what do you estimate in the loss in carrying capacity due to this loss in velocity that you have mentioned?

A Twenty-eight to thirty second feet.

Q Did you ever make any actual measurements to test the carrying capacity of the flume under existing conditions?

A Yes, sir.

Q When and with whom?

A At one time with my assistant, Mr. Corey, George R. Corey.

Q What time was that; when was that?

A May 25, 1916.

Q Did you make any other measurements?

A On June 14, 1916, with A. F. Parker of Ogden, Civil Engineer of Ogden, made another test measurement.

Q Describe the conditions under which you made your measurement with Mr. Corey and describe the test you made at that time.

A We made the meter measurement in the flume with it filled to its capacity at a point about seven or eight hundred feet below the outlet--below the point "E" on Exhibit 121.

MR. A. L. BOOTH: Where would that be on the flume?

A About eight hundred feet below the beginning of the flume at the present time. I am not sure of that eight hundred feet, but it is about that, Mr. Story. I may desire to change that answer after I look the question up and get the exact point of the station.

Q Describe the test you made at that time.

A A meter measurement was made in each foot across the stream.

Q Across the stream or flume?

A Across the flume and in each foot of depth a computation made from those measurements to determine the capacity. The meter was read at each point for one hundred and fifty revolutions.

Q Do you know whether your meter had been collaborated so that it was a correct meter at that time?

A Yes, sir, it had been collaborated by the Department at

Washington on March 24, 1916, and this was the first time that it was used after such rating.

Q What did you determine to be the mean velocity of the water in the flume at that point and at that time?

A 6.7 feet per second.

Q What was the depth of the water in the flume?

A 5.6 feet.

Q Allowing a free board of how much?

A Three-tenths of a foot.

Q From the measurement you made, did you determine the amount of water which was flowing in the flume at that time?

A Yes, sir.

Q How much water was flowing through it?

A Three hundred second feet.

Q Did you at that time go over the flume to the station?

A No, sir.

Q Did you make a subsequent measurement, I believe you testified you did make a subsequent measurement with Mr. Parker?

A Yes, sir.

Q Where was that measurement made?

A At the same point as the previous one.

Q Describe the conditions under which it is made.

A The conditions were the same as those on May 25, 1916.

MR. A. C. HATCH: Was that when you made these three hundred feet measurements?

A Yes, sir, May 25, 1916.

Q What did you do at that time in making measurements?

A Mr. Parker and I each read the meter separately for one hundred and fifty revolutions, each, at each point in the section.

Q Each point in the section, you mean each foot in width and each foot in depth?

A No, sir, we made a measurement at two tenths, six tenths and eight tenths of the depth.

- Q And what point in the width?
- A Each foot, across the flume .
- Q How deep was the water in the flume at that time?
- A 5.6 feet.
- Q Allowing a free board of how much?
- A Three-tenths of a foot.
- Q What did you determine to be the velocity at that time, velocity of the water?
- A 6.72.
- Q And did you determine from those measurements the amount of water which was flowing the flume at that point?
- A Yes, sir.
- Q What amount of water was flowing?
- A Three hundred and one second feet.
- Q What was the date of this last measurement?
- A June 14, 1916. Just a moment, Mr. Story; I wish to be sure of my mean velocity there. I have not computed it; I want to be sure of it.
- Q You were going to re-compute the velocity.
- A I merely checked to be sure of it. I find it correct.
- Q Did you and Mr. Parker at that time go over the flume to the station?
- A Yes, sir.
- Q What conditions did you find in the flume below this point where you made your measurements?
- A At this point, Mr. Story, I can give you the correct distance below the outlet pipe where this measurement was made.
- Q I wish you would do so.
- A It was made at station 18 plus 43, from the head of the aqueduct it would be 743 feet below the beginning of the present flume.
- Q Now, describe the conditions in the flume below the point the measurement was made at the time that you went over it with Mr. Parker.

A At the point of measurement, at the time we made the measurement there was a freeboard of three-tenths of a foot at a point one thousand feet below that point. The free-board had increased to fifty-eight hundredths of a foot and continued so for a distance of three thousand feet, at which place for about ten feet we found a low place in the flume where the free board was thirty-three hundredths of a foot, and that was at station 5800 from the head of the flume. At 58.25 which was twenty feet below that point, the free board had increased to $71/100$ of a foot. That free board gradually decreased until station 60 plus 75 was reached where it was again $58/100$ of a foot. $58/100$ continued to be the free board to station 91, which is a short distance below the Nunn plant where it again increased to $71/100$ of a foot and continued so to station 104 plus 50. At 105 it had again reduced to 58, and at 106 plus 50 to $71/100$. At 109 to $88/100$. At 110 it was down again to $58/100$ and continued so to 115 plus 20, where it again arose to $8/10$ of a foot. From 120 to 147 the free board was varied from $8/10$ to $71/100$ of a foot. At 153 plus 20, it was again to $58/100$ of a foot. At 155---I should say between 155 and 160 is a place known as mud slide, where considerable difficulty is had in maintaining the structure on its foundation. It tends to slip down the hill. At that point we found the following results. At station 155 is a short section with a free-board of three-tenths At 155 plus 50, $39/100$ of a foot. At 156 plus 40, $39/100$ of a foot. At 159 plus 20, it was back to the $58/100$ of free board. At 159 plus 50, right on the mud slide it was $88/100$ of a foot. And at 150 plus 30, the lower end of the difficulty it was back to 71. And continued with a free-board of 71 to station 174 plus 59. From that point to the beginning of the swell flume, it continued all the way from $71/100$ to $8/10$ of a foot,

free board.

Q Referring to the turbines in the Olmstead plant, and assuming they have had efficiency of eighty per cent, as you have testified they were guaranteed, what volume of water is required to operate them to their capacity?

A Three hundred and sixty second feet.

Q You are speaking of the Allis-Chalmers turbines?

A You stated assuming the efficiency eighty per cent. I am figuring it on that basis.

Q With any turbine?

A Yes, sir.

Q Assuming that the efficiency was seventy per cent, what would be the volume of water required to operate them to their capacity?

A Four hundred and ten second feet.

Q And as the efficiency decreased the volume of water required to operate them to capacity would be increased, would it?

A Yes, sir.

Q Assuming that they were , the efficiency were sixty-five per cent what would it be, what water would be required?

A In all these, Mr. Story, I am giving you the nearest ten second feet. This one is four hundred and forty second feet.

Q And at sixty per cent efficiency?

A Four hundred and eighty second feet.

Q Are you familiar with the effect which the change in the power load and consequent shutting down of the consumption of water through the turbines of the plant would have on the water in the flume?

A Yes, sir.

Q State what effect it would have in reference to waters spilling over the spill-way if any, describe the conditions which would exist to the court.

A The load in the plant should be decreased, the automatic

governor would operate to close the gates of the turbine and cause a spill-way at the head of the pipe lines.

Q In other words, as the load varies, the governors open or close the gate?

A Yes, sir.

Q Accordingly, and as the gates are opened and closed, it causes a fluctuation of water in the flume at the pressure box, does it?

A Yes, sir.

Q And thus causes a fluctuation in the flow of water from the spill-way?

A Yes, sir.

Q Just one further question. In making your computation, or making your test, with Mr. Corey, ^{the} of ~~t~~ amount of water which was flowing in the flume May 5, 1916, did you make a separate computation of your own as to the amount of water?

A Yes, sir.

Q It is your own calculation which you have given the court, is it?

A Yes, sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You have given us the conditions as to free board from the point where you and Mr. Parker measured on down the flume to the plant, haven't you?

A The measurement was by myself and Mr. Parker when we measured the free board, yes, sir.

Q Can you give us the free board from the point where you measured up to the concrete flume?

A No, sir, I didn't measure that; the free board wasn't anything at one point---

Q In order to get this measurement, isn't it a fact that boards were put up on the side of the flume so as to increase its capacity at the particular point where it was measured?

- A Yes, sir, I undertook to rectify some of the difficulties that were existing there, so as to see how much water we could get through the flume.
- Q Then, as a matter of fact, the flume would not have carried the quantity of water that was then running in it without these side-boards put on, would it?
- A Yes, sir. We would have crowded the same amount through it and probably wasted a little more,
- Q Run over the sides?
- A Yes, sir, at that particular point.
- Q Now, would the canal or flume carry this quantity of water during its course below--there to the plant?
- A I didn't catch that.
- Q I say, was the capacity of the flume sufficient to carry the quantity of water that you measured from the point where you measured down to the plant?
- A Yes, sir.
- Q Without running over at any point?
- A Yes, sir.
- Q Did you measure at the lowest capacity or did you select a place where you would get---try to get the greatest quantity that it would measure?
- A I didn't get all your question.
- (Question read)
- A You mean in measuring the free-board?
- Q No, in measuring the quantity of water flowing in the canal.
- A We measured, had a regular measuring station where it is customary to measure the water near the head of the flume.
- Q There is a regular place there where the measurements are made?
- A Yes, sir.
- Q Did you measure the maximum depth of water in the flume anywhere?
- A Did I measure the maximum depth?
- Q Yes.

A I did at the point of measurement, yes, sir.

Q Did you at any point in that flume above the measuring station?

A No sir.

Q What is the depth of water?

A 5.6 feet.

Q Why did you put those boards up on the sides, Mr. Swendson?

A There was extremely low place, an angle in the flume, due to the difficulty I have explained in the re-construction, and I desired to eliminate that difficulty in that simple way rather than to jack the flume up to its proper grade. It was below grade at that point, and that was an easier way of fixing the difficulty than to put jacks under it and put it up to grade ~~and~~ at that particular point.

Q Well, of course, you just went there to measure it and prepared it as best you could in the time you had, is that right?

A Yes, sir, I went with the intention of seeing how much water I could get that the flume would safely carry.

Q I didn't quite get all of that answer.

A I went for the purpose of seeing how much that flume would safely carry in its present condition, how much it would safely deliver in its present condition.

Q Then you had put in at the head all it would carry safely?

A At that point, yes, sir, at the head.

Q The friction, what is the co-efficient of friction as you determined it from the two measurements made by you?

A Practically 12, just a little less than 12, not 12.

Q You gave 11 as one of them.

A No, sir.

Q Didn't you?

A No, sir, I didn't give 11.

MR. STORY: Judge Hatch, which were you referring to, 1902 flume?

MR. A. C. HATCH: There were two measurement

made in 1916, one May 25, and one June 14, I think, and it was as to those two, if he determined the friction by those two measurements.

THE WITNESS: I stated those measurements showed a co-efficient of friction of twelve, with the flume in its present condition.

REDIRECT EXAMINATION by Mr. Story.

Q In your cross examination you have mentioned some boards which you put on the side of the flume, and you have also mentioned an angle in the flume, state where, with reference to this angle you put these boards up.

A At a point about fifty feet below the point "E" on exhibit 121 The effect of the cross current and piling up of the water which I have previously described in this testimony is the work, and at that point, the water---the flume is also low, as shown by my level taken at that time, and in preparation of testing, making a fair test of the condition, I put, instead of raising the flume, it being on solid ground at that point, so that we would have to dig under it, to raise it, instead of that, we put between the posts above the boards some thin boards, to prevent the flume slopping over at that point. The flume at that point was something like two-tenths to a foot low, and the water would also strike the cross bars of the flume at that low point, and that was partially the cause of some of the difficulty of overflow at that point, and in an endeavor to get a condition which I considered fair at that point, I endeavored to prevent the overflow in that section.

Q If the flume had been on grade at that point, would there have been any overflow?

A There probably would have been some difficulty. No overflow due to high flume, but some difficulty due to the fact of the disturbance of velocity because of the condition now

existing between the pipe and the flume.

Q Causing the waves which you have mentioned?

A Yes, sir.

Q What effect would the increased velocity have had on the carrying capacity of the flume?

A At what point?

Q At the point that you have described where you put up the boards.

A It would increase the capacity.

RECROSS EXAMINATION by Mr. Hatch.

Q In measuring the 1902 flume, making the computation from the testimony, did you treat it as being a straight flume or one with very high curvature, such as you actually had?

A I treated it as it is, it s curvature.

Q And made allowances for the curvature?

A Yes, sir.

Q You give us eleven, wasn't it, as to that flume?

A Yes, sir.

Q Is that an actual determination, did you just assume that as being---

A No, sir, that is the co-efficient of friction which is applicable to a condition of that kind, to a flume built as that one, and as it was built.

GEORGE R. COREY, called by the defendant,

being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Story.

Q State your name, residence and occupation.

A George R. Corey, residence Salt Lake; employed in the engineering department of the Utah Power & Light.

Q What are your particular duties in connection with your present

employment?

A They consist chiefly of measuring water, streams and flumes, and so forth.

Q How long have you been engaged in that character of work?

A Two years, past two years.

Q Have you spent your entire time in that during the past two years?

A Practically so.

Q And your work has carried you over what territory?

A All of the Bear River sheds and various other streams, Provo river.

Q During those two years, approximately how many water measurements have you made?

A I made fifteen hundred last year; I don't know just how many I have made this, probably fifteen hundred more.

Q In making your measurements, do you use meters?

A Current meters, yes, sir.

Q Are you the Mr. Corey mentioned by Mr. Swendson in his testimony as having made with him a measurement of the flume of the Olmstead plant in Provo canyon on May 25, 1916?

A I am.

Q Did you hear Mr. Swendson's testimony concerning the conditions under which that measurement was made?

A I did.

Q Was his testimony in that respect correct?

A Exactly.

Q Did you make an independent computation from the measurements which were made at that time of the amount of water flowing in the flume?

A I did.

Q How much water was flowing in the flume at that time, at that point?

A 299.57 second feet.

Q In other words, there is a difference of forty-one hundredths?

A Forty-three hundredths.

Q Forty-three hundredths of a second foot between your computation and Mr. Swendson's, is there?

A Yes, sir.

MR. SWENDSON: There is one correction I will make in the testimony. The boards were not put on the flume until I made my second measurement. The boards Judge Hatch questioned about, we put them on after the first measurement. I request correction be made in my testimony to that effect.

THE COURT: Do you desire to cross examine Mr. Swendson further upon this statement?

MR. HATCH: No, I think not.

THE COURT: Very well.

MR. HATCH: I would like to ask Mr. Corey one question.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Have you a series of measurements of this flume of the Utah Power & Light Company?

A Have I a series of measurements made by myself, do you mean?

Q Yes. Or is this the only measurement you have ever made of that?

A No, sir, this is not the only measurement I have ever made.

Q When did you measure it, before or since?

A I measured the flume, I was present with Mr. Swendson and Mr. Parker at the time they made their measurements, although I did not participate directly with them. They, too, reading the revolutions of the meter.

Q Whendid you measure it?

A I measured it the day before.

Q What measurement did you get that day?

A I have a total discharge on the day before of 246.38 second feet.

Q 246.38?

A Yes, sir.

Q When did you measure it again?

A When did I measure it again?

Q Yes.

A I was present with Mr. Swendson and Mr. Parker on the following day when they made their measurements. I did not participate directly in the reading of the meter at that time.

Q What I am trying to get at is, about how many measurements you have made of this flume.

A Those are all that I recall at the present time.

Q Now, how do you account for the difference in the measurements you made when you measured with Mr. Swendson and when you measured it your self, the day before?

A There was a smaller depth of water in the flume.

Q You mean you increased the flow in the flume, did you?

A Yes, sir, at the time the larger measurement was made.

Q Did you put any boards on the side when you measured it?

A No, sir.

Q You have a regular gauging station there, haven't you?

A At the point of measurement, yes, sir.

Q And the measurements are taken regularly?

A So I understand; I am not personally familiar with it.

Q Do you know where those are kept, do you have them?

A The gauging readings, I don't know.

MR. A. C. HATCH: Have you those measurements?

MR. STORY: The gauging measurements?

MR. A. C. HATCH: Yes.

MR. STORY: I cannot answer that.

MR. SWENDSON: No, sir, we haven't them.

They are kept in the operating department,
I believe.

MR. A. C. HATCH: Can you get them?

MR. STORY: I think we can get them; whatever we have, we can get, of course.

REDIRECT EXAMINATION by Mr. Story.

Q Mr. Corey, at the time you made this measurement, of 246 second feet, were you making any particular test as to the amount of water which you could get through the flume, or simply the amount of water flowing in the flume?

A I was endeavoring to make a very careful measurement of the water then flowing, not with any idea of getting the capacity or anything of the kind.

RECROSS EXAMINATION by Mr. A. C. Hatch.

Q Did you go up to the head of the flume to determine whether or not there was free board or whether it was practically up to its capacity that day?

A You mean when I made the--

Q Yes.

A --or big measurement, three hundred second foot measurement?

Q No, when you made the measurement alone.

A No, I didn't go up that time, to establish a free-board.

MR. STORY: Your Honor, we had hoped to have Mr. Parker here to testify with reference to this measurement and conditions of the flume, but he is ill with grippe, and so we are unable to have him present at this time. We are going to ask that we may introduce that evidence at a later date when he is able to appear, and with that exception, we have, I think, but one other

witness, who will testify in regard to the conditions on the Olmstead plant, and I would like to put him on immediately after lunch if I may, because I have not yet had an opportunity to discuss matters with him. In the mean time I would like to digress from this part of the testimony to the proof of our appropriation, that is appropriation of the Utah Light & Power Company on Snake Creek and Upper Provo River, and to that end I wish to introduce a certificate of appropriation of water issued by the state engineer.

We offer in evidence certificate of appropriation of water, State of Utah, Application No. 3097, being Certificate Number 351, issued by the state engineer and recorded in the office of the Recorder of Wasatch County, on May 10, 1912, in Book 3 of Miscellaneous Records, at pages 78 and 79.

THE COURT: What exhibit is it?

MR. STORY: Being Exhibit No. 123.

THE COURT: Of how much water?

MR. STORY: Authorizing the appropriation of twenty-five cubic feet of water per second for power purposes at the points on Snake Creek therein described. I take, it, Your Honor, under the statute, the certificate makes the prima facie proof of the appropriation. I have the original application, certified copies of the applications and proofs if the gentlemen would like to see them.

MR. JACOB EVANS: Are they here?

MR. STORY: Yes.

MR. A. C. HATCH: I don't think it is necessary to go behind the final certificate.

MR. STORY: I don't think it is, either. But I have them here, if you wish to see them. We now offer in evidence a certified copy of an appropriation of water, Application No. 3621, Certificate No. 439, issued by the State Engineer of Utah, to the Utah Power & Light Company authorizing the diversion and use of 180 cubic feet of water per second for power purposes, at the points and between the dates described in this certificate; and may the record show that no objection is made to the fact that this certificate has not as yet been recorded?

MR. A. C. HATCH: Yes.

THE COURT: From what stream is this to be taken, from the Provo river or some tributary?

MR. STORY: It is from the Provo river.

THE COURT: Both of them?

MR. STORY: One is Snake Creek, which is a tributary of Provo River, and the other is from the Provo River itself.

Now, Your Honor, may we substitute copies for the originals of these certificates, in order that we may obtain them for our files?

THE COURT: Yes.

MR. STORY: Now, Your Honor, I desire to offer in evidence all of the exhibits which were identified yesterday, and numbered from 113 to 122, both inclusive.

THE COURT: They may be received.

MR. STORY: With the exception that I wish to look over the stipulation to be assured that the irrigation right mentioned yesterday is included, I think that that concludes our proof, with the exception of the witnesses which

I have mentioned, and may we take a recess until 1:30?

THE COURT: And the other matters you referred to yesterday morning have been stipulated so you don't expect to introduce proof on those matters?

MR. STORY: They say they desire a slight change in the stipulation, and that is something we will have to discuss.

MR. A. C. HATCH: There is a question, then, Mr. Story, about the intermittent flow in the Murdock plant.

MR. STORY: I think we can agree upon it during the noon hour without any difficulty. May we take this matter up then after the recess?

THE COURT: Yes, you may take it up after the recess. However, unless you think it will make some confusion in the record, we may proceed with the next claim until the adjournment hour. Mr. Corfman, I take it, you are ready?

MR. COREFMAN: In what case?

THE COURT: I thought you referred to some matter at the close of this matter. Mr. McDonald spoke to me yesterday and said you had suggested you would take probably all day to-day, and wanted to bring his witnesses. I don't know what the claim was.

MR. COREFMAN: I understood that the next defendant was the East River Bottoms.

THE COURT: Who represents those?

MR. A. L. BOOTH: Judge Booth.

THE COURT: I understand he announced at the recess of the court that he was going to introduce additional proof by reason of the stipulation that has been made at that time being misunderstood

by the parties. I may have misunderstood Mr. McDonald, he spoke to me yesterday and suggested you expected to occupy certain time. I take it then we are not in a situation where we can---

MR. THURMAN: If the court please, I will ask counsel who were not up in Wasatch County, if you have received copies of the stipulation we entered into in Wasatch County?

MR. COREMAN: I received no copy at all; I don't know what was done.

11:30 A. M. RECESS to 1:30 P.M.

MR. STORY: Your Honor, the witness whom I mentioned this morning is here, but he has just received some records he sent for and he is going over those records and will be ready to testify in a few minutes, and in order not to delay the court in any way, if there are any other matters to be taken up, I will be glad to step aside.

THE COURT: Very well, Judge Booth, are you ready with the East Bottoms?

MR. JOHN E. BOOTH: I believe there is one matter to dispose of. I was a little bit misled, as I understood this case would take all the day and yesterday evening I excused my people and have been telephoning and sent a messenger out for them, and expected them back soon. However, there is one matter I think we may dispose of.

MR. STORY: Our witness is here now and we can proceed.

THE COURT: Very well.

D. L. BRUNDIGE, called by the defendant,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Story.

Q State your name.

A D. L. Brundige.

Q Your residence?

A Salt Lake City.

Q Your occupation?

A Superintendent of maintenance of the Utah Power & Light
Company.

Q As Superintendent of Maintenance, do you have in charge
any part of the operation of the company?

A I do.

Q Under your supervision. Are you an electrical and hydraulic
engineer?

A I am.

Q How long have you known what is commonly known as the Olmstead
power plant of the Utah Power & Light Company in Provo canyon?

A I first became acquainted with it in 1907 in June.

Q Did you later have anything to do with the operation of that
plant?

A I operated it as station superintendent.

Q At what time?

A Between about September of 1909 until about the middle of
March, about 1913.

Q Since then what has been your position?

A I have been superintendent of maintenance.

Q And as superintendent of maintenance have you had anything to
do with the operation of this plant?

A Yes, sir.

Q What?

A I have looked after the operation in an advisory capacity.

Q Are you familiar with the general power system, of the Utah
Power & Light Company?

A Yes.

Q Do you know of the change in the ownership of that plant and the system with which it is connected in the year 1912?

A I do.

Q State what change that was.

A The company was before, was known as the Telluride Power Company, and after the change was known as the Utah Power & Light Company.

Q Do you remember about what time of the year that occurred, the transfer occurred?

A I don't remember the exact day, no.

Q To refresh your recollection, was it about the latter part of August or early in September, that year?

A I would say it was.

Q While you were superintendent of the station, in charge of the operating of the station, state what the plant was used for?

A It was a governing plant.

Q Governing plant of the system?

A Yes, sir.

Q Describe the system as it existed at that time.

A I don't know that I quite call just exactly what you want.

Q I mean how many plants, approximately, were in operation and connected up with the system at that time.

A That is prior to being taken over by the Utah Power & Light Company, you mean?

A Yes.

A There was four plants.

Q You say this plant was used as a governing plant?

A Yes, sir.

Q Please describe to the court how it was used in that manner or for that purpose.

A The load on a power system will vary from one hour to the next, or from one instant to the next, and we have automatic machines we call governors, that regulate the amount of ^{water}

~~power~~ being put through the machine, so as to regulate the

amount of power that is going out to the various customers. If a customer drops off the line or discontinues taking his power, that much power will have to be taken off of the water wheel, and this governor automatically drops that amount of water out, as it cuts it off from the machine. Olmstead was the only station which had governors that were up to date and able to do that, and as the load came on to the system, I believe that would probably be the easiest way to make it, the Olmstead plant would load up until it was getting about all the load that it could carry. Then a telephone was put in to the Grace station, for instance, and they were told to pick up enough load to bring the Olmstead load down to a point where it could have a range to either drop off load or pick up load as the case might require.

Q So that the Olmstead station, then, was the one where the violent fluctuation in power load would occur?

A Yes, sir.

Q On the system?

A Yes, sir.

THE COURT: How many plants were connected?

A I believe there were four at that time.

Q You say it was being used as the governing plant in 1909 when you had charge of it?

A Yes, sir.

Q How long did that continue?

A That continued until about a year and a half ago.

Q Do you remember whether or not there were any particular times of the day when your ^{peak} ~~big~~ loads were apt to occur?

A Ordinarily there was a peak caused by the lighting customers coming on in the afternoon, about any time from six o'clock to ten o'clock at night, but outside of that there were other times of the day, for some reason or other, one of

the other plants could not carry the load for a few minutes, or if we had line trouble, something of that sort. And the time the plants would get separate from each others That would cause a peak.

Q I will ask you whether or not as Superintendent of the station, you also had charge of the matter of keeping the water in the flume, or directing what amount of water should be kept in the flume?

A I did.

Q When the plant was being used as a governing plant what were the general instructions to the man at the head-gate?

A To keep---

Q With reference to keeping water in the flume?

A He was to keep all the water in the flume that it would carry.

Q And that was available?

A Yes, and that was available.

Q State what effect the fluctuation in load at the plant had on the water in the flume?

A As soon as the water was cut off of the water wheel, it would have to back up the flume and go over the ~~flum~~ spillway.

Q In the course of operations of the plant from 1909 to 1912, I will ask you whether you know that the plant was ever operated to its full operating capacity?

A Yes, it was.

Q Was this frequently the case?

A It would happen quite often.

Q Are you familiar with the turbines in that plant?

A Yes, sir.

Q You were there shortly after the turbines were, present turbines were installed, were you not?

A Yes, sir.

Q In the course of your duties, had you made any investigation

of the efficiency of the turbines so that you might have been able to determine within an approximate amounts, the efficiency of the turbines as they exist at present, or existed in 1913, say?

A Yes, sir.

Q Is the efficiency at the present time less than it was at the time it was installed?

A Yes, sir.

Q What would you say was the difference?

A When they were installed, the machines were good for about eighty per cent efficiency. At present I would say they were good for somewhere between sixty and sixty-five.

Q What is that due to?

A Due to wear and erosion.

Q Mean on what part of the ~~run~~ turbines?

A The gates and the runner, particularly, and the casing, where the runner fits into.

Q How long did you say they had been operating, only about sixty to sixty-five per cent efficiency?

A I should guess, they have been, roughly, six years.

MR. THURMAN: The last six years?

A Yes, roughly, six years.

Q In other words, there was a rapid drop in efficiency after the first installation, was there ?

A Yes, sir.

Q I will ask you whether or not they are available at the present time, any records of operation of the old company prior to the time that the Utah Power & Light Company acquired the property, as far as you know?

A Yes, there are some records.

Q I am talking about some records; do you know of any of the old records?

A Yes, we have records I know of, along about 1912, from then

on up until about the present.

Q You misunderstood me. What I am getting at, is, has the company at the present time any of the old company's connected records, as far as you know?

A Very few of those, or none I know of.

Q Have you since 1912, since the new company took hold of the property, kept records of your operations?

A Yes, sir.

Q I will ask you whether or not you have examined those records to determine the maximum amount used during say 1913, '14 and '15?

A Yes, I have.

Q Have you those records available with you?

A I haven't them with me. I have got some data I have taken off of those records.

Q Well, from the examination of those records, can you tell what the maximum amount of power used was---is, which was used in 1913?

A Yes, sir.

Q What was that?

A I can give you some particular instances.

Q Yes.

A On January 24, the station carried---

MR. A. C. HATCH: Just a moment; if we could have the original records from which these were taken.

MR. STORY: These are carbon copies of the original records.

THE WITNESS: No, these are some extracts I have taken out.

MR. A. C. HATCH: I think we should have the original records.

MR. STORY: Judge, I thought we would have the original records here. May we not agree this

testimony may go in, subject to your motion to strike if we do not produce the original and show it?

MR. A. C. HATCH: Of course, it is putting us to somewhat of a disadvantage not having them here to compare now.

MR. STORY: We can produce them and will.

MR. A. C. HATCH: If the court please, these records are not records kept by the witness, I understand.

MR. STORY: They are kept under his direction.

MR. A. C. HATCH: And he has only taken notes; he doesn't give a complete summary; I take it, just such portions as would be to their interest.

MR. STORY: Judge, I might say in that connection there is, of course, a large mass of records and they have not been separated, so that all that we have done in this case is to produce the maximum power consumption during that year, so far as we have been able to obtain it by our load record. Now, we will produce those original records from which these memoranda are taken and if we don't produce them all this testimony might be stricken out, that he gives based on that, and we will produce them. I thought they would be here at the present time, but I will raise no question about it being stricken out if we don't produce the original records, Your Honor.

MR. A. C. HATCH: With that understanding, then.

THE COURT: Very well, you may proceed.

Q On January 24th, the station carried a maximum load of

forty-nine hundred kilo-watts.

Q That reduced to water consumption with the efficiency on the wheel of sixty-five per cent, would mean how much water was being used?

A Be approximately 268 second feet.

Q What was the maximum amount of power for that year, if you know?

A 5760 kilo-watts.

Q When was that power produced?

A That was May 19th.

Q Based on an efficiency of sixty-five per cent for the water wheels, state what was the amount of water used to produce that power?

A That would be approximately three hundred and ten second feet.

Q What was the maximum amount of power used in 1914?

A Fifty-two hundred kilo-watts.

Q Reducing that power load to water consumption on a basis of sixty-five per cent efficiency for the wheels, would be what?

A Would be approximately two hundred and eighty-four second feet.

Q And in 1915 what was the maximum amount of power generated by the station?

A Forty-six hundred.

Q And please reduce that to water consumption based on sixty-five per cent efficiency for the water wheels.

A Approximately two hundred and fifty-one second feet.

Q What has been the condition of the power generating units in this plant for the last year or two?

A They have been in quite bad condition condition, if that is what you wanted.

Q Have you been repairing them; have they all been operating?

A No.

Q State generally the condition which prevails.

A This year there was one, often two machines out of order, part of the time. Last year we had one machine shut down a considerable of the time, to give a better efficiency on the other machines.

Q What was the condition that prevailed in 1913, if you remember?

A All of the machines were running then.

Q Have you been overhauling the machines recently?

A Yes, sir.

Q What is the present condition?

A Two of them are in running condition now. The third is being worked on.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q You say that when the wheels were first installed they had about eighty per cent efficiency?

A Yes, sir.

Q And that almost immediately they ran down to sixty or sixty-five?

A They run down that way very fast.

Q Now, how do you account for that?

A It was due to material suspended in water cutting the steel.

Q Don't they continue to deteriorate so long as they are used until finally become so that they are practically worthless?

A They do eventually become almost worthless, but as a general rule it takes---the falling off in efficiency is slower. In this case the falling off was very rapid at first; in fact, before the erection man left he took them apart and went over them and found there had been considerable damage done to the machines.

Q They re-pack them; do they not, sometimes?

A Yes, they do repack, but even---I think you have in mind the

new wearing rings, and things of that sort?

Q Yes.

A Yes, they do put in new wearing rings.

Q And except those are looked after the efficiency becomes less and less the longer you run them, don't it?

A They drop off after they have been run.

Q Now, is sixty or sixty-five per cent very low efficiency?

A It is very poor.

Q How?

A It is poor for the machine.

Q And you say that for the past six years that has been about the efficiency of these wheels up at the Olmstead plant?

A It has been very close to that.

Q How is it they don't keep deteriorating year after year every year?

A They do deteriorate, but as I said before, after the first--- at first the efficiency dropped off very rapidly due to this cutting and after they get so far apart then all this material that is in suspension and goes through those clearance spaces; that is, the space between the runners and moving part and housing, after you get that worn out a certain distance, then this solid material can go through without cutting so much, so the falling off of efficiency will be slower after the machine has once gotten down quite a ways.

Q What is the greatest efficiency of any wheel of which you have knowledge?

MR. STORY: I think, Your Honor, the testimony would be relevant only under similar conditions.

THE COURT: It is to test the witness's knowledge.

MR. STORY: If it is just for that purpose, I have no objection.

- A Machines are made today that have as high as ninety per cent efficiency; that is of this type.
- Q What type of wheels are these?
- A These are Francis type.
- Q You say ninety per cent.
- A Yes, I believe the manufacturers guarantee ninety per cent now.
- Q Then you are losing thirty per cent of your water, are you not, that you are putting through your wheels up there?
- A Not exactly thirty per cent; we are losing the difference between sixty-five and ninety. We were figuring a little bit ago on sixty-five.
- Q Twenty-five per cent, then, or one-fourth of the water that you are putting through your wheels at the the present time, is wasted, is it?
- A It is not; we are not getting that much power out of it, yes.
- Q If your wheels were as they should be, if they were up to their greatest capacity you would get that much more power with the water you use, is that right?
- A Well, I believe operating companies ordinarily run their machines until they get down to some point in their efficiency. You see a machine will drop off in its efficiency as it becomes aged, and it is simply a matter when it would pay to throw that machine away or get new parts for it.
- Q But, where you are using the water you are trying to get all the power you can from the water you have?
- A That is what we hope to.
- Q And it is a matter of fact, is it not, that there is twenty-five per cent of your power lost under the present arrangement?
- A Yes.
- Q That would be over thirty-five per cent according to ninety per cent efficiency, wouldn't it?

- A State the question again, please.
- Q If ninety per cent represented full efficiency dropping down to sixty-five, what per cent would that be of the efficiency as it should have been?
- A Be about twenty-seven per cent.
- Q You say that the peak load was different in different years at the plant?
- A Yes.
- Q Why was that?
- A It would depend on the conditions of the system load.
- Q It ranged from fifty-seven hundred, your highest, down to forty-six hundred, did it not?
- A I believe it did, yes.
- Q And was it by reason of your having insufficient water?
- A Partly would be on account of that and partly on account of the amount of load that we would happen to be able to throw onto this station.
- Q There is no season when at sometimes during the year you don't have sufficient water?
- A Yes, there is times.
- Q Every year there is sufficient water during some part of the year?
- A Yes, during parts of the year we have water.
- Q And then would the difference in your load be by reason of the inefficiency of the wheels or by reason of the shortage of water?
- A It would be both, I would say.
- Q Will you give us the dates of those peak loads, last two?
- A For 1915, May 25th, forty-six hundred, and 1914, it was March 11th, fifty-two hundred.
- Q Now, did you give us any for 1916?
- A No, I have not given you 1916.
- Q You stated that your general instructions to the man at the head was to keep the flume as full of water as it would carry.

A Yes, sir.

Q That is, all the time, was it?

A That was the general instructions, for him to keep the flume full of water.

Q Well, now he had that instruction, which was general standing instruction, wasn't it?

A Yes, sir.

Q During the time that you were in charge?

A Yes, sir.

Q Was there any time when he was not supposed to keep the flume full?

A There would be times he would not because of conditions that arises on the flume.

Q Now, you have what is called a storage reservoir in your tunnel, just above the plant, haven't you?

A We don't call it a storage reservoir, no.

Q It holds considerable quantity of water in excess of the inflow, doesn't it?

A It holds a little water, yes. It is a little larger than the main part of the flume.

Q About what is the capacity in excess of the main part of the flume?

A In what way do you mean?

Q How much water will it hold?

A I believe that it is considered to be good for about sixteen hundred kilo-watt hours.

Q That is the storage capacity?

A Yes.

Q Now, that provides for the peak loads, does it not?

A We might use it for peak loads.

Q You do, as a matter of fact, use it for peak loads, don't you?

A Once in a while we will pull down on that, yes.

Q Whenever it is necessary you draw from this storage water?

Q Then when did you determine the efficiency of the wheels from measurements made?

A It would depend--it would be--we knew about how much water we had in the flume by calculation.

Q From what, upon what did you base that calculation?

A That is the grade of the flume and the height of the water in the flume.

Q You had to make some measurement in order to get a basis for the calculation, didn't you?

A Yes, take the height of the water in the flume, sure.

Q When have you made that determination, if at all?

A I did not quite get your question.

Q When have you made any determination at all as to the efficiency of the wheels from the measurement of the water as to the results obtained on your machines?

A We have checked that up every now and then.

Q When did you do it?

A I checked it just a day or two ago.

Q Now, what water did you have in the flume.

A At that time we had about 246 second feet, I think it was.

Q How can you determine, without measuring the water flowing in the flume, what water there is in it?

A You have to make an estimate of the amount of water some way.

Q But you cannot tell what there is running in the flume by what goes through the wheel, can you?

A No.

Q Because of this excess water in the tunnel?

A Well, if you carry your water at a certain height in the flume, say you put a mark on the side of your flume and then carry it to that height, and carry a continuous flow, why you could tell you were not flowing any water out of that storage.

Q Might it not be going over the spill-way?

- A Well, you would have to select a point below the spillway.
- Q What is the most water you ever measured in that flume, greatest quantity?
- A I believe Mr. Swendson made a measurement a short time ago--
- Q I am asking you; Mr. Swendson testified to what he did.
- A I never have made an actual measurement myself.
- Q Have you ever been present to supervise the making of a measurement?
- A No, I have not.
- Q You have records of all the measurements made in your office, don't you?
- A No, sir; they are in the engineer's office.
- Q Sir?
- A All the measurements are taken by the engineering office.
- Q When you have what is called these peak loads, do you know whether you are drawing on the reservoir water at those times, can you tell in the plant?
- A Why, we have a set of signals in the station that show the height of the water in the pressure box; that is the box at the top of the hill.
- Q And that would indicate whether you were drawing off from the reservoir?
- A Yes, that would indicate the height of the water.
- Q Now, at some point in your testimony you give an estimate of 310 second feet of water; that was in May 1913, necessary to produce the fifty-seven hundred kilo-watts?
- A Yes, sir.
- Q Where did that water come from?
- A That come out of the flume.
- Q It comes from the reservoir water, didn't it?
- A Not necessarily so.
- Q The capacity of your flume, only three hundred feet, wasn't it, two hundred and ninety-nine, something?

MR. STORY: There is no testimony of that kind is there?

MR. A. C. HATCH: Yes, when they put the boards up on the side.

MR. STORY: Pardon me. There is no such testimony as that.

MR. A. L. BOOTH: Mr. Swendson testified he measured three hundred feet.

MR. STORY: Yes, measured three hundred feet at a certain point but that doesn't mean there was additional water, and there has been testimony there was water coming in below that point from Bridal Veil Falls and Lost Creek. Judge Hatch perhaps did not hear that testimony and I didn't think it was a fair question.

MR. A. C. HATCH: Yes, I heard it, but I didn't understand the point where this water came in. I don't know where this measuring point is.

Q Now, what is the capacity of the flume, do you know, maximum, under its present condition?

A Under the present condition there was a measurement made by Mr. Swendson.

Q Just a moment; I am asking if you know.

A I have not made an actual measurement.

Q Have you any way of determining the outflow from the wheels when you had this fifty-seven hundred kilo-watts?

A We didn't take the measurement then, no.

Q Can you determine it without actually measuring the water?

A No.

Q There isn't any other way of determining the quantity of water that is passing through the wheels except by measuring it, is there?

A That is all.

Q About how long would these peak loads continue?

A They might continue thirty minutes.

Q Might be only five minutes.

A Might only be a minute or two. Just a few minutes, long enough for a man to take a reading either way.

Q Now, are these peak loads which you have given us the highest that you found in the record?

A Yes.

Q During these years?

A Those are the highest I found.

Q And there was storage water to carry it over any one of these peak loads so far as you know, wasn't there?

A Yes.

Q That is in the tunnel; that is all.

REDIRECT EXAMINATION by Mr. Story.

Q You referred to some Francis turbines?

A Yes, sir.

Q I will ask you whether or not those turbines which you mentioned as having ninety per cent efficiency are late models?

A They are late models, yes.

Q Describe that kind of a turbine, if you will.

A It consists of a wheel or runner having passage way in the body of the runner, so that the water passes over the blade, or bucket, as it is called. The water is directed into these blades or buckets entirely around the periphery of the wheel, by guide links, which open and close to regulate the amount of water.

Q They run on a perpendicular shaft, do they not?

A They run on a horizontal shaft.

Q And in oil?

A The ~~shaft~~ shaft is carried in bearings that are oil lubricated.

Q That is however a late model and it is only in late years any such efficiency has been obtained in turbines, is it not?

A Yes, sir.

MR. STORY: That, Your Honor, I think, I am inclined to think , completes our case, with the exception of this other witness which I mentioned.

THE COURT: From Ogden.

MR. STORY: Mr. Parker from Ogden, yes. And unless these gentlemen wish to stipulate what he would testify, why, I suppose I will have to bring him down. He will testify exactly the same as Mr. Swendson and concerning the conditions at the present time in the flume at the point where the pipe joins the flume.

THE COURT: Is that all you have at this time?

MR. STORY: That is all I have at this time.

THE COURT: Now, Judge Booth, are you ready?

MR. JOHN E. BOOTH: Yes sir, I think we are ready to proceed with some of them. If the court please, I desire to submit the matter of Samuel Reiske. First, I believe he is not a party of record until he comes in with his answer, nor was John H. McEwan his predecessor in interest. I don't know how they came to be let out.

THE COURT: There is an answer on file, the answer of Samuel Reiske.

MR. JOHN E. BOOTH: It is on file. I am making that remark. It is agreeable to all the parties interested this matter should be settled in the same suit without leaving him out. It must have been a matter of inadvertence we was let out. In the first place practically all the people I represent we have taken the scriptural injunction to agree with our advisory quickly, and I don't anticipate we are going to have very much difficulty with anything I have. From conversations I had with the other side, I think I may make the statement and see if it is not agreed to, and then that may be entered as a stipulation. John H. McEwan settled upon some land in Provo Canyon some years ago, later sold his interest out to Mr. Reiske and it was agreed by the parties, Mr. Reiske and the plaintiff, that Mr. Reiske's rights shall be determined according to the amount of ground that he has and the date of his appropriation, and the two appropriations are here, 4796 and 4797, and their dates of appropriation, I think, are already in, and they will take their place according to their dates. Am I correct on that?

MR. THOMAS: Judge Booth, are those applications made in the office of the state engineer?

MR. JOHN E. BOOTH: Yes sir, and they are granted.

MR. THOMAS: Are these rights assigned and now owned by --

MR. JOHN E. BOOTH: Yes, by Mr. Reiske; he has a deed for them. Exhibits 125 and 126, purporting to be certificates

of appropriation of water from Utah Lake and Jordan River, and they may be considered, I suppose, as read, without reading them entirely into the record.

THE COURT; They are the final certificates?

MR. JOHN E. BOOTH: They are the final certificates issued in favor of John H. McEwan.

JOHN H. McEWEN, called by the defendant, Samuel Reiske, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth.

Q What is your name.

A John H. McEwen.

Q Where do you reside?

A Provo.

Q Are you acquainted with the land that is now owned by Samuel Reiske in Provo canyon? A. Yes.

Q Do you recall the description of it?

A About, in a general way, I don't know just how you mean.

Q By legal subdivision and section?

A I believe, I think it is Section 7, 4 East, if my memory serves me right.

Q It is below Charleston?

A Yes sir, it is just below Deer Creek.

Q Below Deer Creek? A. Yes sir.

Q On which side of the river?

A On both sides of the river.

Q River runs through it? A. yes sir.

Q I will ask you if you made application for water for that land?

A I did.

Q Do you recall the first time, the date of your first application?

A I think it was in August, 1909.

Q And later you made another one, did you, or about the same time?

A No, I made two at the same time or about the same time.

Q What did you do then in pursuance of that application?

A Well, I built two ditches.

Q How soon afterwards?

A First one I started on the same year and finished it and had the water out the next spring in 1910.

Q The other?

A The other I proceeded on that same year and built a ditch, principally in 1910 and used the water in the spring of 1911 during that season.

Q How much did you, how much land did you irrigate?

A Well, I irrigated -- of course, there has been some probably put under irrigation since I left there.

Q I am asking what you did.

A But at that time I should think I had under irrigation that early somewhere near 40 acres.

Q When did you sell?

A I had the time extended to complete that ditch. I understood there was some technicalities in regard to the water afterwards. You had to it, seems, use the water on actual land before you could prove up. They extended my time, and there was more land irrigated.

Q How much did you actually irrigate when your certificate was finally issued, July, 1915, or when you sold, rather?

A Well, I hadn't irrigated very much more up to the time I sold. I sold March, 1913, I think it was.

Q Forty acres, you say, was about the extent of your irrigation?

A Yes sir, at that time.

Q Up to the time you sold? A. Yes sir.

THE COURT: You sold in March, 1913 or '14.

A '13.

CROSS EXAMINATION by Mr. Thomas.

- Q When did you begin the appropriation, Mr. McEwen?
- A I made the appropriation or the application in 1909, August.
- Q When did you first begin to use the water there?
- A 1910, spring.
- Q 1910? A. Yes sir.
- Q Did anyone ever resist your claim to that water?
- A No sir.
- Q Did any of the lower water users ever object or call your attention to the fact you were taking water which they might be using or claiming?
- A Not up until the time I left.
- Q In 1913?
- A Well, it was 1912, practically.
- Q You really used the water then but two seasons?
- A I only used it two seasons.
- Q What did you irrigate?
- A I irrigated bench lands, some bottom lands.
- Q What did you raise?
- A I raised part of the time, first year wheat and some lucern. I put it into lucern immediately.
- Q You sowed your lucern and grain at the same time, didn't you, the first year?
- A Not on the same land.
- Q How much grain did you have in in 1910?
- A I think I thrashed neighborhood of four hundred bushels.
- Q How much land did you have in, what acreage?
- A I could not just say.
- Q Do you remember about what your yeild was per acre?
- A No, I don't.
- Q Give your best judgment?
- A I raised about four hundred bushels, and I suppose I had in probably twenty acres, maybe.
- Q You had then about twenty acres in lucern that year?

A No, I didn't. I had seventeen acres I seeded dry before I got the water out.

Q Then in 1911, what acreage did you irrigate?

A Well, I irrigated something better, I suppose, than thirty acres -- in 1910, you say?

Q No, 1911, that was your second year.

A Second year there is forty acres of land.

Q In grain and lucern. A. Yes.

Q About the same proportion of each you had the year before?

A No, I had more lucern.

Q Since that time you didn't use the water upon the land you sold the next year.

A I sold the next year.

Q What amount of water did you divert?

A As near as I could judge, about two second feet. We had been using from each ditch. Of course, we didn't use that all the time, that was what we applied for, was two second feet.

Q Do you recall now what you were allowed?

A No, I don't, but it is on that.

Q In the one you are allowed 66/100 of a second foot, that is for use upon nearly forty acres of land. 39.18. The other application you are allowed 1.27 cubic feet of water per second for 76.89 acres of land. I believe that is all.

MR. JOHN E. BOOTH: Mr. McEwen, I understand you raised crops in 1910?

A Yes sir.

MR. JOHN E. BOOTH: 1911?

A Yes sir.

MR. JOHN E. BOOTH: '12 and sold it '13?

A Yes.

MR. THOMAS: No, he said he sold in '12.

THE WITNESS: I sold March 1, 1913.

MR. JOHN E. BOOTH: So you raised crops for three seasons there?

A Yes, I did.

SAMUEL REISKE, called by the defendant Samuel Reiske, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth.

Q Mr. Reiske, you are the Samuel Reiske referred to as a defendant here? A. Yes sir.

Q From whom did you purchase the land in Plove Canyon you now claim water for?

A From Mr. John H. McEwen.

Q When did you purchase it?

A 1913.

Q Since that time have you used it yourself?

A Yes sir.

Q What amount of land have you actually irrigated during the time either season?

A Fifty acres.

Q What is it in?

A It is in, forty acres in hay and two acres used for garden and carrots and about eight acres in grain.

Q Has that been every year since you have had it?

A Yes sir.

Q How much was actually broke up and used in crops when you bought it?

A About forty-two acres.

Q You claim only a high water right, I understand you?

A Well no.

Q How late do you claim do you use water on the place?

A I used it all season last year.

Q This last year? A. Yes sir.

Q There was plenty of water last year?

A Yes.

MR. JACOB EVANS: This year, you mean.

Q You mean '16.

A Yes, I used enough to raise my two crops of hay the year before.

Q 1915? A. Yes sir.

Q How late do you need the water up there for lucern for two crops?

A Why, the second crop will mature with one watering in the forepart of August, between the first and tenth, and then we have the grain, won't need any after that.

Q About when do you harvest your grain?

A We don't harvest until August and after July watering, latter part of July it will mature.

CROSS EXAMINATION by Mr. Thomas.

Q How much water are you taking and using upon your land?

A Why, we water every other week. It takes approximately one week to water each bench.

Q How much in quantity of water do you take?

A I could not tell, we have two ditches and all that we can carry in a small ditch.

Q Take all your ditches will hold?

A Yes, it is only a small ditch.

Q You never measure the water?

A No, I don't think so.

Q Do you know how much in quantity a second foot of water would be, could you determine that by looking at it in a ditch?

A Well, not hardly. We put in two gates there, measuring gates, and I have had some men judge actually one ditch, carry about two second feet, but I could not positively state the facts.

Q Who regulates your flow?

A Why, nobody.

Q You attend to that yourself? A. Yes sir.

Q The water master does not regulate it?

A No sir.

Q You bought the water right from Mr. McEwen?

A Yes sir.

Q And you are familiar with the amount of water which the state engineer allowed him in his application, aren't you?

A Yes sir.

Q You don't know whether you take more or less than that?

A I don't think we hardly use so far the full quantity.

Q That you cannot state definitely?

A I believe, because we don't -- our ditch is very small. It takes us a week nearly to water 25 acres with one ditch.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q By the way, where does the seepage or water that runs off the surface, where does it get back?

A It goes right into the river below the lower bench, quite a heavy flow or spring there all summer, until late in the fall, depends on how long we use the water.

Q And this spring rises, this water in the spring rises from the seepage of your irrigation?

A Yes sir.

CROSS EXAMINATION by Mr. A. J. Evans.

Q Did commissioner Wentz ever turn the water off from you?

A I think he did.

Q When?

A In '13.

Q Turned it off in '14?

A Why, he instructed us to stop using it, and I believe that he, after that, got water up so that we could get along.

Q What time was that?

A I cannot remember, I think it was either latter part of July or forepart of August.

Q Any in 1916, this year? A. No.

Q Not interfered with at all? A. No.

CROSS EXAMINATION by Mr. Thurman.

Q You don't use water all the time through those ditches, do you?

A Last season we have, and then in the fall of the year when the

rains commence we have, I think, used them. Sometimes we run a little water down to water our stock in one ditch.

Q You say it took you about a week to water your grain. How often did you water your grain?

A Between three and four times.

Q When you got through watering your grain did you turn the water back into the river?

A Turn it in the river.

Q You don't use the water more than about half the time, do you?

A Why, on one bench I think Mr. Anderson uses it part of the time and we use it the other time. On the other ditch, why, there is high water, I think Mr. Hoover uses it.

RECROSS EXAMINATION By Mr. Thomas.

Q Mr. Reiske, Mr. Wentz, the commissioner, has shut the water off from you several times, hasn't he?

A Why, he shut it off once, I think, I didn't see him do it, but he instructed us to quit using it.

Q When was this?

A Why, I think it was two years ago, and last year we got a message to quit using it, and I believe we did quit using it in August.

CROSS EXAMINATION by Mr. Corfman.

Q Do you claim any water adverse to the people taking water during the low water season at the mouth of Provo river?

A Why I don't know. We claim ^{there is} ~~this~~ surplus water in the river and we claim some of it.

Q That is during the low water stange, when the water is low, during July and August, do you claim the right to take the water from the river at any time?

A I could not tell, it is determined by Mr. Wentz, the engineer.

Q You are regulated by the commissioner.

A Yes sir, we only want enough water to raise my crop.

Q Do you use it during the months of July and August to raise your

crops?

A. Yes sir.

Q And does he regulate it and turn it off?

A He turns it off, he gives instructions to turn it off.

Q Do you do that? A. Yes sir.

Q Recognize his right to do that?

A Yes, I did two years.

Q How?

A I did two years.

MR. JOHN E. BOOTH: I think we shall submit that, your honor please, and take up David S. Park.

DAVID S. PARK called by the defendant David S. Park, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth.

Q Mr. Park, you are one of the defendants in this case?

A Yes sir.

Q Where is your ground located?

A Section 13.

Q Sixth South, 2 East, at the mouth of the Canyon?

A Yes sir.

Q How much ground have you there?

A About 85 acres.

Q Are there others interested with you in that ditch?

A Yes.

Q Do you recall who they are?

A McBride and Hoffman.

Q Riard estate?

A Yes, that is McBride.

Q The Branch E. Young estate, have they some.

A They have a separate stream from mine.

Q Doesn't it come out of the river at the same place?

A No sir, not at the same place, above.

THE COURT: Then I understand it McBride and Hoffman are the only ones interested with you in this ditch?

A Yes sir.

Q How long have you owned that ground, Mr. Parks.

A About thirty-two years.

Q You are one of the parties to what is known as the Morse decree?

A Yes sir.

Q Had your interests determined in that?

A Yes sir.

Q I will ask you if you have consulted with the plaintiff in this case concerning that? A. No sir.

Q Are your demands greater now than they were in 1902 when the Morse decree was rendered?

A No, about the same.

Q Have not increased your acreage any since then?

A No sir, not to speak of.

Q Use no more water than you did before?

A No sir.

Q And don't ask to have anymore than is awarded to you in that decree? A. No sir.

Q You have how much land?

A About 35 acres.

Q And how much land has Mr. Hoffman in the same ditch?

A Thirty, I think.

Q Has his been used about the same time yours has?

A Yes sir.

Q Who were the original owners of those lands, do you recall?

A Roberts took the land up, I think, in the beginning; then changed hands a few times after that.

Q From whom did you buy it?

A I bought from Shurtliff.

Q Originally it was the Roberts. Who was the other man there, do you recall?

A There isn't anyone else I know of.

Q Barton?

A Oh yes, Barton used to own.

Q And they have part of the land and have a separate ditch?

A Yes, Barton land has a separate ditch from mine.

Q Who owns the Nuttall place now?

A Hoffman.

Q That is the one you are interested in?

A Yes sir.

MR. JOHN E. BOOTH: I will state, your honor please, in these matters we are relying very largely for this low water right on the Morse decree. I think I may say generally when the water in the prove River at the mouth of the canyon amounts to 300 second feet that a good many of us don't claim anything about it-- that is the limit in the Morse decree, as you will remember.

Q Now, I will ask you Mr. Park, have you occasion in the very early season to use more water on your ground?

A Yes sir.

Q About how much have you used if you can tell?

A Well, we used so much I cannot hardly tell in high water.

Q When there is an abundance of high water?

A Yes sir.

Q Have you had any difficulty with the commissioner?

A No sir.

Q You are willing to accept of that decree and his division under that decree? A. Yes sir.

MR. MCDONALD: Mr. Wentz suggests in order that the record may be clear this be connected with the Nuttall & Park ditch, because that ditch is now in the record and this will be misleading unless you connect it with the Nuttall & Park ditch.

MR. JOHN E. BOOTH: I desire to have some of the other defendants, but they are not here. Perhaps I can do that.
Q The Park & Nuttall ditch, you understand what that means, do

you? A. Yes sir.

Q Who are interested in all of that water?

A Park and Nuttall Ditch?

Q Yes.

A There is Hoffman and McBride.

Q And yourself?

A And myself.

Q Just those three? A. Yes sir.

Q What ditch is it the Young estate uses water for some of that original Roberts ground?

A I don't know what name that goes under.

Q There is a ditch there?

A Oh yes.

Q Do you know if they are using water also through that ditch?

A Yes sir.

MR. JACOB EVANS: What ditch is it that you are now referring to, Barton & Young?

Q You know the Barton & Young ditch, do you ?

A Yes sir.

Q Is that the one you meant, was that the one you referred to, that is referred to in the decree, Barton & Young ditch?

A Yes sir.

Q Now, the people under that ditch, do you know if they are using it to water through there about the same time you have yours?

A Yes sir.

Q How long do you say that is?

A Since they begin using it?

Q Yes.

A I think about the same length of time I have had mine.

Q I will ask you if you know whether they have used this water under the Morse decree that it has been distributed to them from time to time?

A I think so.

Q You are a neighbor there and have seen it?

A Yes sir.

Q And I will ask you if there has been any question ever raised about your right to use that water?

A No sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Do you irrigate the entire 85 acres, Mr. Park?

A I don't irrigate that much.

Q How much do you irrigate, how much of it do you irrigate?

A About 54 acres.

MR. A. C. HATCH: Judge gooth, can you give us the number of acres that decree gives him?

THE WITNESS: That is my part of it.

Q I didn't understand you?

A I irrigate about 54 acres myself.

Q Of the 85 owned by you? A. Yes sir.

Q Is the balance irrigated at all, balance of your 85 acres?

A I irrigate it when I have water enough, all I can of it.

Q What is it, timber land?

A Yes sir, cottonwoods and pasture land.

Q Flood it over when the water is high?

A Yes sir.

Q Part of it is river bed, isn't it?

A Yes, there is some river bed.

Q About how many acres of the 85 is river bed?

A Oh, I should think twenty acres.

MR. THOMAS: You claim no more water, ^{than} that allotted to you under the Morse decree, do you?

A No sir.

MR. A. C. HATCH: What quantity was awarded to you under the Morse decree, if you know?

A How much I have used.

MR. A. C. HATCH: No, how much was awarded you under the Morse decree?

A No, I don't know.

MR. JOHN E. BOOTH: You are regulated by the commissioner under that decree and accept it.

A Yes sir.

MR. A. C. HATCH: Did you ever measure the land that you irrigate?

A No sir.

CROSS EXAMINATION by Mr. A. J. Evans.

Q Do you know how much Hoffman irrigates?

A No, I really don't know just how much.

Q Approximately?

A Approximately twenty-five acres, maybe a little more than that.

Q And McBride?

A Well, I don't know how much they irrigate.

Q Do you have a judgment on it?

A Why, somewheres near twenty acres, I should judge.

Q Twenty acres?

A Somewheres near there, I should judge.

Q How much of a stream do you have, Mr. Parks.

A Why, about two seconds and a half.

Q What part of the time do you use it?

A Use it all the time.

Q That is between the three of you? A. Yes sir.

Q The entire time? A. Yes sir.

Q How often do you water?

A Oh, about every six or seven or eight days, depends on the kind of stuff we have in.

Q What kind of crops do you raise?

A Orchard, grain, lucern, potatoes, corn, all kind of crops.

Q What proportion of your ground is in orchard?

A About thirty acres.

Q About how much grain?

A About ten acres.

Q Any alfalfa? A. Yes sir.

Q How much?

A Four or five acres.

Q Balance in potatoes?

A Potatoes.

Q Balance in potatoes?

A Potatoes and corn and different stuff.

Q That needs water every week, does it? A. Yes sir.

Q About what proportion of the time do you use the stream yourself?

A Myself?

Q Yes.

A Half the time.

Q And the other half is divided equally between the other two?

A Yes sir.

MR. JOHN E. BOOTH: We reserve until I can get the other defendants here for the Barton & Young Ditch. I will try to get them. I will take the Faucett field next, your honor please. I will state this matter was also included in the Mores decree. I will call Mr. George James.

GEORGE JAMES, called by the defendant Faucett Field Ditch Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth:

Q Your full name, Mr. James?

A George James.

Q Where do you reside?

A Pleasant View.

Q How long have you lived there?

A In the neighborhood of forty years.

- Q Did you know the locality before that? A. Yes sir.
- Q How long since you first became acquainted with that?
- A Oh, I guess I have been acquainted with that country for fifty-five years.
- Q And lived there about forty? A. Yes sir.
- Q Do you know the land included in what is known as the Faucett Field? A Yes sir.
- Q And the parties who own the land? A. Yes sir.
- Q To your knowledge how long has that country in there been irrigated.
- A Well, it had been irrigated between sixty and sixty-three years some of it.
- Q That was before you knew about it, wasn't it?
- A Yes.
- Q I am asking you --
- A It has been irrigated, ^{about,} I should judge, somewhere about fifty-five years since I knew it.
- Q Now, in the last thirty years, say has there been any increase, material increase in the acreage irrigated?
- A I don't think so, none that I know of.
- Q It is one of the oldest water rights in the country, is it not?
- A Well, according to that I should judge it was,
- Q These parties known as the Faucett Field people were parties to the Morse decree? A. Yes sir,
- Q And the decision that was rendered in that case, I am going to ask you as one of those parties how you have got along under that decree?
- A Well, we have got along pretty well.
- Q Would it be an injury, or what effect would it have on you if that water was cut down?
- A Well, we would not have enough water.
- Q You are a practical irrigator yourself?
- A Yes sir.
- Q You people have an organization there not incorporated?

A No.

Q But you have a watermaster?

A That is right.

Q And who has the general control over all of it.

A Why, MR. Lott, he is our watermaster, and I just don't know --he keeps our books, secretary kind of, just holds them.

Q This water that you use for the Faucett Field is run portion of the way down the East Union ditch, is it not; Upper East Union?

A Well yes, we run it in consolidation with the Upper East Union.

Q It goes in the same canal to where you take it out?

A Same canal?

Q And is reckoned, however, as Faucett Field water?

A Reckoned we have our individual stream.

Q And regulations?

A Regulations, we ain't in with the Upper East Union in regard to regulation at all.

Q I will ask you if this water has been used during the irrigation season, night and day. A. Yes sir.

Q And all the time?

A All the time.

Q Now, I will ask if you claim any water, or desire any water outside of what the Morse decree gives you?

A No sir.

Q All above that you are satisfied anybody may use it that can use it? A. Yes sir.

Q I will ask you if you have consulted with the other members of this Faucett Field Company?

A No, I have not. That is, I talked with them and heard their opinions on the subject, they were satisfied with the decree.

Q Were you one of the members of the Faucett Field Company that had a consultation with the plaintiffs in this case MR. Murdock?

A Yes sir.

Q And there was practically an agreement entered into there?

A Yes sir.

Q Can you state about what that was?

A Well, as I understand that agreement the question came up if we were satisfied with our decree.

Q Morse decree?

A Morse decree, and we told them we was.

Q And they --

A And they accepted it.

MR. A. C. HATCH: Move to strike out that "accepted". The witness said they accepted that, I didn't get the whole of it.

MR. JOHN E. BOOTH: He stated, this witness stated that the question of the Morse decree was up, and they said they were satisfied with it and the plaintiffs accepted it.

MR. A. C. HATCH: I don't so understand it, I don't know, if they have I have never heard about it.

MR. JOHN E. BOOTH: Don't put this in the record, but I happened to be there.

MR. A. C. HATCH: That is why I move to strike it out that the plaintiffs accepted it.

THE WITNESS: Maybe I can make that a little plainer.

Q Very well.

A They asked us if we were satisfied with this decree, if we had water enough. We told them we were and they stated that they didn't think they wanted to go behind a sixty or sixty-three year old right, and were willing to let our decree stand as it was.

CROSS EXAMINATION by Mr. A. C. Hatch

Q Do you know what the Morse decree gives you in duty?

A I don't know just now.

Q Twenty acres to the second foot, isn't it?

A What is it?

Q Twenty acre duty.

A How many acres?

Q Twenty. You have a second foot of water for each twenty

acres of land, haven't you, in the Faucett field under the Morse decree?

A One hundred and twenty, wasn't it?

Q Twenty, you have about five second feet of water for one hundred and twenty acres.

A I don't just know in regard to that.

Q Do you know how much water the Morse decree gives to the Faucett Field ditch?

A I do not when it comes to the acreage.

Q Do you know how many acres of land there is irrigated from that ditch?

A Well, there is about one hundred and fifteen acres, I believe, somewheres about there, I don't know just exactly.

Q What are the dimensions of the ditch?

A Where is the dimension of it?

Q Yes, what is it.

A What are the dimensions of the ditch?

MR. JOHN E. BOOTH: They don't all take it out at the same place, they don't use just one ditch.

A You see we run in with the Upper East Union, we take at the same place as the Upper East Union, carrying down with the upper East Union. As far as the lower end of the Faucett field our water runs in consolidation with theirs.

Q You never have been short of water under the regulations of the Morse decree?

A Well yes, we have had dry seasons where we haven't had it go around as often as we should do to raise our berries.

Q When?

A We have suffered some in regard to water.

Q When did you have a dry season?

A Well, when it was dry and the river run low.

Q When was it?

A I don't know just the time, we have had it when we have been pretty scarce of water.

Q What is the period between your irrigations under that ditch?

A How was that?

Q Read it.

(Question read)

A What is the length between our waterings?

MR. JOHN E. BOOTH: Yes.

Q How often do you use the water, how often do you apply it upon your land?

A Well, we are times now according to the acre, I just forget the hours of the time, but we have been running our water and turn ain't come around until this year. We have cut it up on time, we have not been receiving that water only about ten to twelve days, and that to fourteen. That is what ~~sax~~ I say, and our truck patches, our gardens, our small fruit suffer.

Q Since you are timing it you have a better regulation, don't you?

A How is that?

Q You have better regulation now you are timing it?

A Yes, we have better regulation since we put it down on time. We didn't have it quite as long a time, but have it a little oftener.

Q Have you any idea as to the quantity of water that flows in your ditch?

A No, I don't.

Q How wide is it, how deep is it?

A Well, the ditch is wide in some places and narrow in others. It has got an awful fall, you could not hardly estimate the width of it.

Q You have several diversions from the East Union Canal, don't you, several places where you take the water?

A Yes, we have several places where we take the water from the Upper East Union canal.

Q Do you have all those streams running all the time during the irrigation season?

A Oh no, we just have one stream.

Q One at a time?

A One at a time.

Q How wide and how deep is that stream?

A We ain't measured that water, we have our gates and have our ditch measured, and the Upper East Union generally measures it.

Q How wide is your gate?

A My gate is about, I should judge it is about 18 inches.

Q How deep?

A Well, I don't know, I never measured the water going through it.

Q Do you take your water from the Upper East Union?

A Out of the Upper East Union ditch, yes sir; we run it in the ditch that belongs to the Faucett Field Company before the Upper East Union come there.

Q Is all the Faucett field water run through your gate when you are using it?

A No sir, nobody's water but mine.

Q Where is the other stream?

A They take it out at their own headgate.

Q So there are two streams running at the same time?

A No sir, when my gate is open the other is shut.

Q So that all the water --

A They all water one at a time and that water is times to them.

Q All of them water, that is going to the Faucett Field users goes through your gate when you are using?

A Nobody's water goes through mine, but my own water.

Q That is all?

A What is all. Oh yes, I understand you now. Yes, the Faucett water, I take all of the Faucett Field water that belongs to the Faucett Field when I water.

Q What is what I was trying to get at.

A I take all of the Faucett field when I water, it all goes through my gate.

Q But you don't have any idea as to the quantity you take?

A No, I have not.

Q Who does know?

A We are measured, we have our water, commissioner measures our

water, and keep within that measure right down strict as we can.

Q Never slip up on the ditch and add a little bit?

A Well no, we don't have to, we don't have to, slip up on anybody's water.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q Just one question. Where does the drainage from the Faucett Field seepage go?

A The seepage of the Faucett Field?

Q Yes.

A Well, it goes up and goes into City creek, and what waste water that runs off of it goes in there.

Q Do you know what effect that has on the streams below?

A Well, it increases the springs.

Q You know where myplace is? A. Yes.

Q Do you know some streams there that are very much larger ⁱⁿ irrigation season?

A I know sometimes when we quit irrigating and if the season goes dry they are entirely dry, and if we irrigate they run quite a stream of water.

RECROSS EXAMINATION By A. C. Hatch.

Q Who turned the water to you this year?

A Why, I guess it was Mr. Wentz.

Q How have you got along the last year or two with your irrigation, have you had plenty of water?

A Yes, we have had plenty of water.

Q Have all the users under the Faucett Field ditch had plenty?

A Yes, I think they have, I haven't heard any complaints.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q Let me ask you how it was year before this last.

A Well, year before last we were pretty short until late in the season, the river went entirely dry.

MR. THOMAS When you speak of last year you mean this

present year?

A Year before this.

MR. THOMAS: Beg pardon.

A Year before this.

MR. THOMAS: 1915?

A Yes.

Q That is the dry year I am speaking of.

A I could ford the river with shoes anywhere.

Q That was 1915?

A That was 1915.

Q 1916 you have had plenty of water? A. Yes.

MR. JOHN E. BOOTH: If the court please, I believe I inadvertently omitted to formally introduce these two exhibits, 125 and 126 in the Reiske case. I had them marked and submitted them to the stenographer, but I think I omitted formally to introduce them. I suppose there is no objection.

MR. COFFMAN : Has the witness Mr. James been excused.

MR. JOHN E. BOOTH: I suppose so.

MR. THOMAS: I think he left.

MR. JOHN E. BOOTH: Mr. Meldrum I wanted to use too.

THE COURT: You can send for him and will be entitled to cross examine him. However, if there is no objection we will proceed and you may cross examine him when he returns.

MR. JOHN E. BOOTH: I will have him here. Now, your honor please another matter we can get through in a moment or two and that is all I am prepared for this afternoon. The clerk says that he doesn't find the original answer in the Faucett Field. I don't know why it is, I will have to substitute my copy.

THE COURT: I suggested to the clerk an order may be made if it was found necessary. I suggested to him a little further search, and if they don't find it an order may be made substituting the copy.

MR. JOHN E. BOOTH: I desire to submit Exhibit 127, a stipulation between the Provo Reservoir Company and John D. Dixon, one of the defendants, and have it made a part of the record. I don't know whether any of the others -- do you desire to see it, it is signed by these people.

THE COURT: This is a stipulation between the plaintiff and J. D. Dixon. and others?

MR. JOHN E. BOOTH: J. D. Dixon alone.

MR. THURMAN: Have you closed the Faucett Field yet.

MR. JOHN E. BOOTH: No, but the witnesses are gone, I will have to put them on in the morning.

OMMISSION.

Testimony as to Mrs. Johanna Anderson.

MR. JOHN E. BOOTH: Your honor please, the stipulation I had Mr. Thomas desires to hold until morning.

THE COURT: Now, are there any other matters we can take up this evening?

MR. THOMAS: yes, your honor, there is one matter if I can get attention of the plaintiff for the moment we can, of L. L. Donan. The plaintiff is willing to stipulate that the claim set forth in the counterclaim of Mr. Donan may be allowed. Without going into detail, I may say briefly the water he uses is largely for fish pond purposes. Provo City has no objection to the allowance of the claim, and so far as I know no other litigant has any objection to the allowance of the claim. The use of the water is alongside the river bed, and it merely finds its way back in. Certain difficulties that Mr. Donan had with the Telluride people were adjusted separately and that eliminates any contention on their part.

THE COURT: This is satisfactory, is it gentlemen, he be allowed what he claims in his cross complaint?

MR. A. C. HATCH: Yes.

OMISSION.

Discussion as to Heber City stipulation,

Discussion as to appointment of special judge.

4:20 P. M., Recess to 9:30 A.M., November 15, 1916.

OMISSION.

Introduction of exhibits on behalf of Midway Waterworks
Company and stipulations as to Wasatch County acreages.

MR. JOHN E. BOOTH: I suppose it would be well to finish up with the Faucett Field as these witnesses left under a misapprehension. Mr. James, will you come forward.

GEORGE JAMES Recalled - - -

CROSS EXAMINATION by Mr. Corfman.

- Q Mr. James, in the use of the water for the Faucett Field ditch you testified to yesterday, have you been under regulation by the water commissioners? A. Yes sir.
- Q And where has the water been measured to you from the river? A Well, it has been measured to the Upper East Union ditch, I suppose.
- Q And the water runs through the Upper East Union canal down to your head gate? A Yes sir, that is, we use it jointly together.
- Q Is the water at ~~the~~ your head gate regulated by the commissioner, or do you take the water there without any regulation? A We take it without any regulation where we regulate that between the Upper East Union and ourselves, as a rule.
- Q Have you been under any control as to the taking the water from the Upper East Union? A No, sir; only we are supposed to take out what is measured in as our proportion.
- Q As your proportion? A As our proportion of the water.
- Q Has that been agreed upon between yourselves and the Upper East Union? A Yes, that is the way we regulate ourselves, we just have our streams.
- Q Have you a measuring gate at that point? A We have a weir gate below us. They did have one above, but I believe they destroyed that one.

MR. JOHN E. BOOTH: I suppose it would be well to finish up with the Faucett Field as these witnesses left under a misapprehension. Mr. James, will you come forward.

GEORGE JAMES Recalled - - -

CROSS EXAMINATION by Mr. Corfman.

Q Mr. James, in the use of the water for the Faucett Field ditch you testified to yesterday, have you been under regulation by the water commissioners? A. Yes sir.

Q And where has the water been measured to you from the river?

A Well, it has been measured to the Upper East Union ditch, I suppose.

Q And the water runs through the Upper East Union canal down to your head gate?

A Yes sir, that is, we use it jointly together.

Q Is the water at ~~the~~ your head gate regulated by the commissioner, or do you take the water there without any regulation?

A We take it without any regulation where we regulate that between the Upper East Union and ourselves, as a rule.

Q Have you been under any control as to the taking the water from the Upper East Union?

A No, sir; only we are supposed to take out what is measured in as our proportion.

Q As your proportion?

A As our proportion of the water.

Q Has that been agreed upon between yourselves and the Upper East Union?

A Yes, that is the way we regulate ourselves, we just have our streams.

Q Have you a measuring gate at that point?

A We have a weir gate below us. They did have one above, but I believe they destroyed that one.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q There has been no difficulty between you and the Upper East Union?

A No difficulty, always run unanimously agreed.

MR. JOHN E. BOOTH: Your Honor please, we will submit the Faucett Field on that. I desire to ask in the matter of Dixon we had yesterday, if the attorneys for the city are ready.

MR. THURMAN: Mr. Booth, on this Faucett Field, I don't remember you put ⁱⁿ any evidence showing the quantity except as it is referred to in the decree. What is the quantity of water.

MR. JOHN E. BOOTH: In the Morse decree I supposed that was in the testimony, so I didn't offer that.

MR. THURMAN: You haven't put in the acreage or the water.

MR. JOHN E. BOOTH: We put in the acreage, 108 acres.

MR. THURMAN: I thought maybe you remembered the amount of water.

MR. JOHN E. BOOTH: It changes as the river varies. Faucett Field 169/10000 at the highest stage. Now, on account of this being the older right as the river goes down our percentage increases, so the next stage is 180 out of ten thousand, and at the lowest stage it is 202 out of ten thousand. Of course it is not necessary to introduce the decree, as it is already in.

THE COURT: I think the decrees were both introduced at the other hearing.

MR. JOHN E. BOOTH: Yes, it has been introduced several times, and we can introduce it again if you are not satisfied with it.

MR. JACOB EVANS: Your acreage agrees with that given by the witness Scott.

MR. JOHN E. BOOTH: Yes.

MR. A. L. BOOTH: You claimed 115.

MR. JOHN E. BOOTH: Yes, but there was a discrepancy.

In the matter of John D. Dixon, he is quite busy in the bank, and I let Mr. Thomas have that stipulation last evening and he told me he would consider it and hand it back this morning with his reply.

MR. TUCKER: Your honor please, Mr. Thomas has not been able to get down here yet this morning, and it will be more satisfactory to the city if those matters can be put off until he arrives, as I understood the stipulation provides for a change in the place of intake and that would affect the city's rights and it would more satisfactory if Mr. Thomas could be heard on that.

MR. JOHN E. BOOTH: We will wait for them then. Now be glad to take up the Carter interest. It will be brief and we will get through with it before we start on these longer cases. This is in the interest of John H. Carter, R. G. Carter, Amos Carter, David Carter, R. D. Young, Lafayette Carter, Verenus Carter, Mary E. Downs, J. F. Downs, and Eliza Ashton, administrator of the estate of Aaron Carter, Deceased.

DAVID CARTER, called by the defendant, Carter Ditch Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth.

Q What is your name?

A David Carter.

Q Where do you live?

A I live at Carterville on Provo Bench.

Q Are you one of the persons that owns some land and water rights there? A Yes sir.

Q On the west side of Provo River? A. Yes sir.

Q Where does your water come out of the river?

A Comes out at the mouth of the canyon.

Q In what canal?

A In the West Union, I think.

Q But not a part of the West Union water?

- A Oh no, we have to work our assessments and keep it up.
- Q How long have you been there, Mr. Carter? you people I have named here.
- A We have been there, I don't know how long, it has been, I guess thirty years.
- Q All of that?
- A Yes, I think it is all of that.
- Q You were parties to what is known as the Morse decree?
- A Yes sir.
- Q Have you acted under that decree since it was rendered until now in the distribution of your water? A. Yes sir.
- Q Has it been satisfactory or otherwise?
- A Been satisfactory.
- Q Do you know how much land you people have?
- A Well no, I don't know exactly. Somewheres between seventy-five and eighty acres.
- Q That you all have?
- A That we all have.

MR. JACOB EVANS: Lets see if we cannot arrive at this. The water to this land is taken through the West Union, called the West Union, Smith and Carter ditches?

MR. JOHN E. BOOTH: Yes.

MR. JACOB EVANS: And the acreage shown as shown by Scott Stewart was nine hundred, is that right?

MR. JOHN E. BOOTH: This is not a part of the West Union or Smith & Carter ditch. This is an independent right they have had for fifty years, and it is much more convenient for them to bring it through the West Union Canal and take it out about a mile below the head.

MR. A. J. EVANS: Do you know whether that is included in the Scott survey or not?

MR. A. L. BOOTH: I think it is.

MR. JOHN E. BOOTH: We don't claim anything ~~for~~ after the high water only what the Morse decree gives us of the low water

MR. JACOB EVANS: What I was trying to get was the acreage under these various ditches.

MR. JOHN E. BOOTH: This is a separate claim of between seventy-five and a hundred acres. The last item, Hohn Carter and all other persons taking water from the Carter Ditch \$5/10000.

Q I will ask Mr. Carter if you are under the regulations of the Commissioner?

A Well, we were for a while, but I don't think we have been for the last few years. They come and put our gates in and fixed it so we know just what to take out.

Q And you have abided by that regulation?

A Yes sir.

Q And been any difficulty between you and the commissioner on this matter ?

A. NO sir.

Q You are satisfied, you have consulted with your co-owners in there?

A. Yes sir.

Q And are satisfied with the amount of water you are getting?

A Well, we have not got enough water but then we will have to be satisfied, I guess, because it is all we have used.

Q Some years have you been short?

A. Yes sir.

Q How were you this year, this present year?

A Present year we had plenty.

Q How was it in 1915, a year ago?

A We were short.

Q You were short that year?

A Short.

Q As most everybody was. Now you ask then your right be confirmed as was fixed by the Morse decree?

A Yes sir.

Q Is your land mostly in the bottoms.

A Yes sir.

Q So that you don't need much of the high water?

A No, we have more water than we need.

Q Glad if somebody would take that?

A Would if they would take it and take care of it.

Q It costs you considerable difficulty in the early spring to keep it off of your land does it not?

A Caused us about two or three hundred dollars damage last year.

CROSS EXAMINATION by Mr. Jacob Evans.

Q You say you are under no regulation as to the distribution of the water?

A Sir?

Q You are not regulated you say for the last few years?

A No sir, only just as the commissioner fixed the gates.

Q Did they fix them in the spring of the year and let them run through the irrigation season in that way?

A No sir, sometimes have to open it out in right low water to get our amount.

Q In other words the commissioner fixing the gate does not control the amount of water you people take?

A No sir.

Q If you feel you are entitled to more than what the commissioner gives you, you go and take it?

A We have a box fixed there in low water, in low water we draw more water than we do in high water. Of course, the gate has to be opened a little wider to get that water in low water.

Q You open it up to take what water you think you are entitled to?

A We take what water is measured there, so that when low water comes we know ~~where~~ ^{where} to move the stake to to get it.

Q You take your water direct from the river or creek, do you?

A We take it from the West Union that is down a mile.

Q The quantity of water is measured into the West Union by the commissioner?

A. Yes sir.

Q And you take your water out of the West Union?

A Yes sir, it is an individual ditch, it all runs together.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q Has there been any difficulty between you and the West Union or the Smith interests in regard to the division of this water?

A No sir.

Q It has always been amicable?

A It has always been right.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Just a moment, how is it you take more water in low water than you do in high water?

A Because we don't need so much in high water as long as the river is flooding our land all over waist deep.

Q Then in high water that is about the way you irrigate?

A That is the way we irrigate most of our ground.

Q Most of your ground is irrigated by the river --

A By the high water.

Q Flooding over it waist deep?

A Good many places it is waist deep.

Q You don't claim you take more water than that in low water?

MR. THURMAN: I would call that "waist" water.

A Waste water, I don't know what you call it, it is waste water.

Q You don't claim you take more than that in low water?

A No sir, but the decree doesn't give this to us in high water, but it is in low water.

Q Nature gives you that?

A Nature gives us that.

MR. JOHN E. BOOTH: I think, your honor please, we submit that. We'll take up the East River Bottoms Water Company now.

FRED FERGUSON, called by the defendant, East River Bottoms Water Company, being first duly sworn, testifies as follows:

Q Mr. Ferguson, where do you live?

A Pleasant View.

Q What is your initial?

A Fred Ferguson.

Q Are you one of the owners in the -- of land and water in the east River Bottoms? A. Yes sir.

Q About where is that located?

A Just north of prove about four miles.

Q Between here and the mouth of the canyon?

A Yes sir.

Q How long have you lived where you are?

A About twenty-eight years.

Q Who lived before you did on the ground?

A My father.

Q Do you know when he first settled there about?

A No, he bought it from the Baum estate.

Q By the way, how old are you?

A I am forty-eight.

Q And since you can remember you and your predecessors in interest have owned that ground? A. Yes sir.

Q And do you know the other owners?

A Before us?

Q Your neighbors, I mean?

A Oh yes, I am acquainted with my neighbors.

Q Do you know the Jacob Baum place? A. Yes sir

Q Was that settled as early as yours?

A I think it was, I think the two old gentlemen homesteaded the same ground if I remember right, or understood it right.

Q And they settled on it long before they homesteaded?

A I think so.

Q Now, how much land have you in the River Bottoms, that is included in this East River Bottoms Water Company?

A Why, about 444 acres.

MR. THURMAN: Is that all of it?

MR. JOHN E. BOOTH: That is all of it.

Q This includes Mr. Bonnett?

A No, no, don't include Mr. Bonnett, the John James estate, and Mr. Bonnett bought it, but I don't think he ever got his water stock, in fact I know he has not.

Q While his land is in the vicinity and under the same regulation he never has joined the company?

A No, he has not joined the company, but the party before him joined the company, but he never took any interest to get his water stock.

Q Never had a transfer made.

A No, never had a transfer made.

THE COURT: This 444 acres includes all the land that is watered from the East River Bottoms?

MR. JOHN E. BOOTH: Yes, in this water company. There is some separate people.

THE WITNESS: Outside of that Bonnett piece.

Q How much is there is the Bonnett piece, do you know?

A Well sir, I should judge between three and five acres, I could not tell you exactly.

Q There is a portion of the Bonnett place that is watered from the Upper East Union Canal? A. Yes sir.

Q Have you been an officer in this company?

A Yes sir.

Q What?

A president.

Q And any other? A. No.

Q Watermaster?

A Yes, I have been watermaster.

Q I will ask you if you have been regulated under the Morse decree? A. Yes sir.

Q Ever since it was --

A Yes sir.

Q Ever since that decree was rendered? A. Yes sir.

Q I will ask you how you got along under that when you got your share of water?

A Well, sir, we got along first rate. 1915 was a little shy, but outside of that we have fared fairly well with it, got along first rate.

Q Now, could you get along and mature your crop with economical use of the water for a less amount than was awarded to you in that decree?

A No sir, I don,t think we could.

Q How is it in early season, high water time?

A Well, we seem to have plenty of water in high water time.

Q Everybody has sufficient?

A Everybody has plenty.

Q Now, do you need to irrigate as early as they do on the bench?

A Well yes, I think so, ~~ont~~ meadows. We don,t irrigate grain as quick, but meadows and pastures we do.

Q I will ask you if you have had a consultation with the plaintiff Provo Reservoir Company, you had a meeting with them?

A Yes.

Q And talked this matter over? A. Yes sir.

Q Under that what was the agreement reached as to the Morse decree?

MR. JACOB EVANS: Object to that as immaterial and incompetent.

THE COURT: Your objection is because he is not competent to state what the agreement was.

MR. JACOB EVANS: I don,t think it would make any difference unless it was some written agreement of some kind. We could not agree with respect to this matter except for ourselves anyway.

THE COURT: I take it that is all that could be.

MR. JOHN E. BOOTH: Certainly.

THE COURT: Objection must be sustained if you insist upon it. he is not competent to express his opinion what the agreement was. He may state what was said.

MR. JOHN E. BOOTH: It was very much shorter, is there any question but what that was made?

THE COURT: Is there any dispute.

MR. JACOB EVANS: As far as my understanding is no agreement was made that could be binding upon anybody with respect to this matter. That is as I have understood it all along. I have not attended any of those conferences, I don't know what they were.

THE COURT: There is a dispute then whether there was an agreement?

MR. JACOB EVANS: There is.

MR. JOHN E. BOOTH: If that is it -- I supposed it was in good faith. Of course, if there is a dispute it is coming in a little bit late. I believe that is all then.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Do the East River Bottoms take their water all out of the river at the same place or take it at different places?

A They take it out of City Creek, of course it comes from the river.

Q Is there one opening in the City creek which takes the entire stream for the East River Bottoms Water Company?

A Yes sir.

MR. JOHN E. BOOTH: Excuse me, all you people don't take it out of the City creek at the same place?

A No, the understanding I had from Mr. Evans one opening from the river will take into City Creek.

Q No, no, what I want to find out is how many ditches do you take out of City creek for the East River Bottoms Water Company?

A Must be nine or ten.

Q Nine or ten? A. Yes.

Q Let us commence at the upper one, tell us what you call that ditch?

A The Upper ditch is the Smith ditch.

Q The Smith ditch? A. Yes sir.

Q How much land is irrigated under the Smith Ditch?

A I could not tell you that.

Q What is the next ditch?

A The next ditch is Mendrum, and one of the Smith boys waters out of the next ditch.

Q How much water, how much land do they irrigate under the Meldrum ditch?

A Well sir, I couldn't tell you how much.

Q What is the next ditch?

A Next ditch is Garden ditch.

Q How much land do they irrigate under the Garden ditch?

A I don't know, I couldn't tell you.

Q What is the next ditch?

A Acres of land they water -- the next ditch is old lady Jenson, Agnus Jenson waters a little piece.

Q How much land is irrigated through that ditch?

A Well, I cannot tell you the amount of land they irrigated, they have a number of shares, I don't know the ground.

Q Give us the next ditch?

A Next ditch is Boyce's, Peter Boyce ditch.

Q Do you know how much land is irrigated?

A No sir.

Q Under that ditch. Do you know how many shares they have?

A Boyce?

Q Yes.

A No, I don't know.

MR. JOHN E. BOOTH: Haven't you a list of it?

A Not with me, I thought our secretary would be here with a list of shares.

Q What is the next ditch?

A The next ditch is a little ditch I water part of my ground through, Richmond place.

Q What do you call it?

A Just call it Ferguson ditch, I suppose.

Q How much land is irrigated from the Ferguson ditch?

A I water three acres from that, but there is forty above that is not in this company that use the same.

Q I am simply asking about the number of acres that is irrigated by the company.

MR. JOHN E. BOOTH: We will furnish you that from the secretary, each share represents an acre of ground and I thought Mr. Ferguson had it.

Q What is the next ditch?

A Ferguson No. 2, I think.

Q Do you know how much land is irrigated from Ferguson No. 2?

A I can explain that to you if you want to listen to it. There is so many shares in each one of them ditches and they water as much ground as they got. Some of them hasn't got enough shares to water their ground, but they run the water during the time through the canal.

Q If you don't know you can say so and probably somebody else can furnish the information. What is the next ditch taken out?

A Ferguson No. 1.

Q Ferguson No. 1? A. Yes.

Q Do you know how many acres are irrigated by the Ferguson No. 1?

A No .

Q Give us the next ditch?

A Next ditch is James Meldrum's and Judge Booth's ditch.

Q Meldrum and Booth, and do you know how many acres irrigated?

A No, I don't.

Q What is the next ditch?

A Jacob Baum ditch.

Q Acres irrigated?

A I couldn't tell you.

Q Next ditch,

A Next ditch I think is the Thomas Foote ditch.

Q Acres irrigated?

A I couldn't say.

- Q next ditch?
- A I think that is all. I think the Bonnett and Foote waters out of the same ditch.
- Q That is eleven ditches then that is taken out of City creek at different places along the river bottoms?
- A Yes sir.
- Q You gave the names of Ferguson ditch, Ferguson No. 2 ditch, and then Ferguson No. 1 ditch, there are three ditches, that is correct?
- A. Yes sir.
- Q Now, when you said there were 444 acres of land irrigated, how did you arrive at that if you don't know how much is irrigated by each of these ditches that you have named?
- A I think the water stock will show that.
- Q You are basing it then on the number of shares of water stock, are you, and not upon the acres of land irrigated?
- A I will tell you the way I was basing it, on the water stock and men really have more ground and haven't got water for it.
- Q You are basing it upon the number of shares of stock in your company?
- A. Yes sir.
- Q In other words, there was 444 shares of shares of stock in your company?
- A I think there are.
- Q And that was the way you arrived at the number of acres of ground irrigated?
- A. Yessir.
- Q Now, the actual survey as made by Scott Stewart, as testified to by him was 344.44 acres, you knew that I presume, or didn't you?
- A No, I didn't know that.
- Q You didn't know that? . A. No.
- Q Now, all this land in the river bottoms, a great deal of it is cotton wood land, isn't it? Grown up to trees?
- A No, not very much of it, small amount of it.
- Q Isn't there a good deal of creek bed -- river runs right through it, doesn't it?
- A. No sir.
- Q Where is your land from the river?

A On the east of the river.

Q And isn't a good deal of that land river bed through there that cannot be cultivated?

A No sir, very little of it.

Q Isn't there a good deal of it that is grown up to brush and cottonwood trees?

A Right along the edge of the river there is. That land ain't in with this company, it is never irrigated at all right along the river there. This I talk of is what we irrigate.

Q Anyway, you don't know the number of acres?

A No.

Q And you base your judgment upon the number of shares in the company?

A. Yes sir.

Q Now, isn't there considerable of that land that has springs on it and is wet and marshy?

A Well, there is some little, yes. Some little of it has got springs on it.

Q Do you know about how much?

A No, I couldn't tell you exactly, there isn't very much though.

Q Doesn't Judge Booth's land have some marshes and springs on it?

A Yes.

Q Do you know how many acres it covers?

A His covers?

Q Yes.

A No, it is just a trench down through where it seeps from the hill, follows the hill.

Q How about the Baum land, isn't that pretty wet and swampy?

A No, it isn't wet, there is some water springs up, but they don't get the benefit of that water, it springs up so low the other parties gets it.

Q Where does it go to.

A Into City creek.

Q Into City creek?

A. Yes sir.

Q How do you arrive at what portion of the water that was given to the river bottoms belongs to the East River Bottoms Water

Company/

A Well sir, we have never come to that yet. That has been up to our commissioner. He has allotted us so much on the east side and so much for the Barton & Young place.

Q That is the land that is now irrigated by the East River Bottoms Water Company doesn't take in and include all the land that was given water under the Morse decree?

A No sir.

Q And you don't know what proportion of that water that was given under the Morse decree belongs to your company and what proportion of it belongs to somebody else?

A No sir, we don't.

Q Never been able to determine that?

A No sir.

Q Have you tried to determine it?

A No, we have not.

Q You have always had plenty of water up there and there has been no ~~need~~ necessity for determination, isn't that right?

A No, we haven't had any to waste.

Q You had the entire City creek running through there with 40 50 second feet of water in it all the time, haven't you?

A Yes.

Q And went to the head gates and took what water they wanted whenever they felt disposed to take it?

A Oh no.

Q Have you been irrigating on turn? A. Yes.

Q When?

A Last three or four years.

Q Since the commissioner has been appointed and this suit has been commenced; prior to that time there was no regulation at all, was there?

A Yes, they took it in turns; didn't all take water at once, one would take and then the next one.

Q There was no organization and any regulation among yourselves

at all, was there, prior to the appointment of Mr. Wentz as commissioner in this suit?

A Oh yes.

Q No measuring devices was there, prior to that time?

A Oh yes, there was measuring devices when Hyrum Thomas and A. L. Booth --

Q Mr. Wentz has had to put on a special man up there with gates and put padlocks on them, and lock them up?

A He has done it, yes.

Q And they have been broken down frequently?

A No, they have not been broken down.

Q You remember Mr. Chipman was put on there now?

A I do, yes.

Q And prior to that time everybody went to the City creek and helped themselves to whatever water they wanted?

A Oh no, they didn't.

Q I take it you don't claim the water given in the Morse decree, that is the whole quantity of water, but only claim such portion of it as would justly belong to the company?

A That is right.

Q But you don't know what that is?

A No, we don't know what that is.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q Have you ever had difficulty with the people on the west side and people on the east side with this division of the water?

A No.

Q The commissioner had regulated that for you?

A We have never had no trouble at all.

Q Has there been during every year since the Morse decree a commissioner? A. Yes sir.

Q And he has had charge? A. Yes sir.

Q Of yourselves as well as the others? A. Yes sir.

Q And been satisfactory? A. Yes sir.

Q I will ask you with regard to breaking the gate, has there ever been any difficulty except in one instance you know of as watermaster?

A That is all I ever heard of.

Q And the company was blamed.

A And the company was blamed for that, but it was an individual that done it.

Q Without right or authority of the watermaster?

A Yes sir.

Q In these shares that you speak of there are two classes, are there not? A. Yes sir.

Q One primary and one of secondary? A. Yes sir.

Q And the secondary ~~the~~ covers this part that is all meadow and pasture, the other the farming land, is that as I understand it-- we will let you have the division of that?

MR. JACOB EVANS: He doesn't know what it is.

MR. JOHN E. BOOTH: No, he doesn't, I thought he had the papers with him when I called him. I believe that is all. I think that with the privilege of submitting that list of acreage that we rest on that.

THE COURT: Now, have you any other claims, Judge Booth, to present?

MR. JOHN E. BOOTH: Yes, I think there is one more, Mr. Foote.

THOMAS J. FOOTE, called by the defendant Thomas J. Foote, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth.

Q Thomas J. Foote is your name? A. Yes sir.

Q You have a little interest, separate private interest in the water up here, do you not?

A Yes sir.

Q Eleven acres? A. Yes sir.

Q Will you tell how that is, how you irrigate it?

A When they were making the division in the land there was a spring branch that came through that section that I could get, and when I wanted more water for my land they told me, they suggested rather --

Q Who was this?

A As I remember now one was Peter Boyce, and I don't remember, perhaps those who were making the division, I don't remember just who they were, I believe it was Mr. Ferguson and Mr. Stubbs perhaps.

Q At the organization of the company this was?

A Yes sir.

Q East River Bottoms Company?

A Yes sir, and they suggested I had plenty of water there and I took that suggestion and I used the water that came through those spring branches for this land.

Q Does it come from the river at all, this water you use?

A No sir.

Q Just springs above your ground?

A Yes sir, comes out below Pete Boyce's farm and from there all the way down perhaps to my ground.

Q How much ground do you claim?

A Eleven acres and a fraction, I don't remember the fraction.

Q Where does the water go when you don't use it?

A It goes into Provo River, I suppose; I have never followed it to the bottom of the sough, but it must go into Provo River unless it should empty into the head of the Factory race, it may do that, I don't know that.

Q Runs down through there? A. yes sir.

Q So this water right you claim doesn't connect with the river in any way?

A Not on that part on the eleven acres.

Q That is what I mean, you have an interest in the East River Bottoms Water company besides this?

A Yes sir.

Q But this is a separate.

A This is a separate.

Q You asked to have the right to use these springs for that eleven acres?

A Yes sir.

Q How long have you used it?

A I believe the first purchase was in 1898 and the next purchase was in 1906. I first got five acres then six and a fraction.

Q Who owned it before you?

A John Brown owned five acres, perhaps little more, I am not certain, and Elisha Thomas portion of it. There was some trading done.

Q How long have you known of these springs being used on this ground you now own?

A Ever since I have owned it, that is as far back as I know.

Q Do you know of those people owning the ground before then?

A Those people owned it, I don't know whether they watered it that way or how they watered it.

Q You have owned it how long?

A I have owned five acres of it since 1898, and the remainder since 1906, I believe.

CROSS EXAMINATION By Mr. A. L. Booth.

Q This spring water that you say you use on your land comes from what would be called the bed of Provo River, doesn't it, the River Bottoms?

A No sir, not necessarily. I think the most of it comes from the irrigation above, at least when they irrigate the spring fluctuates some. There is always a stream there, but when they are irrigating in the summer there is a greater stream.

Q You don't know how much there is then?

A I don't.

Q How often and how long do you use it for the irrigation of this eleven acres?

A I water every week regularly, and oh, it takes me -- the stream

is not -- I haven't got a very large ditch and perhaps I would use it twenty-four hours.

Q To water the eleven acres? A. Yes sir.

Q If you didn't water at all then either Provo City or Little Dry Creek or some of these lower irrigators would get the benefit of that water, wouldn't they?

A I suppose they would, certainly someone would.

Q When you turn it past yourself it must go down and be used in low water time by some of these lower irrigators?

A I suppose so.

Q Have you ever been regulated?

A No sir.

Q You go and take it when you wish? A. Yessir.

Q And keep it as long as you need it?

A Have done so far.

Q Has anybody ever measured it do you know?

A No sir, not that I know of.

Q Has the commissioner ever taken any notice of it?

A Not that I know of, never seen him over there.

Q You don't claim if this spring should dry, you don't claim any water direct from the river for that land, do you?

A Yes, I would in a way, because I figure that I was entitled to some water.

Q Has that land ever been watered from river water you know of?

A Just a very little of it.

Q How much of the eleven acres?

A After I got the other water I used the water on another piece of ground that needed it. We are short of water on our farm.

Q How much of this land has ever been irrigated from water taken direct from the river or from City creek?

A Not more than a quarter of an acre, I would judge.

Q That that was not watered direct from the river then if the spring should dry you wouldn't claim water from the river?

A Maybe not, I would be willing to take a chance on that, yes,

that is perfectly satisfactory to me.

Q I say if the spring should dry then you would not claim you had ever irrigated this land with water from the river direct?

A No, I couldn't very well.

Q Nor anybody else you know of?

A I don't know what anybody else has done, of course.

REDIRECT EXAMINATION by Mr. John E. Booth.

Q Nobody has ever interfered with you at all in the use of this water? A. No sir.

Q In the last thirty years?

A I will say when I first went there Mr. Baum and I had a talk over it and he used portions of these two. I also take it from two spring branches, that is two different ones, it is not one spring branch, it is two. One of them springs up along, as I say, Pete Boyce's farm and comes in below from the east all the way along.

MR. JOHN E. BOOTH: Now, the Smith Ditch people are here if we can get through with that be glad to do so.

THE COURT: You may proceed.

ARTHUR L. TANNER, called by the defendant, Smith Ditch Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. John E. Booth.

Q Mr. Tanner, where do you live, give us your full name?

A Arthur L. Tanner.

Q Where do you live?

A Provo bench.

Q Are you one of the owners in the Smith interest in the West Union Canal company? A. Yes sir.

Q And have been for how long?

A Eight years.

Q How much of the waters turned into the West Union Canal Company under the regulations of the Morse decree belongs to the Smith interest?

A One fourth.

Q And your water is taken out altogether?

A At the West Union yes.

Q And then separated how far down, how far do they run together?

A Why, I suppose the first separation would be right close to the mill.

Q Then another one later, lower down?

A Yes sir, all the way along down as far as the Carter Farm.

Q Now, you have been under the regulation of the commissioner?

A Yes sir.

Q Strictly? A. Yes sir.

Q And I will ask you how you have succeeded in your irrigation under the water awarded to you under the Morse decree?

A Why, practically been able to get along fairly well.

Q What is the character of the land that you people have up there? bottom ground or gravelly?

A It is along the edge of the bench, consequently it is rocky and loose soil.

Q Needs more water than below. You have land below, have you not, below the hill in the river bottom?

A I do myself.

Q That is what I mean. A. Yes.

Q Which requires the more water, bench land or down where you are under the hill?

A There is this with reference to that ground, we have little spots of ground varies all the way through there. As a general rule there isn't but very little difference between that ground on the edge of the bench and river bottom ground. while the river bottom ground, my ground as a whole is looser.

Q Needs more water?

A Needs more water, it is entirely loose gravel underneath with a

thin layer of soil on top.

Q There has never been any difficulty between you and the West Union as to the division of this water?

A No sir.

Q And with the commissioner with regard to the amount.

A No sir.

Q I will ask you if, as a representative of the Smith interest you people are satisfied with the Morse decree to get your water under that?

A. Yes sir.

CROSS EXAMINATION By Mr. A. L. Booth.

Q About where is the line separating the Smith Ditch people from the river bottoms?

A The line separating them.

Q Yes, you say you have land in the river bottoms and have land under the Smith Ditch Company, where would you say the line of separation between the lands watered from the Smith ditch and land watered from the river bottoms comes?

A Practically might call it the edge of the bench.

Q Call it the edge of the bench?

A Edge of the bench. No, I don't believe there is a bit of river bottom water used on the bench. At the moment it flows off the bench then comes the Carter claim there, comes off the bench, goes into the bottoms to be used.

Q How wide a strip is there between the canal, West Union Canal where your water goes to the river bottoms land?

A It will vary, I suppose from about three rods to three quarters of a mile possibly.

Q You say it begins about a mile below the mouth or head of the canal?

A Yes sir.

Q And goes how far south?

A To the first opening.

Q No --

A Oh, goes to Carter pond, that must be two miles from the head

of the ditch

Q Have you any idea how much land is watered by the Smith^{ditch} interests.

A I can give you pretty close to the figures here without keeping you waiting.

Q Does this come from your own measurements?

A This?

Q Yes.

A I made this out, the people made it out and afterwards checked it up with Commissioner Wentz. There is a little discrepancy, but not enough to amount to much. There is about 376 acres watered by Smith Ditch water, There was a little discrepancy in that when I checked it up with Mr. Wentz.

Q That is supposed to be one-fourth of the West Union interest?

A Yes sir.

Q Isn't there a great number of springs that come out on this land that is watered by the Smith^{ditch} interests also?

A You can count them springs and cannot -- there are some spots going to swamp got to be drained, and moment drain is put in got to have irrigation. There are some springs.

Q As I understand it, practically all of the land below the West Union Canal and south from the first diversion from the canal down to about the Lincoln school house, is that what is called the Smith ditch interest?

A It waters down that way, yes.

Q Aren't there some large springs there in the neighborhood of the Lincoln school?

A There is considerable swamp ground above the Lincoln school and some springs.

Q On or near the George Gaum property?

A Yes, above there.

Q Isn't that water used for the irrigation of some of his land?

A I don't know of any of it only turned into the ditch, ingermingled with the other water.

Q That water is used to help irrigate some of the Smith ditch interests?

- A There is a little gets down there, yes.
- Q There is two or three second feet coming down there?
- A There is a stream running over the hill, it cannot all be used.
- Q It is used in the River Bottoms?
- A The stream has always come over the hill, as far as I know.

REDIRECT EXAMINATION by Mr. John E. Booth,

- Q This water that springs up comes from where?
- A Well, from you might say, from the Carter point down as far as the Lincoln school near the West Union canal, sort of a swale next the canal.
- Q From the irrigation on Provo Bench, is it not?
- A In all probability that is where it comes from.
- Q It was perfectly dry before they did irrigate up there?
- A Yes sir.
- Q You remember that?
- A In fact it has only been a few years some of it has come up.
- Q The Provo bench is above the West Union, I think that is all. We will submit the Smith interests with the stipulation we have filed here also. That is all I have now.

THE COURT: Mr. Corfman, have you some matters.

MR. CORFMAN: Yes, I will take up the Fort field.

I will call your honor's attention to the original complaint that the Fort Field Irrigation Company was represented in this complaint by numerous defendants and were at the time of the rendition of the Morse decree a voluntary association, named in that decree as individuals and in the complaint in this action as individuals, and I am calling counsel's attention to the fact that they subsequently after the rendition of the Morse decree incorporated. I asked leave and was granted permission to file this answer in behalf of the Fort Field Irrigation Company, a corporation, and for that reason the defendant named in the complaint as B. H. ^{Knudson} ~~Newton~~, Milton H. Knudson, Andrew Knudson, and others named in the original complaint in

this action are represented by this company. Is that correct, gentlemen?

MR. JACOB EVANS: I understand that is so, yes. There is quite a number of people sued as individuals and we learned subsequently there was a corporation, and we served the individuals and in addition to that we served the corporation later on.

MR. CORFMAN: You admit the corporate existence?

MR. JACOB EVANS: Oh yes.

THE COURT: At the time the case was submitted you will furnish the court with a list of the parties who were served as individuals who are now in the corporation; it will assist the court.

MR. A. D. BOOTH: There were some who did not join the corporation and some who did, and we will have to get the statement of those.

MR. JACOB EVANS: Mr. Corfman can furnish that better than anyone.

HENRY J. W. GODDARD, recalled by the Fort Field Irrigation Company, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

- Q Your name is H. J. W. Goddard? A. Yes sir.
- Q Are you an officer of the Fort Field Irrigation Company?
- A Yes sir.
- Q What officer?
- A President of the company.
- Q Are you the president? A. Yes sir.
- Q You own lands under the system? A. Yes sir.
- Q Fort Irrigation system, Fort Field Irrigation Company?
- A Yes sir.
- Q How long has that company been organized?

A Since 1903, immediately after the Morse decree was rendered.

Q And prior to that time it was a voluntary association?

A Yes sir.

Q And how many acres of land are irrigated under this system?

A Five hundred and seventyfour.

Q Has that been calculated by surveys made by Commissioner Wentz?

A No, I think not, I don,t think we have had it surveyed.

Q These lands are of what character?

A It is farming land, sandy loam part of it, and part heavy loam.

Q And the lands lie immediately west of the suburbs of Provo City?

A Below Little Dry Creek, join Little Dry Creek Company on the west.

Q And the north line of the area irrigated would be Provo River?

A Provo River.

Q And you have a canal? A. yes sir.

Q From what point do you take water from Provo River?

A About forty or fifty rods east of the Lake View bridge where it crosses Provo River.

Q North and west of Provo? A. Yes sir.

Q Will you describe the course of the canal?

A Runs west across the county road, follows the county road south to Center street.

Q I will call your attention to plaintiff's Exhibit No. 47 in this suit and ask you to point out the point of diversion from the river and the course that the main canal takes?

A I don,t think it is on this exhibit, it would be somewhere in here.

Q Have you a head gate at the point where the diversion is made?

A Yes sir.

Q And have you been under regulation and control by the water commissioners of this court, several water commissioners.

A Yes sir.

Q Since the rendition of the Morse decree?

A Yes sir.

Q What is the source of supply of the water that you divert from the river?

A Principally from seepage that rises in the bed of Provo River below Little Dry Creek.

Q And is that seepage from springs that arise and flow into the river sufficient to supply the needs of your company?

A Not always, there has been times it has been short.

Q In those instances where there has been an insufficient supply from seepages and springs, I will ask you how you got the water for the land?

A We have applied to the water commissioner and he has furnished use more water. I think sometimes from the Lake Bottom canal when they would have too much, and other times, ^{came} from Little Dry Creek down.

Q When was this canal first constructed?

A The Fort Field has irrigated land, I guess, as long as fifty-five or sixty years.

Q It was the pioneer irrigation company and derives -- the Fort field derives its name from the fact the pioneers had a fort there? A. Yes sir.

Q And it has since, the land is known as the Fort Field land?

A Yes sir.

Q And this company takes its name from --

A Yes sir.

Q How old are you?

A Fifty-eight years.

Q And has this canal been kept and maintained since you have known it?

A Not in the present place. As the river changes we have changed our place of intake several times in my memory.

Q But the main canal and system has been practically the same?

A Practically the same.

Q Since those early days? A. Yes sir.

Q And what crops have been grown under this system?

A The present crop is principally beets, sugar beets.

Q Are there any gardens?

A Some market gardening.

Q Some truck gardening?

A Cabbage, onions and so on.

Q And area cultivated in general consists of what crops?

A Grain, potatoes and beets.

Q Is grain grown extensively?

A No, it is not at the present time. The farmers usually rotate their crop with grain. It is principally beets.

Q And the crops are usually rowed crops, are they?

A Yes sir.

Q For how many years have you been familiar with the lands and the system of irrigation?

A Oh, I should judge forty-five to fifty years, since I can remember, always owned land down there.

Q What do you say as to the use of the water having been used economically?

A Yes sir, as far as I know.

Q And beneficially. A Yes sir.

Q I will ask you as to productiveness the land under this system compares with lands in general?

A It is far better land than the general run of land, best land in the county, I should judge.

Q And the system of farming would you say is what is sometimes called intense? A. Yes sir.

Q And have you had any more water than has been necessary for the proper growing of your crops?

A During the high water we don't use scarcely any water there except for garden truck. That field kind of sub irrigates as long as there is a stream going direct to the lake.

Q And during the early months you don't use so much water?

A No sir.

Q And about when do you commence to irrigate under this system?

A Along about the latter part of June, between the fifteenth and

latter part of June.

Q And up to that time the water is usually high in the river?

A The water usually falls along from the first to the fifteenth of June. We have to irrigate it immediately after.

Q And when do you use the -- when does the need of the farmer there require the greater amount of water, during what months?

A July and August.

Q What crops are you then growing?

A Sugar beets, market garden truck.

Q Are sugar beets grown extensively in that district?

A They are, being close to the Cutter, principally part of the land is devoted to sugar beets.

Q What system have you for distributing the water?

A We distribute it on time.

Q How?

A Make out a time sheet every year.

Q Do you issue tickets. A. Yes sir.

Q To the water users?

A To the water users.

Q And is your system under a regulation and control by watermasters?

A Yes sir.

Q And have you head gates? A. yes sir.

Q Devices for properly dividing the water?

A Yes sir.

Q About what quantity of water during the irrigation season when you do commence to irrigate is required and you have for the irrigation of your lands under the system?

A We have had somewhere in the neighborhood between 7 and 8 second feet.

Q Is that amount required?

A About an 80 acre duty we figure it, yes sir.

Q Throughout the season?

A We don't care so much about it in the early part of the season. In the latter part we do need it.

Q During the early season you could get along with less than an 80 acre duty? A. Yes sir.

Q I will ask you whether during recent years have you had more at any time than necessary to supply your needs?

A No sir, we have been short some seasons and had to call on the commissioner.

Q What season particularly has there been a shortage of water there in the district?

A 1915. I think this year too we were short, had to call on the commissioner to turn us some from above.

Q And have you then had sufficient?

A Yes sir, some of them were not able to get their water over the land in the time that was allotted.

Q Now, since the rendition of the Morse decree, as I understand you, you have repeatedly called upon the water commissioner to turn down water from those above?

A Yes sir.

Q That is when the necessary supply has not been provided from seepages and springs? A. Yes sir.

Q Flowing down the ~~ex~~ channel of the river?

A Yes sir.

Q And if for any cause the seepages, seepage should discontinue or the springs to flow you would still have to require a greater amount of water?

A Yes sir, I think that is provided for in the Morse decree, if the seepage fails we are to draw direct from the river.

Q And I take it that was the way you got the water in early years was direct from the river before --

A It was yes sir.

Q The water system above had been taken out?

A Yes sir.

CROSS EXAMINATION by Mr. Thurman.

- Q MR. Goddard, does that seepage water fluctuate different quantities in different years or is it rather constant?
- A Why, it fluctuates some. I think the west river bottoms, west side of the river there they use it in one or two places, I think, and when their streams are not used we have sufficient from seepage.
- Q Does the fluctuation of a season correspond with the fluctuation in the general supply of water?
- A It does yes, to a certain extent.
- Q That is when there is more water to be used and more water is used there is more seepage? A. Yes sir.
- Q Now, when there is an average season, fairly plenty of water, do you have to resort to the commissioner for water from the river?
- A I think we have nearly every year, especially immediately after the river is shut off when the canals take all the water at the mouth of the canyon for a little period there until the return seepage gets back to the river that we are short. Later on in the season why, I believe it keeps up pretty well.
- Q You spoke of some land in there, sandy loam?
- A Yes sir.
- Q Some of clay loam, I am a little confused whether you meant two different kinds of land or whether it was all sandy clay loam, which do you mean?
- A On the edge of the river it is a sandy loam underlaid with gravel in a great many places. That land requires quite a but more water than others. Farther off to the south and west it is more of a black loamy soil or clay.
- Q Which class of land do you say the Westphal farm is?
- A Westphal farm is under Little Dey Creek, not under the Fort Field.
- Q It is not under the Fort Field? A. No sir.
- Q Is the Fort Field west of Westphal's land?

A Yes sir.

Q Is the clay land you speak of in the Fort Field similar to the Westphal?

A Most of it is, yes.

Q I understand you to say that land sub irrigates?

A It does, yes.

Q To what extent?

A Why, during the high water, depends on the height of the river to a great extent. If the river is bank full it does not require any water in the Fort Field. A small stream, of course have to irrigate.

Q Do you know of a season when the sub irrigation has been sufficient throughout the season?

A No sir.

Q You ordinarily begin to irrigate the latter part of June?

A From the fifteenth, depends on the season.

Q Recently, recent years you have been irrigating sugar beets?

A Yes sir.

Q They require more water than you used formerly when you raised grain?

A They do, yes.

Q How much more would you say?

A Why, we usually irrigate sugar beets three to four times, maybe five some localities.

Q Down to how late in the season?

A Down to the fifteenth of September.

Q Do you have to irrigate them oftener than you did grain?

A We do, yes.

Q About how often?

A About the same time, about every two weeks.

Q How often do you irrigate them?

A Every fourteen days.

Q Was that about the same as grain when you raised grain?

A Well, usually when we raise grain I think about one irrigation would answer for a grain crop.

- Q One irrigation? A. Yes sir.
- Q How long have you been raising sugar beets?
- A Ever since the sugar factory was located at Lehi we have raised beets there, I don't know just what year that was.
- Q Were you raising sugar beets at the time of the Morse decree?
- A Yes sir.
- Q As extensively as you do now?
- A Well hardly, I think, but nearly so.
- Q You have quite a few artesian wells in that section, don't you?
- A Quite a number, yes.
- Q They are used for irrigation?
- A They run into the Fort Field ditches. Of course when the owner is not using them, why the Fort Field people, I guess, use them.
- Q These owners of land that have wells use as much water from the river as they did before they had the wells?
- A Yes sir, the owners of wells they usually apply them on little garden truck, something that way where they can get it oftener, use it when they want to, but the Fort Field as a company cannot depend on any artesian wells. We don't know what time the owner may use it.
- Q Those wells are quite constant in their flow, aren't they?
- A No, they are not. They usually go back in three years.
- Q Do they fluctuate with the season on the surface?
- A No, a new wells will run I think fairly steady stream the season through, and gradually decrease. In a few years until scarcely any flow comes from that.
- Q Is that due to exhaust in the supply, or due to defect in the well, or obstructions getting in the well?
- A I don't know the cause.
- Q Do they try to open out their wells sometimes?
- A They have done it, yes sir.
- Q Has the result been to increase the flow?
- A It has, they have opened it up for certain length of time and

then they would go back again.

Q D^o you know whether between seven and eight second feet of water is the supply awarded you under the Morse decree? whether that is about what it amounts to?

A No, I don't remember that.

Q Do you remember the provision of that decree?

A I think the Morse decree awards us something like five second feet, or three hundred minute feet.

Q Five or six second feet? A. Yes.

Q That is what you have been using, isn't it?

A We have been using more than that I believe right along.

Q Do you know why the commissioner turned you more if he did turn you more than that?

A There was no users below us and he comes, he tightened the dam up as tight as he could.

Q How?

A There was no users below the Fort Field Company, and tightened our dams as tight as he could.

Q There is no users below you, nobody of course below you to turn it to? and if there has been an insufficient supply the water has all been used in the low water has all been used in the low water season in the system why how would he be able to get water from the river when your seepage run short?

A He has taken it from parties above.

Q How?

A He has taken it from parties above, those that had too much, when we have been short.

Q Has taken it from parties above to give you more than the Morse decree allowed you, is that true?

A No, I think not. I believe Mr. Wentz drew a tabulation, I don't know what you would call it, a report anyway, and allotted the water according to the acreage. That was his idea of that, they should be entitled to that.

Q Do you understand that he has been in the last year or two

that he has not followed strictly the Morse decree, he has been trying to correct inequalities and so forth?

A That is what I understand, yes sir.

Q That has been done under stipulation?

A No, no stipulation. He took that upon himself to do that, I believe.

Q Took it on himself. Now, Mr. Wentz has only been distributing for two or three years? A. Yes sir.

Q Going back of his administration of this matter, and who was the commissioner that preceded him?

A E. J. Farrer.

Q Did Farrer also disregard the decree?

A I don't know as to that.

Q Did you get more than 300 minute feet under Farrer?

A At times, yes.

Q There would be water in the river?

A Yes sir.

Q Coming down? A. Yes sir.

Q In case the seepage was insufficient? A. Yes.

Q Then the water was not all used above that point?

A I don't understand you.

Q If there was water in the river coming down to finish the supply for you the water would not all be used in the river down to that point, would it? A. No.

Q So that you have been permitted to take more water than the Morse decree gave you?

A We have done, yes sir.

Q Did you ever measure the water that was distributed to you there?

A The commissioner has measured it, I have not.

Q These commissioners you mentioned?

A Yes sir.

Q Wentz, Farrer?

A And Hyrum Thomas.

Q Your statement of between 7 and 8 second feet, I take it is what

you have understood from them?

A. Yes sir.

Q Not of your own knowledge?

A. No sir.

Q Do you know the depth of the ground water below the surface after you commence irrigating?

A After we commence irrigating?

Q Yes, or when you commence July and August say.

A In places it is from four to five feet; I should judge, some places seven or eight feet.

Q No places less than that?

A Some places less.

Q What is the least depth?

A There is one or two places the water comes to the surface after the irrigation above.

Q What time of year would that be?

A Be in August.

Q Is there much of it?

A No, two or three acres in spots, low spots different places, some places have to be drained and then they have to be irrigated.

EXAMINATION By the Court.

Q Mr. Goddard, I don't know I clearly understood you, you say there are times when you receive more water than the three hundred minute feet referred to in the Morse decree?

A Yes sir.

Q Would that occur at a time when it was necessary to turn water down the river to supplement the seepage water, or was it only at times when the seepage water, or water rising in the river was sufficient to give you more than three hundred feet?

A I think the times we have called on the commissioner our flow has been below the three hundred minute feet.

Q And the water that was added by the commissioner from the river above, did that make more than three hundred minute feet when added to the water that was in the bed of the stream?

A Maybe not at that time, but later on it would. The seepage

would be greater later on, as I explained before.

Q That is what I wanted to know. In other words whether the commissioner turned down to you a quantity of water which, added to the seepage water made more than three hundred minute feet at the time it was delivered to you?

A I think not.

J. W. BATES, called by the defendant, Fort Field Irrigation Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by M. Corfman.

Q Your name is J. W. Bates? A. Yes sir.

Q You live at Provo? A. Yes sir.

Q And you own land under the Fort Field Irrigation Company's --

A Yes sir.

Q -- irrigation system? A. Yes sir.

Q How many acres do you own?

A Twenty.

Q How long have you owned this land?

A About sixteen years.

Q Do you irrigate these lands from the water taken into this system? A. Yes sir.

Q What crops do you raise?

A Why, sugar beets, principally, and grain and potatoes.

Q And are you an officer of the company?

A Yes sir.

Q What?

A Secretary and treasurer.

Q And as such, have you to do, anything to do with the distribution of the water?

A No, we have a watermaster that attends to that.

Q As secretary do you issue tickets?

A Issue the tickets.

Q About what time are these tickets issued?

A Usually about the middle of June.

Q Is that after the high water stage? A. Yes sir.

Q Up to that time ordinarily do you have sufficient sub irrigation to take care of the lands? A. Yes sir.

Q From that time on water is required for the irrigation of the crops? A. Yes sir.

Q Farms? A. Yes.

Q And that condition continues until the close of the irrigation season? A. Yes sir.

Q What class of crops are generally grown under this system?

A It is principally sugar beets, the farmers put in grain though and potatoes for a rotation. They cannot raise sugar beets on the same land constantly, and have to rotate with other crops.

Q What crops are generally taken from the land there?

A What do you say?

Q What are the products generally taken from the land?

A Of course they raise garden stuff there, onions and cabbage.

Q Is that grown extensively?

A Some years they have quite a lot and some not so much.

Q How about sugar beets?

A They are constantly raised every year.

Q Would you say that is your principal crop?

A Yes sir.

Q Have you had -- do you know whether or not you have had to call upon the water commissioner in years past for to turn water down from the ditches and canals of the river above?

A Well, I know it only when we have fallen short of water. If I had time -- if the watermaster had not gone to see him -- I believe he would go and see him and have it turned down, of course, I could not swear positively he turned it down. It is our understanding it has been turned down, the watermaster attends to that.

Q You would notify the commissioner?

A Yes sir.

- Q Then the water would come down from above to supply your needs?
- A Yes sir.
- Q You are acquainted with the methods adopted and used there for the supply of water to the lands?
- A Yes sir.
- Q You are a practical irrigator yourself?
- A Yes sir.
- Q Have been for many years? A Yes sir.
- Q What do you say as to the method used being economical?
- A I think it is economical.
- Q And not permitted water to waste?
- A No sir, I don't think we have.

CROSS EXAMINATION By Mr. Thurman.

- Q Do you know about what quantity of water you have used there, Mr. Bates?
- A No sir, I don't, because I never measured it. It is attended to by the water master.
- Q Do you know whether the water master turns water from the river when you have from seepage three hundred minute feet.
- A Why, I don't think that he has ever turned any water after we have had sufficient. When we have sufficient of course there is no need of more.
- Q Of course, sufficient is indefinite, it don't help us any.
- A No.
- Q You understand you have five second feet or three hundred minute feet for your land there under the Morse decree?
- A Yes sir.
- Q And you rely for that largely on the seepage water?
- A Yes sir.
- Q That comes in below the Dry Creek?
- A Yes.
- Q Now, when you have that many minute feet doesn't that supply your land?
- A Well, of course I don't really, have never known whether --

just when we had that or when we didn't. The watermaster looks after that part of it principally, you see.

Q All right, if you don't know I think that is all.

MR. COREMAN: We have nothing further to offer in behalf of this defendant.

THE COURT: Have you some other claim?

MR. THURMAN: I want to recall Mr. Goddard for a question.

HENRY J. W. GODDARD recalled.

CROSS EXAMINATION By Mr. Thurman.

Q Mr. Goddard when you have had more than three hundred minute feet down on your land for your land has it not been because there was that much seepage?

A When we have had less than three hundred minute feet?

Q No, when you have had more than three hundred minute feet hasn't it been because it was seepage water?

A I think so, yes sir.

MR. COREMAN: I would like to call Mr. Wentz.

T. F. WENTZ recalled by the defendant Fort Field Irrigation Company, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Mr. Wentz, you are familiar with the lands under the Fort Field Irrigation System? A. Yes sir.

Q And during your administrations as water commissioner of this court in the years '15 and '16, did you observe the crop conditions under this system?

A Just generally, I have not been over it in detail except one

trip in 1916.

Q During those season were you at any time called upon by the water master or the officers of this company for additional water than that that seeped down from the other users?

A Once in 1915 and twice in 1916.

Q Did you when called upon, did you supply them with additional water? A. Yes.

Q To make up about how much did you turn down on those occasions?

A I will have to look at the record on that. In 1916 the first water I turned from above was on July 11th, enough to make up about five and three-quarters second feet.

Q That was in 1916? A. Yes.

CROSS EXAMINATION by Mr. Thurman.

Q Mr. Wentz, you have five and three-quarter second feet there distributed to that company. The Morse decree calls for five second feet, does it not?

A Calls for five second feet when the river is at and below the twelve thousand minute foot stage. There is no distribution of the Fort Field mentioned in either of the other stages, and Fort Field is not mentioned in the tabulation with the other parties in the Morse decree.

Q Just distributed that, decree distributed to it at one stage of the river? A. Yes.

Q That is at or below twelve? A. Yes.

Q And that is five second feet? A. Yes.

Q Do you know how you come to distribute five and threequarters?

A On the schedule I was running on at this period I estimated the duty of the Fort Field land at 100 acres per second foot, and I tried to deliver that amount of water to them.

Q What have you heretofore given as judgment as to what would be a sufficient supply for them? A. Yes.

Q What is it?

A In the early season of the year, about June 20th, an 80 acre

duty; from June 20th to July 20th, a 90 acre duty; July 20th to September 1st, 100 acre duty; September 1st to October 1st, 125 acre duty, and October 1st to the remainder of the season and to May 10th of the following season so much of 125 acre duty as may be necessary.

Q Would the fact that it is completely sub irrigated up until about the 20th of June, does that make any difference in your estimate of the quantity necessary?

A Well, I don't think the Fort Field is completely sub irrigated up to that time. Parts of it may derive some moisture from that sub irrigation, from that sub surface water, but all that land that is underlaid by gravel and porous material or even a small strata of porous gravelly material will not conduct any water to the root zone.

MR. TUCKER: That five and three-quarter second feet, do you know how much was seepage water?

A 2.54.

THE COURT: At what stage of the river was that?

A That was on July 10th of this year.

THE COURT: WHAT WAS the stage of the river, do you know was it above the twelve thousand minute feet stage?

A Yes, we were running approximately four hundred second feet, I can give you the exact --

THE COURT: If it is above that, that is all I care for.

A Yes, we were running nearly four hundred second feet.

MR. CORFMAN: That is all.

THE COURT: Now, Judge Corfman, have you some other claims?

MR. CORFMAN: Yes, First Ward Pasture Company. In behalf of the defendant First Ward Pasture Company, we offer this map, Exhibit 128.

T. F. WENTZ recalled by the defendant First Ward Pasture Company, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Call your attention to the map or plat on the blackboard, marked Exhibit 128, and ask you if you prepared that for the First Ward Pasture Company, the defendant in this action, one of the defendants in this action? A. Yes.

Q And was that prepared from actual survey?

A Yes, the outline and the heavy white line marked "Factory race" are prepared from an actual survey, and the other outlines, except the small double line representing the irrigating ditches through the field are sketched in on the ground as they approximately appear through the tract.

Q And will you point out where the water is taken for the irrigation of these lands, from what point?

A At the northwest corner of the plat. The water for irrigating the tract east of the Factory race is taken out as shown on the map from the Factory race, and runs east for a short distance in the street line and then through into the tract, and the water that irrigates the tract on the west side of the Factory race is taken out at the same place, carried in a ditch inside the tract boundary in a southerly direction along the west side, irrigating the portion west of the Factory race,

Q Calling your attention to the circular track marked on this plat, what does that refer to?

A The circular part on the tract marked "race course" is an old race course that existed there at the time of this survey two years ago.

Q That was there for a short period of time?

A Yes.

Q And has since been abandoned? A. Yes.

Q And it is now as one field? A Yes.

Q You are familiar with what is known as the Mill race or Factory

race running through provo?

A. Yes.

Q And that water is diverted from Provo River?

A Yes.

Q You spoke of two canals being diverted from the Factory, one for the irrigation of the lands east of it and one west?

A Yes.

Q Now, the Factory race as it runs through provo City, divides at what point in the city?

A Divides at the head gates of the Smooth Lumber Company mill, that is the tail race or the by-pass in the Smoot Lumber Company comes around the west side of the plant and joins with the tail race from the plant at the northwest corner of the First Ward Pasture tract.

Q And is any water taken for the irrigation of these lands from the Smoot tail race?

A. No.

Q It is all taken from the race proper?

A From the by-pass.

Q Have you made a survey of the lands for the purpose of determining the area irrigated?

A. Yes.

Q And is that as found by -- we stipulated as to that.

MR. JACOB EVANS: I was just wondering, First Ward Pasture 147 acres.

MR. COREMAN: Oh no, there is more than that.

Q What is the area irrigated, did you find?

A Do you mean from the Factory race or river water?

Q Yes.

A 147 acres.

Q How many acres are there in the entire tract, do you know?

A The total area irrigated in the entire tract is 338.28 acres.

Q Now, you are speaking of 147 acres you didn't take into consideration the area of the original race track, did you, that is not included in your --

A No, there is three acres additional should be added to that for the race track for the total area.

Q Did you include any part of the enclosure for what is known as the race track there in your estimate.

A Included everything except the race course which is fifty feet wide and half a mile long, making three acres. There is 147 acres exclusive of the race course itself. 150 acres with the race course included.

Q Now in arriving at the area irrigated, did you ever observe how many acres on which water is used from the Factory race, have you ever observed the irrigation?

A No, sir.

Q And was your judgment based upon ditches that you found there and estimates?

A Yes, and with the officers of the company that were with me at the time of the survey.

CROSS EXAMINATION by Mr. A. L. Booth.

Q Where does the supply to irrigate this other come from outside of the Mill race.

A From the east drain and springs along the east side of the tract.

Q It is not in any way connected with Provo River so far as you know?

A. No.

Q Are there any ditches made from the Mill race to the pasture land other than this 147 acres?

A. No.

Q Now, you said that the Mill race water came from Provo River. When the farmers take the Mill race water for the irrigation of their land, as has been testified to heretofore, isn't there spring water and seepage water in the Mill race sufficient to irrigate the First Ward Pasture 147 acres?

A Yes.

Q So that, as a matter of fact, they don't need at the present time as conditions are existing now, any water directly from Provo river if it were not for the power interests that send the water down there, do they?

A. No.

REDIRECT EXAMINATION by Mr. Corfman.

- Q Now, when you say there would be enough seepage water, do you have reference to -- you say if it was applied -- you don't mean to say that the seepage water is not used elsewhere and the farmers are using it upon the lands above?
- A No, I mean to say if the Factory race were dry at its head near the provo Pressed Brick Company, that there is enough water rises in the Factory race to supply the 147 acres of First Ward Pasture.
- Q If it wasn't taken and used by other irrigators, mean to say that?
- A I say the quantity that rises in the Factory race is enough to supply the First Ward pasture.

CROSS EXAMINATION By Mr. Jacob Evans.

- Q You have never taken into consideration the First Ward Pasture in the distribution of the water of Provo River, have you?
- A No, I have never made, never turned in any additional water for the First Ward pasture.
- Q And never took it into your distribution in any way?
- A No.
- Q It is not a part of the water that is distributed by Provo City either, is it?
- A I don't know as to that.

RECROSS EXAMINATION by Mr. A. L. Booth.

- Q About how many second feet come into the Mill race below the head when the water is shut out from the river?
- A On a determination of this amount November 28, 1915, the amount of water rising in the Factory race below its head at the Provo Pressed Brick Company and the northwest corner of the First Ward pasture Company was 5.65 second feet. Determinations in the summer season show this amount to be between eight and nine second feet.

REDIRECT EXAMINATION by Mr. Corfman.

Q What season of the year was it you made that measurement?

A November 28, 1915.

Q Mr. Wentz, you wouldn't undertake to say that there was that quantity of seepage throughout the irrigation system would you, finding it there in November?

THE COURT: Throughout the irrigation system?

Q Irrigation season?

A As stated, during the irrigation season the quantity is more than that, between eight and nine second feet.

Q Before the return seepage goes into the race it would not be so much in the early season, would it?

A Well, I couldn't say in the early season before the irrigation begins in May or June, I couldn't say what that would be,

Q Isn't it a fact the return seepage would gradually increase after the water is applied to the lands in above, and continue to increase throughout the season up until about the time you made this measurement?

A No, I would look -- the water begins to recede when the irrigation begins to cease, say the fifteenth of August, I think the greatest inflow would be about last of July or first of August.

JOSEPH F. STRONG, called by the defendant First Ward Pasture Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q What is your full name?

A Joseph F. Strong.

Q How old are you?

A Seventy-two.

Q You live at Provo?

A. Yes sir.

Q How long have you lived here?

A Ever since '55.

Q Are you acquainted with the lands known as the First Ward Pasture, and owned and controlled by the First Ward Pasture Company, the defendant in this action?

A Yes sir.

Q How long have you been acquainted with these lands?

A How long what?

Q How long have you been acquainted with these lands?

A Ever since I come into provo.

Q Are you interested in the lands known as the First Ward Pasture?

A Yes sir.

Q As a stockholder in that company?

A Yes sir.

Q How long have you been a stockholder?

A Oh, sixty years, I guess.

Q Is that about the length of time the company has been organized?

A No, the company has been organized before that time, before '55.

Q And have you been an officer of the company?

A Yes sir.

Q Have you had to do with the irrigation of the lands during the irrigation season?

A Yes sir.

Q In what capacity?

A Why, looking after it, taking care of the stock and watering the ground.

Q And what experience have you had in watering these lands.

A Why, on which side?

Q On either side?

A Well, in the west side we have plenty of water in the first part of the season have plenty of water.

Q Where do you get it from?

A Get it out of the Mill race.

Q And on the east side how do you get the water for the land?

A East side we get it from the East drain, most of it.

Q All of it?

A Well, there is a little sometimes , and that failed. There was a little towards the gas plant, that is almost a failure.

Q D^o you take any water from the Factory race to irrigate lands on the east side? A. Yes.

Q And the ditch for watering the lands on the east side is ~~not~~ diverted from the race at the northwest corner of the tract?

A Yes.

Q For what are these lands, for what purposes are the lands used?

A Pasturing altogether.

Q About how many animals are pastured there each season?

A About an average, about four hundred and fifty.

Q Are these animals turned in there by the stockholders in the company?

A Yes -- no -- well, stockholders being those that rent shares.

Q The pasture is held and used by residence of Provo City?

A Yes sir.

Q You keep a cow or two cows? A. Yes sir.

Q Now, what kind of grasses are growing there?

A Well, there is redtop, clover, timothy and other wild grasses too.

Q And what method do you use in irrigating the land?

A Well, we have to take it out of the Mill race each way, turn it on to the land, let it flood.

Q Flood it? A. Yes sir.

Q And has that been your method ever since the company has been organized? A. Yes sir.

Q About how often do you irrigate the land?

A How long?

Q How often during the irrigation season?

A In right dry weather like it was last year got to irrigate it every week.

Q Is that necessary to keep the grasses in growing condition?

A Yes sir, that is, to carry that many stock.

Q What times do you take the water from the Mill race?

A Anytime, I take it any time I can get it.

Q And do you know about how much water you have used in the Mill race?

A Sir?

Q D^o you know how much water you have used from the Mill race?

A No, not exactly, I fill up them water sects.

Q How have you filed the water sects?

A Out of the Smoot Lumber spillway there.

Q Well, have you filled them full?

A Yes, I have filled them full when I have been irrigating.

Q About how long do you let the water run?

A Well, it takes it two or three days, three or four days to get down. It is kind of a flat country and swales that you have got to let it run so as to get it over.

Q Over the high places?

A Yes sir, if you had plenty of water first part of the season that way.

Q Have you had since the organization of the company, ⁱⁿ the use of these lands for pasture, as you have testified to, have you had all the water that is necessary for the irrigation of these lands?

A Well yes, until they turn the water around to the fields and then in the day times Smoots turns the water this way, and shuts us off entirely, have had quite a job to get water,

Q When the Smoot Mills are using the water?

A It shuts the water off.

Q And you cannot use it? A. No sir.

Q But it is only when the -- it goes down the race proper that you can take the water? A. Yes sir.

Q During those times during the irrigation season have you ever had a scarcity?

A In the first part of the season there is an overflow of water, more than Smoot wants, you know.

Q I understand, but during the low water season have you had more than enough, in taking the Mill race water to irrigate the

lands there that you have used from the Mill race.

A More than enough?

Q Yes.

A Oh yes, in the first part.

Q I am not asking about the first part, during the very low stages?

A In the low season, no sir, it is hard to get enough to run out over.

Q You have not been under regulation and control by the water commissioner? A. No sir.

Q You spoke of the East Drain, what kind of a stream is that?

A In the first part of the season the water is very low in the East Drain, and I don't get enough to water it in the first part, but along in July it begins to raise when they begin to water and let little streams into it, and last part of the season that is better than it is on the first part.

Q Where does the water of the East Drain come from, the river?

A It comes, it is the drain.

Q It is drainage water? A. Yes.

Q Is that diverted from the river at all?

A It goes through the pipe, Well the overflow, what makes the water increase comes from the river. The water comes in naturally from the little creeks, all of the water in the city lots gets into that, and I get the benefit of that in the last part of the season.

Q What is known as the East drain is a drain constructed for the purpose --

A Of draining.

Q Draining lands east of Provo, town of Provo?

A Yes sir.

Q And it is that water that you use largely on the eastern portion of this First Ward Pasture tract?

A Yes, that is what it is used for.

Q And how many years has the use been made of that water?

A I don't know, I have watered it from that for about eight years,

I have been watering it right now.

Q Do you know how long the east drain water has been used by the company for the irrigation of its land?

A It has been used all the time through the middle of that pasture it was always used.

Q How many years back has that been?

A I guess it has been fifty or sixty years. If you will let me explain, it was a waste ditch, and it was made into a drain. Waste ditch comes from the east fields, that is what it was used for and then they put in pipe and made a drain of it.

Q How long has the pipe been laid.

A I couldn't tell.

Q Would these lands produce the crops of grasses that you have testified to without irrigation?

A Oh no, it is the driest land in this country if you take the water away from it.

CROSS EXAMINATION BY MR. JACOB EVANS.

Q You are under no regulation so far as the use of the water is concerned, are you?

A No sir, I have not been.

Q The city does not distribute any water to you?

A No.

Q And you get the water that you use on the west side from the Mill race?

A. Yes sir.

Q You have no independent ditches belonging to the company which in any way connect up with the river proper, have you?

A I didn't catch what you said.

Q I say the company has no ditches that connect with the river?

A No.

Q Either on the west or east side?

A No sir.

Q The water on the east side goes through the East drain and without any connection of ditches at all to the river system?

A Well, there is ditches between the East drain and --

Q Those ditches, however, are city ditches, are they not?

A They are city ditches, yes sir.

Q Controlled by the city? A Yes sir.

Q And whatever water you get down there on the east side comes from the east drain and waste water?

A Waste ditches.

Q That runs through the City ditches?

A Yes sir.

Q And that is the way it has always been, hasn't it?

A Way it has always been. We have took care -- the city has never done nothing inside of our enclosure. We have taken care of the water, ~~my~~ just bring it to the lane and we took care of it.

Q You pay no taxes to the city?

A I don't think so, pay taxes enough.

Q Don't maintain any ditches, but you just get the waste water from the city ditches and east drain, and that is what you have always had there?

A Yes sir.

REDIRECT EXAMINATION By Mr. Corfman.

Q You say you pay no taxes. Are you --

MR. JACOB EVANS: I said city water taxes, irrigation.

Q Have you an arrangement with the city for the use of the water in the Mill race whereby you are to keep up certain ditches?

A Yes, we have. That is what I explained to him, we keep up the ditches for the use of the water and conduct it through. Sometimes we have more trouble with the overflow of water than we have with anything else.

Q By reason of the city furnishing you that water the company keeps up those ditches?

A Yes sir, that is the way it has always been.

12:00 Noon, Recess to 2:00 P.M.

REDIRECT EXAMINATION by Mr. Corfman continued.

Q Mr. Strong, you speak of the water from the east drain being used to irrigate this track of land lying east of the Mill race?

A Yes sir.

Q How long has that drain been constructed?

A The pipe?

Q The pipe or drain proper that you take the water from?

A Oh, it must have been about fifteen years, I think.

Q Prior to that time where did you get the water to irrigate the lands east of the race?

A We got it down what we call the old waste ditch from the east fields, straight down.

Q All the water?

A Through what we call Piercy's farm.

Q Was that through Provo City's water system?

A Yes sir.

Q And if this drain for any reason should cease to flow you would have to call upon Provo City for water from their system?

A There is no other resource now.

Q And up until this drain was constructed you did receive water from the Provo City system for the irrigation of those lands lying east of the race?

A Yes sir, that is what we used down that race.

Q You don't know the quantity of water that you applied to this land?

A. No sir.

Q But you have always had from the race and these sources sufficient to successfully irrigate the lands for the raising of grass?

A Yes.

Q You have had experience in irrigating of grass lands as well as lands that have been plowed and cultivated?

A I think so.

Q What would you say as to the quantity required for irrigation of grass lands as compared with cultivated lands?

- A The grass land it takes quite a stream to flood bt over. It lays so flat and swales so as you have got to run quite a stream or cannot do anything with it.
- Q Would you say then you would use more water than ordinarily used for cultivation of land?
- A For cultivated lands?
- Q Yes.
- A No, takes the most for pasture.
- Q And you have had and used that on this particular piece of land for how long a time?
- A I have been, oh, altogether, for about eight years. before that --
- Q I am speaking now of the company, you are interested in the company; how long has the company had the water?
- A They have water-ed that to my knowledge ever since '55, not as much as they do right now.
- Q Would these lands, is it necessary to irrigate these lands in order to grow the crops?
- A Yes sir. If I could explain a little, where it ain't watered, where the cattle eats on the grass, where it ain't watered, they pull it up and drop the roots and destroy more than if it is watered.
- Q If the lands becomes dry? A. Yes.

RECROSS EXAMINATION By Mr. Jacob Evans.

- Q You say this pipe line was put in there about ~~in~~ fifteen years ago?
- A Sir?
- Q The pipe line was ^{put} in the east drain about fifteen years ago?
- A I think so , I couldn't say as to that. It was put in there with wooden pipe in the first place, and that was a failute and then they put in earthen pipe since then?
- Q The earthen pipe has been in there about fifteen years?
- A Earthen pipe?
- Q Yes.
- A No, not quite long.

Q About how long?

A Maybe twelve years.

Q How long has the eater run in that east drain?

A Oh, it has been a long time, been fifteen years ago.

Q Well, the east drain and the old waste ditch are one and the same thing, aren't they?

A Not exactly, it has been changed, used to come right down past Thurman's store, right through what we call Piercy's farm, down through that way, then they changed it.

Q There is a low swamp place just east of the city, isn't there?

A Yes.

Q And the principal part of that water comes from that low swamp?

A The drain?

Q Yes. A. yes.

Q And always has come from there, hasn't it?

A Well no, the most of the water comes from the irrigation of the east fields, right down them meadows and out that way by what we call Turner's pasture, toward the south.

Q It was waste water generally speaking, wasn't it?

A No, it comes generally pretty well east.

Q Did you ever get a ticket to irrigate your land with from the city? A. No sir.

Q Never have had any ticket? A. No sir.

Q Never have had any regular turn allotted to you?

A No.

Q You say you do the irrigating there?

A Yes sir.

Q Do you take care of the cattle too? A. Yes sir.

Q Your business then is to receive the cattle and know the number of cattle that is being pastured there?

A Yes sir.

Q And look after the irrigating? A. Yes sir.

Q In looking after the irrigating about all you do is turn the water in and let it take care of itself, isn't it?

A It takes it long enough to get through that I have time to run it day and night.

Q A great deal of the waste water from the city goes down onto that pasture also, has done?

A How?

Q Waste water from the city, I say, goes down into the pasture and always has done? A Yes.

Q And that is where you get your supply from?

A Yes sir.

Q That is right, isn't it?

A Yes sir.

Q You never have had any direct ditch leading from the river down to the First Ward Pasture?

A Well, we had it out from the east side there until it was out off, come down past Eddenburg's then they turned out what they called the waste ditch going that way, then cut it off around by Bullock's farm.

Q Great deal of that pasture land is low, swampy land, isn't it?

A No sir, it ain't, if you take the water off.

Q I say it is swampy isn't it, runs down into the toolies and rushes there?

A Swampy if you turn it on long enough. It ain't natural swampy land.

Q There is lots of that land that has water standing on it all the year around?

A No sir, if you take it off.

Q If you take it off there wouldn't be any water on it?

A I can ride over the swamiest land we have got on horse back without any trouble if you turn the water off.

Q Haven't you got some big sloughs in that pasture?

A There is one next to the gate there, little spring.

Q Isn't there some sloughs down pretty well toward the lake?

A No, I don't know of any.

Q Don't know of any slough land at all?

A Not if you take the water away. I ride right through them

rushed if you take the water out.

REDIRECT EXAMINATION by Mr. Corfman.

Q How many acres have you in your enclosure there?

A Altogether?

Q Yes.

A There is about, let's see, altogether?

Q Yes.

A I guess there is nearly five hundred acres.

Q And your lands extend to the waters, edge of the lake?

A Yes sir.

Q And it is those lands --

A It is what?

Q It is the lands bordering on the water's edge that have toolies growing?

A Yes.

Q The 147 acres that have been testified to here by Mr. Wentz, there are no toolies growing on any part of that land?

A No sir, if they will keep the water off there is none.

Q There is not at this time any growing there?

A I don't know of any.

Q Never has been?

A I don't know of any.

T. E. THURMAN, called by the defendant First Ward Pasture Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Corfman.

Q Your name is T. E. Thurman? A Yes sir.

THE COURT: Did you testify before?

A Yes, in the city case.

Q Are you interested in the land of the First Ward Pasture Company? A Yes sir.

Q Stockholder in that company? A Yes sir.

Q How long have you been acquainted with that tract of land?

A Since as long as I can remember, since '53.

Q And you know from what source the water has been had for irrigation of these lands?

A Yes sir.

Q Will you tell the court?

A It has been watered from the Factory race and from what is known as the slough. The waste ditch from the east field here and waste water from the land east of the city.

Q What portion of the tract has been watered from the Mill race?

A All west of the race and some on the east.

Q Are you acquainted with what is known as the East drain?

A Yes sir.

Q How long has that drain been in operation?

A Ever since the town was settled, that is, ever since the land was occupied up here.

Q Well, the drain?

A The drain was --

Q When was the drain pipe installed?

A That was in '89, I had the contract for digging the drain in 1889.

Q And, that wood pipe at that time?

A Yes sir.

Q And do you remember when that wood pipe was installed, whether you used any water from the Provo City system?

A No sir, they did not.

Q How?

A No, they used it, that was just made for a drain coming down Center street to 4th East and then went straight south.

Q That was water from the Provo City water system, was it not?

A Yes, it was from that.

Q And the lands, did you draw any water from the lands east from the First Ward Pasture lands?

A Yes sir.

Q From what field?

A From what is known as the south of Spring Creek field, some water, some land that is watered from that now in the pasture.

Q At the present time?

A Yes sir, springs that raise on my farm runs down into the First Wash Pasture.

Q Have you ever had to do with the irrigation of the land yourself personally? A. Yes sir.

Q During what years?

A I cannot just recollect. I was the first secretary of the corporation, from then up until about ten years ago I had charge of it pretty near altogether.

Q And attend to the irrigation?

A I hired it done, yes. I seen it was done and supervised it.

Q Since you have known this land has it been irrigated ~~maxx~~ each and every season? A. Yes sir.

Q More than fifty years? A. Yes sir.

Q Have you had sufficient water to irrigate it properly?

A Yes.

Q Was it necessary to irrigate the land in order to raise grasses?

A It is.

CROSS EXAMINATION by MR. Jacob Evans.

Q The Spring Creek you speak of as irrigating part of this land on the east side of the Mill race is no part of the Provo river system, is it, MR. Thurman?

A Well, it is drainage water, same as this other, only it raises farther south.

Q It is no part of the Provo River system?

A Well, the Provo city controls it until it gets pretty near to the pasture, then they take care of it.

Q Well, doesn't that water spring up near the Bullock farm.

A About half a mile this side.

Q Some big springs there? A. Yes.

Q Swampy, marshy ground? A. Yes.

Q Not connected in any way with any of the ditches or canals of the river system, is it?

A No sir.

Q Never has been? A. No.

MR. CORFMAN: That is all the testimony we will offer in this case.

THE COURT: Have you any further claims to make proof upon?

MR. CORFMAN: I don't recall any. May it please the court I would like to recall Mr. Wentz with permission of counsel and the court, for the purpose of correcting his testimony, that was introduced here on behalf of the Fort Field Irrigation Company.

THE COURT: You may.

T. F. WENTZ recalled by the defendant Fort Field Irrigation Company, testifies as follows:

DIRECT EXAMINATION by Mr. Corfman.

Q Mr. Wentz, in your testimony this morning in behalf of the Fort Field Irrigation Company, you testified that you were called upon during the time of your administration as court commissioner to turn water from the provo River on one or more occasions, and you also testified as to the duty of water, did you wish to correct the statement you made concerning those matters?

A Yes, I testified that on July 11, 1916, I increased the amount to five and three-fourths second feet as outlined in the distribution. That should have been 6.38 second feet or a 90 acre duty.

Q Is that all?

A That is all.

THE COURT: I am not advised who should proceed at this time.

MR. JOHN E. BOOTH: There is one or two little matters we can take up this morning. I filed two stipulations, one in behalf of the West Union Canal Company and the plaintiff in this case, marked "125"; the other one between the plaintiff and the Lake Bottoms Canal Company. I understand there is no objection. There was a misunderstanding about the Lake Bottoms so that may be considered as admitted, as far as all parties are concerned. There was a misunderstanding as to the West Union as to the question whether this stipulation included the Smith Ditch interest. I will state my understanding is it does, but it does not include the little matter we had of the Carters this morning, but does include the West Union.

MR. A. L. BOOTH: The Smith?

MR. JOHN E. BOOTH. The Smith; so that is all that goes into the West Union canal. The Smith ditch has a fourth interest in the waters of the West Union canal of what goes in there. Now, I think that will probably settle all that. I believe that is satisfactory, and Mr. Thomas returns to me the exhibit No. 127, stipulation in behalf of the plaintiff and John D. Dixon, and I am informed there is some objection to that on behalf of Provo City. I don't know what it is, and I don't know just what to do to meet it. If he will be kind enough to indicate the objection I will be glad to see if we can either stipulate or meet it.

MR. THOMAS: I shall. We object, if the court please, to the introduction of this stipulation on the ground that so far as Provo City is concerned it is immaterial and incompetent. Furthermore --

THE COURT: Just a moment, do I understand you have offered this in evidence?

MR. JOHN E. BOOTH: I propose to.

MR. THOMAS: I thought it had been formally presented last night.

MR. JOHN E. BOOTH: I will do that now, I will offer

Exhibit 127, purporting to be a stipulation between John D. Dixon, one of the defendants, and the plaintiff Provo Reservoir Company, and ask it be made a part of the record.

THE COURT: What objection have you to it?

MR. THOMAS: That it is incompetent, irrelevant and immaterial so far as relates to Provo City.

THE COURT: I don't understand Provo City is a party to it, I understood it was a stipulation between the plaintiff and Mr. Dixon.

MR. JOHN E. BOOTH: That is all it purports to be.

THE COURT: I don't see how the city can have any interest in it, you don't join in the stipulation.

MR. THOMAS: Not in any sense, that is true. Further more the stipulation purports to give the right of diversion or change the point of diversion. Our objection to that is Mr. Dixon has had no right granted to him to make any change in the point of diversion of these waters, as we understand the situation at the present time, so that the presentation of this stipulation would carry or convey the idea that such right had been given.

THE COURT: By the plaintiff, consented to by the plaintiff.

MR. THOMAS: Only.

THE COURT: That is all. As I understand it it is a stipulation between the plaintiff and Mr. Dixon and so far as the plaintiff is concerned, the plaintiff stipulates they may have whatever is contained in the stipulation. I have not read it but I am unable to see how anyone else is interested in the stipulation unless you join in it. Of course if you do --

MR. THOMAS: No, we don't, your Honor.

MR. JOHN E. BOOTH: So that it may be admitted.

THE COURT: It may be filed and binds the plaintiff. Judge Booth, do you desire to introduce some evidence on Mr. Dixon's behalf?

MR. JOHN E. BOOTH: Your honor please, in consideration of that we may want to offer some proof. Mr. Dixon is extremely busy today with the sugar factory paying their best people, and if this matter could go over until morning.

THE COURT: I think likely it can, I think Mr. McDonald will be ready to proceed,

MR. JOHN E. BOOTH: That will be satisfactory to have it go to tomorrow?

THE COURT: I think so. Now I think Mr. McDonald, we are ready to proceed with your matter. Will you indicate the claim you are presenting now.

MR. MCDONALD: Yes, it is the Henry B. Smith Jr. and W. J. Smith.

MR. JACOB EVANS: What particular ditch? Is it named or designated in any way?

MR. MCDONALD: I don't know.

HENRY SMITH, JR., called by the defendants Henry B. and W. J. Smith, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. McDonald.

Q State your name, please?

A Henry Smith, Jr.

Q Do you own some land on the Provo River which is watered by water from the river?

A. Yes sir.

Q It is owned by yourself individually or is W. J. Smith interested in it?

A He owns part of it.

Q How much land?

A He owns about an acre and a half.

Q How much do you own?

A I own four acres. How much ground do I own in the bottom?

Q Yes, altogether in these two tracks you are claiming water for?

A There is fifteen acres --

Q Nevermind that, just the land you are claiming water for in this suit.

A Four acres of it.

Q Four acres to yourself and acre and a half to your brother, W. J.?

A Yes sir.

Q You own other land, I understand, but are not claiming water for that in this suit? A. No sir.

Q How long have you owned this land? that is, you and your brother?

A Eleven years, I think.

Q And do you know how long it has been irrigated with water from the provo river?

A Ever since I have been big enough to remember.

Q How long ago is that?

A Well, that would be about thirty years ago.

Q What kind of land is it, the character?

A It is gravelly soil.

Q And you say that the water has been used on it for thirty years past to your knowledge?

A Yes sir.

Q And do you know the quantity of water that has been used upon it?

A No, I don't.

Q Can you give the dimension of the water that has run out of the measuring devices? A. Yes sir.

Q Give us that?

A In one flume I have sixteen inches deep and 25 inches wide.

Q And what in the other one?

A The other one 17 inches deep and 32 inches wide.

Q Now, one of these is a box or measuring device put in under the directions of Mr. Wentz, wasn't it? A. Yes sir.

Q Which one?

A The lower one.

Q What do you say was the water in the lower box?

A 17 inches deep and 32 inches wide.

Q Did you test the time or determine the time that it took to irrigate one of these tracts or both of them during the last season?

A Yes sir.

Q Which one of them?

A Well, both of them

Q All right, give us the first one, the 16 by 25 first.

A I turned the water on it at twelve o'clock and I kept it on until half past five on that, on the lower one, it may have been about ten minutes after twelve when I turned it on that one and kept it until five.

Q Did you use the water during that time to the best advantage?

A Yes sir, I stayed right with it and working it.

Q Was there anybody with you who saw you do the irrigating?

A Yes sir.

Q And during that time did any of the water run off the land or run to waste? A. No sir.

Q Who was with you?

A Mr. James Gillespie and Mr. John Gerdon .

Q Did you give us the time on both tracts? A. Yes sir.

Q From twelve to half past five, I believe, on the first tract?

A Yes sir.

Q From twelve ten to five P. M. On the other?

THE COURT: What is the size of the lower box?

A 17 inches deep and 32 inches wide.

THE COURT: I mean the other one.

A That is the lower one and the first one is 16 inches deep and 25 inches wide.

Q Now, during those thirty years, do you know whether the water has been continuously used on this land?

A Yes sir.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Where is this land, Mr. Smith?

A It is up at the mouth of Provo Canyon, it is up where they used to have the old saw mill.

REDIRECT EXAMINATION by Mr. McDonald.

Q Let me ask another question, Mr. Smith, how often do you water this land or how often have you watered it in times past?

A About every seven days or eight days.

Q Is it necessary to irrigate it that often?

A Yes sir.

CROSS EXAMINATION by Mr. Jacob Evans continued.

Q This land on the bench or is it down in the river bottoms?

A It is down in the river bottoms.

Q Where from the mouth of the canyon?

A Well, it is about a half a mile below the mouth of the canyon.

Q What stream do you take the water out of, City creek stream?

A It is the City creek now, part of it, it is in the old Mill race, where the old Mill race used to be, our old Mill race, the city built their creek in ours.

Q Are you under any regulation there with respect to the use of the water, does anybody give you time or tickets, or tell you when to take it or not to take it?

A They have the last few years. That is the River Bottom Company did at first, then the city has.

Q Is your land a part of the River Bottoms Water Company land?

A No sir, I never joined them.

Q Never joined the company? A. No sir.

Q But that land is a part of the land that water was given to under the Morse decree? A. yes sir.

Q Known as the East River?

A I don't know whether they give it to me that way or not, but I never joined them. They give me my time ever since they had it.

Q This company gives you your time?

A Yes sir.

- Q Tells you when to take the water, and how often do they give it to you ?
- A About every eight days.
- Q And do they time you how long you can keep the water ?
- A They have done part of it.
- Q What time do they give you?
- A They give me, they did give me eight hours on it and then the last two years they wanted to cut me down on it, but I could not water it, so that is the reason I did not join them, I could not get over the ground with the water.
- Q You don't know what quantity of water was flowing in these boxes at the time you made your--
- A I wouldn't know the measurements of it, no, Mr. Wentz would know.
- Q What do you produce on this land?
- A I used to raise lots of hay on it.
- Q What do you produce now?
- A I have got part of it into an apple orchard, last two years I have used it for pasture.
- Q Is any part of it in brush or cottonwood trees and creek beds?
- A Not what I am farming.

REDIRECT EXAMINATION by Mr. McDonald.

- Q Mr. Smith, do you know whether Mr. Wentz measured the upper box, the 16 by 25?
- A No, I don't think he has.
- Q What quantity of water was there in that box or measuring device as compared with the lower one, the 17 by 32?
- A I should judge by the looks of the stream -- of course I didn't measure only in the box -- it would be about two thirds as large as there was in the other, maybe half, little better maybe.
- Q That is in the one 16 by 25 as compared with the one 17 by 32?
- A Yes sir.

CROSS EXAMINATION by Mr. Corfman.

- Q The city never turned any water to you?

A No! the city has regulated me a time or two, year or two.

Q When?

A I used to get it from Mr. Thomas, he regulated me one year and then this year I got it through Mr. Wentz.

Q The city never turned you, any of the city officers haven't you turned the water?

A I don't know, I have always used the water there. That is, it has always been used, and go and take it whenever we wanted it.

Q Mr. Farrer was the water commissioner, do you know, instead of Thomas?

A He wasn't that year, he give it to me.

Q Hyrum Thomas? A. Yes sir.

Q What year did he turn you the water?

A I don't remember the year.

Q Do you know whether he took it out of the city's portion of the water or take it out of the East River bottoms?

A He would take it out of our old Mill race one we always did use out of.

Q Whose ~~supply~~ supply did he take it from the East River Bottoms or city supply?

A I don't know where he got it, we got it out of City creek.

Q You are on what is known as the East River Bottoms, are you not?

A Yes sir.

Q And your rights were decreed under the Morse decree?

A I think so.

Q Under the East River Bottoms class.

A I think so.

Q And your right, if you have a right, comes out of that water, does it not, that was decreed to the East River Bottoms.

A Yes sir, Mr. Ferguson give it to me for a few years.

REDIRECT EXAMINATION by Mr. McDonald.

Q Mr. Smith, as I understand you relative to this ditch so that the record may be straight, your father or some of you, had a

mill race which connected with the river?

A Yes sir.

Q For mill purposes and then sometime after that the city connected with that mill race? A. Yes sir.

Q And extend it to the river?

A This ground has been farmed for about forty-five years, and we had our own ditch before the city built their ditch up into it.

Q Now, do you know anything about ~~the~~ whether or not there is a decree distributing your water to you, or awarding you some water in connection with anybody else?

A No, I don't.

T. F. WENTZ recalled by the defendants Henry B. and W. J. Smith testifies as follows:

DIRECT EXAMINATION by Mr. McDonald.

Q You heard Mr. Smith testify to the size of his lower box, did you? A. Yes.

Q 17 by 32 inches? A. Yes.

Q Give us the volume of water that is in that box, will you, as you have the figures.

A This lower box that he designates with ~~a~~ ^{the} suppressed weir numbered Smith No. 1, under the East River Bottoms Water Company, the height of the weir is nine inches, leaving the depth of the water under his measurement of 17 inches, as being eight inches over the weir, with a discharge of 5.7 second feet.

Q Now, it might aid the court a little if you will give the court the duty of water on that land at that ratio?

A With the 5.7 second feet running five and a half hours on the five and a half acres irrigated every eight days is a duty of 34 acres to the second foot.

CROSS EXAMINATION by Mr. Jacob Evans.

Q Mr. Wentz, do you regard that as a proper duty for that land?

MR. McDONALD: Your honor please, the only purpose we put the witness on for was to prove the quantity of water.

THE COURT: I suppose he could tell what the ~~six~~ duty would be. It would save recalling him in rebuttal, he may answer.

A No.

Q What would you say would be the proper duty of water for that piece of land, Mr. Wentz?

A The minimum of fifty acres per second foot.

Q Would that be through the entire irrigating season.

A No, that would be in the early part of the season in the first period.

Q What would be the duty for the second period?

A Fifty-five acre duty.

Q And for the third period?

A Sixty-three acre duty.

REDIRECT EXAMINATION by Mr. McDonald.

Q What you are giving us as to this duty now is theory, isn't it?

A Theory and experience, practice.

Q Have you ever experimented on this particular tract?

A Not on this particular tract.

Q So that all the information you have is theory?

A And comparison with other soils similar to this.

Q Have you tested the soil on this particular tract?

A I have observed it.

Q That is all you know about it, is the observation?

A Yes, and a test of a tract immediately across the river, just identically the same soil.

Q Did you hear the testimony of Mr. Wheelon relative to lands of this character, this particular land?

A Yes.

Q Remember what he said as to the duty of water on it?

A Yes, part of it.

Q What was it?

MR. JACOB EVANS: I object to it as immaterial, it is in the record.

THE COURT: Objection sustained.

MR. McDONALD: Your honor will remember this was that the land was to be cast aside and the owner abandon it and give the land to somebody else.

MR. A. J. EVANS: Are you willing to take that testimony?

MR. McDONALD: That is all.

JAMES GILLESPIE Called by the defendants Henry B. and W. J. Smith, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. McDonald.

Q State your name, please?

A James Gillespie.

Q Are you acquainted with the land that belongs to Mr. Smith, Jr, who just testified?

A yes sir.

Q How long have you known it?

A About twenty years.

Q Did you observe an experiment by way of irrigation on this land during this last season?

A Yes sir.

Q Remember about what date it was?

A About the 20th of July.

Q Of this year?

A This year.

Q You may state whether or not the water was judicially used upon the land at that time?

A I thought it was.

Q Are you an experienced farmer?

A No, I don't know that I am.

Q Did any of the water run to waste?

A Some little.

Q Off of the land? A. Yes sir.

Q How far did it run, if you know?

A It probably would run, oh, ten yards, possibly.

Q Ten yards?

A I wouldn't say more than that.

Q In any quantity?

A No, just a small stream.

Q Did Mr. Smith put the water over the lands as rapidly as he could? A. Yes sir.

Q And you witnessed the entire experiment?

A Yes sir.

JOHN GORDON called by the defendants Henry B. and W. J. Smith, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. McDonald.

Q State your name, please?

A Gordon.

Q Just sit down, where do you live?

A In Pleasant View.

Q Are you acquainted with the lands of Henry B. Smith, Jr.?

A Yes sir.

Q And W. J. Smith? A. Yes sir.

Q How long have you known him?

A About twenty-five years ago.

Q What character of land is it?

A I wish you would come a little closer, please.

Q What character of land is it?

A Why, it is what we call River bottom land.

Q Is it gravelly?--

A Rocks, gravel, and little dirt mixed with it.

Q And did you witness an experiment by way of irrigating this land during the last summer?

A Yes sir.

Q Do you remember when it was?

A Last time?

Q Yes, or any time this summer?

A I was there the 20th of last July.

Q And did you see Mr. Smith irrigate this land at that time?

A Yes sir.

Q And how long did it take him, if you remember, to irrigate the tract?

A Took him five hours.

Q And during that time was the water judiciously used?

A Yes sir.

Q Did Mr. Smith get the water over the land as rapidly as possible?

A Yes sir, he stayed right with it.

Q And you may state whether or not any of the water went to waste?

A Very little.

Q Are you a practical farmer? A. Yes sir.

Q Did Mr. Smith use the water to the best advantage?

A Yes sir.

Q In irrigating the land?

A According to my judgment he did.

CROSS EXAMINATION by Mr. Thurman.

Q How long a run was that irrigation ?

A Run off?

Q No, what distance did the water run in irrigating?

MR. McDONALD: He says what distance did the water run in irrigating the tract of land?

A Oh, according to my judgment one run about a quarter of a mile and the other one about 200 yards.

Q Did he hold it upon the upper end until the water reached the lower end and run off? A. Yes sir.

REDIRECT EXAMINATION by Mr. McDonald.

Q Do you know whether the land could be arranged so that it could be irrigated any more rapidly? A. No sir.

Q What do you mean by no sir, could it be arranged so that it could be watered to better advantage?

A No sir, it could not, I watered that ground twenty years ago.

MR. McDONALD: That is all, your honor, we have on that.

MR. THURMAN: I want to recall Mr. Wentz for one question on this last.

T. F. WENTZ recalled

CROSS EXAMINATION by Mr. Thurman.

Q Mr. Wentz in determining the proper duty of the land of Henry Smith as you gave it a while ago, did you take into consideration whether it could be more economically irrigated by having shorter runs than he gave?

A Do you mean the duty I specified?

Q The duty you testified would be a sufficient amount of water 50, 55 and 63?

A Yes, with runs that are within reasonable length.

Q Now, did you see the land? A. Yes.

Q Was it susceptible of a shorter run than a quarter of a mile?

A Yes.

REDIRECT EXAMINATION by Mr. McDonald.

Q Do you know how far his ditches were apart?

A Yes, his ditches are not a quarter of a mile, his land does not

extend a quarter of a mile in length. The upper piece, the ditch runs down through it, leaving about a third on the west side, two-thirds on the east side, and the runs vary there from nothing to possibly as much as ~~4~~ 350 feet. The lower piece I am not so well acquainted with and I could not say the length of runs on that piece, but the extent of the whole piece is not a quarter of a mile.

Q The length of the run on the upper piece would be 300 feet approximately?

A Those runs vary.

Q You don't know what the runs are on the lower piece?

A No.

HENRY SMITH recalled.

DIRECT EXAMINATION by Mr. McDonald.

Q Mr. Smith, what is the nature of your runs on this land that you have testified to?

A On my upper piece I take it right out of the head ditch, that is, out of the main ditch, and there would not be twenty feet from that over on the ground and the lower piece I judge would be about three hundred yards to the head of my ground, then I take and start to watering right through it.

Q How long is the tract of land you run the water through?

A It is 36 rods wide.

Q And have you experimented to determine whether or not the water could be used to better advantage by having any cross ditches or making shorter runs of your water?

A I believe it would be impossible to get a cross ditch on account of the way the ground is, I would have to take it up that high to get it on my ground.

Q You would have to take it out where you do take it in order to

get it over the ground?

A. Yes sir.

CROSS EXAMINATION by Mr. A. L. Booth.

Q Which direction does the water run when you irrigate?

A It runs south.

Q Do you mean that the north and south dimension of your ground is 36 rods?

A Yes sir, I have my ditch on the east side of my ground, and I have run the water right straight, and run it kitty-cornered across the field.

Q Which direction does it run?

A It runs kind of west.

Q To the south or north?

A It runs across it west then goes south.

Q But does it run straight west or southwest?

A You see I would start the top part of it from head ditch, and it runs kind of southwest to get across.

Q Which way does the water go to the land from the City race?

A It goes from the north.

Q And runs down the east side; then, as I understand it, it runs west for a distance of 36 rods' or southwest?

A That is the lower part of my ditch, then it runs south that far, then I run it across west.

Q Now, if it run to the southwest, don't you have to run the ditch along the north side also? part way?

A Well yes, there is -- no, I have no straight ditch across the north. Yes, I have too, on the one piece of it I got two ditches. There is one at the head of my apple orchard I run that kind of straight west and then run it south on my rows.

Q How much of it is apple orchard?

A Well, there is about two acres and seven rods, I think, of it.

Q And how much is old orchard?

A There is about an acre and something, I don't know, I ain't exactly measured it, acre and something.

Q Which part is your apple orchard, east or westpart?

A It is on the south part of my hay ground.

Q The apple orchard runs clear across the whole piece ^on the south side, does it?

A You see I have a ditch right through the center of my ground, that is down middle way of it, and on the south part of my apple orchard and north part of my hay ground.

Q Which way does that ditch run that is through the center of your ground? Does that run to the west or south?

A I have it so that it heads it right on the north part of it, I have two parts of the ditch and water straight south, all my ground is watered south excepting my head ditch.

Q I thought you said a little while ago you had your head ditch on the east of your ground and water run to the west and south?

A I have one straight ditch on the east side, and I have to run this west, as I said before.

Q Then can't you run the water south across any portion of the land wherever you might select?

A That would make it too long a run for that kind of ground.

Q I say your ditch, couldn't you have a ditch running across your ground from north to south across the middle of the ground?

A. No sir.

Q How do you get the water along that middle part then?

A I start at the north end of it and water it right straight through. on the upper part of it until I come down to my center ditch.

Q How long a distance is that?

A Well, that would be eighteen rods.

Q That ditch runs which direction, that center ditch?

A It runs west.

Q Then when you get -- you collect the water in that ditch, do you, that center ditch and run it across the other eighteen rods?

A Yes sir, right down the tree row.

Q Right down your tree rows for eighteen rods?

A Yes sir.

Q By doing that ^dyou say it took you five hours to water between three and four acres?

A. Yes sir.

OMISSION.

Testimony as to right of James B. Jordan .

Discussion as to Heber City stipulation

Testimony as to right of Joseph Morris.

3

MR. A. L. BOOTH: There is a stipulation entered into between the plaintiff and Wildwood Resort Company, I think it is on file. We submitted a copy of it to some of the defendants attorneys and I don't know how many of them are familiar with it, but it follows the Chidester decree, and I will ask now if there are any of these gentlemen that have any reason for not accepting the Chidester decree and the stipulation based on that between the plaintiff and the Wild Wood Resort Company.

MR. THOMAS: This is between the Wild Wood Resort Company and plaintiff?

MR. A. L. BOOTH: This is between the Wild Wood Resort Company and plaintiff and it is based on the Chidester decree in which both the plaintiff and Wild Wood Resort Company are named. There was a decreed water right to the Wild Wood resort Company in that decree.

MR. THURMAN: What decree is that?

MR. A. L. BOOTH: That is in the Chidester decree.

MR. THURMAN: I don't think it is that name.

MR. A. L. BOOTH: No, it was in the name of George I. Taylor. The stipulation itself refers to that, it is the successor of George I. Taylor mentioned in the Chidester decree. I take it in the absence of any objection then that stipulation would be sufficient in relation to the Wild Wood Resort Company.

THE COURT: Have counsel for any of the other parties to the suit anything to suggest in relation to it?

MR. THOMAS: No, I think not, your honor. The contention of prove City would be that water was appurtenant to that land. That, however, is a matter for argument. I doubt that we could make any formal objection because the same contention we raise would be raised with the other, that the water should remain there. This stipulation provides that the water shall stay on the same ground to which it was given

in the Chidester decree, and of course the ground has changed hands from Mr. George I Taylor to the Wild Wood Resort Company.

THE COURT: Then you have no objection?

MR. THOMAS: No objection at all.

MR. A. L. BOOTH: Will it be understood the Wild Wood Resort Company does not need to go further with its proof?

THE COURT: Unless some counsel who is not present and being notified of it should want to resist it, then you would be notified to put in your proof.

MR. A. L. BOOTH: Of course, I don't represent the Wild Wood Resort Company.

THE COURT: Who represents them?

MR. A. L. BOOTH: Nobody, but the stipulation is entered into between the plaintiff and company.

THE COURT: If it is resisted the Wild Wood Resort Company should be notified in time to introduce evidence.

MR. AL L. BOOTH: Yes.

MR. McDONALD: I would like to suggest a stipulation has been entered into between the plaintiff and group of old water users known as Spring Creek users on the river bottoms here and it follows substantially the Morse decree, and if there is anybody has any objection to it they could make it known.

MR. TANNER: Your honor, Caleb Tanner is the successor in interest through G. H. Taylor who appears as one of the defendants in this action. The water right in question in the Morse decree appears in the name of Myron Tanner through the Carter Ditch, and is the only part of the water right to Myron Tanner that called for any of the natural flow of Provo river. That water right was transferred from Myron Tanner to several intervening parties and then has come back to Caleb Tanner, and I have entered into a stipulation with the Provo Reservoir Company. The water right is described fully in the Morse decree. The water right was shifted from the lands upon which the original appropriation took place in 1909, and was

used continuously from 1909 until 1914. I would like to correct that, instead of saying 1909 I think it was about 1904, soon after the entry of the Morse decree, was changed from the land upon which the original appropriation took place to lands on Provo Bench and continued to be used there until 1914, when, through an action of the commissioner, assuming that the decree not being plain -- in the subsequent paragraph it refers to the fact that the land of Myron Tanner is irrigated from spring and seepage water, and the greater part of the estate was so irrigated. These fraction that is in the stipulation was a fraction from the natural flow of Provo River. There was an effort made to clear up the difficulty with the water commissioner at the time the ruling was made, but it became practically impossible, because the representative of the commissioner, Judge White-cotton, insisted that every part in the original Morse decree should be properly sustained and make proper showing to the court, and since this case was coming up, the matter was deferred until this time. The stipulation is in the files and all that I would like to know is whether it will be -- I think generally recognized that the right is there under the tabulation and given to Myron Tanner, maybe I will have to deraign my title when the time comes.

MR. THOMAS: The title is covered by the original stipulation, is it not?

MR. THURMAN: We have a stipulation here that was intended to eliminate all the deraignment. That is a man ^{the} would prove a right when the right began, and he himself is now the owner of it, the mesne conveyances and so forth were eliminated.

THE COURT: Unless someone denies it.

MR. McDONALD: Mr. Tanner, is this any of the water that is involved in any dispute of what is known as the springs out here relative to Clyde?

MR. TANNER: This comes through the Carter ditch that

was proved this morning by Judge Booth's witnesses.

MR. McDONALD: I am asking if this is water that is involved in your stipulation has anything to do with any of the water that is involved in some controversy out in the river bottoms, Clyde and these other people and yourself.

MR. TANNER: This is an old appropriation for land on the river bottoms, from the natural flow of Prove River through the Carter ditch.

MR. McDONALD: Where is the Carter ditch.

MR. TANNER: It now takes water through the West Union and carries it down the West Union for about a mile and a half, diverts it from the West Union and carries it to the river bottom, and there irrigates the Carter farm and in times past irrigated part of the Tanner farm.

MR. THURMAN: Same right that was proven this morning, ain't it?

MR. TANNER: Yes.

THE COURT: I take it unless someone notifies Mr. Tanner they question in some way the title that he has received through mesne conveyances or some other way, notifies you they question your right under the stipulation, you may rest on the stipulation.

MR. THURMAN: I have suggested to Mr. Tanner, who just spoke to me, that it might be just as well for him to put in his proof. He has a stipulation here with the plaintiff but has not a stipulation with the other parties, and it is only matter of a few minutes perhaps.

THE COURT: Very well.

CALEB TANNER recalled by the defendant Caleb Tanner, testifies as follows:

DIRECT EXAMINATION by Mr. Thurman.

Q Mr. Tanner, you are a party to this action at the present time?

A Yes, not a party directly, but party through water right that has been transferred from Mr. Taylor.

Q Mr. Taylor is a party?

A Mr. Taylor is a party defendant here.

Q And you claim to have succeeded to his right?

A It is so entered in the record.

Q You may --

A In the files rather.

Q Have you a plat there of your land? A. Yes.

Q You may describe to the court -- I will not ask you in detail.

A The water right that I claim was originally developed upon the land shown on this plat, it has got no exhibit number.

MR. JACOB EVANS: Have it marked.

MR. THURMAN: We will give it one afterwards.

A Arthur Tanner, and is the land lying northeast of the yellow line named irrigation ditch from Spring creek. That land up until 1902, was irrigated through the Carter ditch, which originally diverted water from Provo river, at a point on the extreme upper end of the map, named old Carter diversion.

Q Just one moment, refer to that Exhibit as 129.

A The point of diversion at the old Carter point at what is locally called the high bank was abandoned soon after the Morse decree was entered by the consolidation of what was locally known as the Brown ditch with a higher interest locally known as the Huber ditch, those two combined interests being now what is called the West Union Canal Company. A dam was made to conduct the water to which the Carter ditch was entitled down the river bed to the high bank, the losses incident to this carriage over the natural bed were so heavy that an arrangement was made agreeable to all parties to transfer all the Carter water through the West Union canal, and that has been continued until the present time, so that now the Carter ditch water is taken from the West Union canal at the point marked on Exhibit 129 as new Carter diversion. In 1904 the water to

which the Tanner farm was entitled was transferred from the lands heretofore described onto land lying in the same section about half a mile to the west on Provo bench, and was used through the Provo Bench canal from the date of this transference until 1914, when difficulty arose over its continuous use through that channel by reason of the water commission assuming that all the Tanner farm had its water right from springs and seepage sources. The basis of the commissioner's understanding resting upon Article 12, as I remember, of that decree which specifies part of the Tanner farm lands as being so irrigated.

Up until 1904, and for many years, or up until 1904, all of the land lying above on Exhibit 129, irrigated a ditch from Spring creek, was irrigated by the water right that I claim through the Carter Ditch from Provo river every year, and after the change of that water right from the land in question through the Provo Bench canal and onto Provo bench, this land in question remained dry for many years until the present owner constructed a flume line up on trestles, and now carries and has carried for, I think, about four years, some water from Spring Creek into this territory.

Q You claim one ten thousandths part, do you not?

A $10/10000$ part at the fifteen thousand minute foot stage, and the quantity of fraction ranges to $11/10000$ when the river falls to the twelve thousand foot stage.

Q Do you know of your own knowledge how long that water has been used, when the first appropriation was made, if not, how long do you remember?

A Ever since my earliest recollection I have cleaned the ditch many times and used the water through it hundreds of times for the irrigation of this land.

Q How many years would you say?

A To my knowledge, to my certain knowledge, for thirty-eight years.

Q Thirty-eight years?

A That is thirty-eight years since I knew it irrigated that land, but the land has not been irrigated from that source since 1904.

Q That is covered, all that, by the Morse decree?

A Yes.

Q Under what claim?

A Myron Tanner.

Q And is that amount -- of course the decree shows it, but is that your recollection that is the amount the decree awards?

A 10/10000 at the fifteen thousand foot stage and 11/10000 at the twelve thousand foot stage.

Q How many acres of land are there?

A There was under the original area in here that was irrigated from the Carter ditch about twelve acres of ground. I never measured it, that is just my judgment as to the area, about twelve acres there.

Q Now, as to the necessity of that land, or the quantity of water you claim, do you know anything about that, the requirements?

A The lands it is at present used on are the lands that were originally irrigated.

Q Land originally irrigated?

A The land originally irrigated, according to my memory, the quantity that was given to us at the time that it was used upon there, it was a sufficient quantity for the land, not in excess of the necessities of the land. My memory is this water was measured at some considerable distance above the land to the Carter ditch people, to the Carter ditch, and it is a porous soil, rocky soil through which the water is conducted, and all of the quantity represented there would not get to the land. It would be quite considerable diminution.

Q You could not tell approximately?

A I never ~~was~~ made any measurement to determine that except that I know the land is a rocky land, and it is more than half of a mile from the land up to the place where the old measurements

used to be made, about two thirds of a mile.

CROSS EXAMINATION by Mr. Corfman.

Q How many acres do you apply this water to now.

A Eighteen acres.

Q What quantity is it you are claiming, what part of a second foot of water, or in second feet, how much?

A As I recall it is about a quarter of a second foot.

THE COURT: At what stage?

A At the fifteen thousand, as I remember it.

Q What duty would that be?

A About seventy acres.

Q You claim this water to be appurtenant to the land you now use it on, Mr. Tanner?

A No.

Q It is used originally, it was on the river bottom?

A Yes sir.

Q And it was 1904 you made the transfer?

A Yes, transferred out of the Carter ditch in 1904.

Q The water as it is used now, the seepage from your land, where does that go to, where would the seepage from your land as you use the water now, where would that go to?

A I could not tell where the seepage from the eighteen acres goes to. It is probably in the same general direction that the seepage from the original land -- I think probably that seepage made have been off generally toward the south, and the two tracts of land are less than half a mile apart.

Q And that would give rise to springs and seepages supplying other water users here along the bed of Provo river?

A In either place, yes, I think so.

4:30 P.M., Recess to 9:30 A.M., November 16, 1916.

MR. A. C. HATCH: Mr. Wahlquist has a little matter here this morning to submit at this time, will not take more than ten minutes. We entered into a stipulation this morning fixing the right of John C. Whiting, so far as the plaintiff is concerned, as provided in the former decree of this court, and I will just file the stipulation. Shall I read it.

THE COURT: It is not necessary to read it into the record, it will be on file.

JOSEPH R. MURDOCK called by the defendant, John C. Whiting, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Wahlquist.

Q Your name?

A Joseph R. Murdock, Heber City.

Q Are you familiar with the lands and water rights owned by the defendant John C. Whiting? A. Yes sir.

Q State whether or not they comprise a portion of what is known as the William Wright estate?

A They do.

Q And water rights to the William Wright estate was litigated in court in civil action 957? A. Yes sir.

Q In what is known as the Chidester decree?

A Yes sir.

Q What portion of the water right decreed to the Wright estate is now owned by the defendant John C. Whiting?

A All that was decreed to them except the McAfee spring and one-tenth of the waters on the west side of the river during the high water ~~prize~~ period which is figured as not earlier than June 15th, nor not later than June 30th, in any event, as may be determined by the turning loose of the reservoir waters at the head of the river for irrigation purposes.

Q Does the defendant John C. Whiting own any of the waters decreed to the William Wright estate during the latter part of the season.

A He does.

Q How much?

A A two acre water right, a water right for two acres.

Q Of the water right that was included in the William Wright estate? A. Yes sir.

Q In addition to that does the defendant John C. Whiting own any other water right around Round Valley Creek?

A Yes sir.

Q How much, if you know?

A My best judgment is about five and a half acres of water -- of land that was watered.

Q Do you know from what source that water right and land was acquired?

A From the Wahleburg or Round Valley Creek.

Q That is the source from whom he obtained that?

A He acquired that from the land formerly irrigated and owned by John Hartle.

Q That would make the title of seven and one half acres of primary water right owned by John C. Whiting from Round Valley Creek?

A Yes sir.

Q To which he is entitled to use during the entire season?

A Yes.

Q You are familiar with the situation of those lands?

A Yes sir.

Q In your judgment would it make any difference whether the Hartle water is used upon the land owned by John Hartle, or whether it is transferred and used upon lands of the William Wright estate as to other appropriators?

A I would say not any difference, they adjoin each other and I don't see it would make any difference which side of the line they were ~~was~~ used.

Q The lands are on two banks of the creek there in a very narrow

canyon, are they not?

A. Yes sir.

Q And the ditches are taken out practically as the same dam for use on both sides of the creek?

A That is the case with the exception of about one acre which is taken out above that.

Q And at the lower portion? A. Yes sir,

Q And the waste water, whatever it is, immediately is returned to the natural channel? A. Yes sir.

Q So that to appropriators of the Provo river below the mouth of Round Valley Creek, it would make no material difference where that water is used upon the two tracts of land coming from the Hartle and William Wright homesteads?

A I would say not.

MR. WAHLQUIST. That is all, your honor.

OMITTED.

Testimony as to Pioneer Ditch Company, Allen, etc.

MR. JOHN E. BOOTH: May we take up the matter of Mr. Dixon, your honor please.

THE COURT: Yes.

MR. JOHN E. BOOTH: Your honor please, in order that we may shorten this up, I would like to make a statement that if they agree to this will be very brief, and as I understand you gentlemen there is no contest in this matter except as to the point of diversion; is that correct, Mr. Corfman?

MR. COREFMAN: That is my understanding.

MR. RAY: We have objected in our answer to the change of the point of use of this water on the ground that the return water was part of the supply of the Provo Bench Canal Company.

THE COURT: And under the new place of use as proposed, it would not be?

MR. RAY: Yes.

JOHN D. DIXON recalled by the defendant John D. Dixon, testifies as follows:

DIRECT EXAMINATION By Mr. John E. Booth.

Q Mr. Dixon, you are one of the defendants in this matter?

A Yes sir.

Q And party to a stipulation filed here between yourself and the Provo Reservoir Company, plaintiff?

A Yes.

Q You have a water right as you claim it here?

A Yes sir.

Q What does that consist of that you claim?

A 168 minute feet of A class water as decreed by Judge Chidester, and also application for 10 second feet. Here is the application

Q Of high water? A. Yes sir.

MR. JOHN E. BOOTH: I desire to offer in evidence

Exhibit No. 132, being an application for water made to the state engineer, made by the defendant John D. Dixon.

MR. RAY: That shows the allowance also.

MR. JOHN E. BOOTH: Shows the allowance of the claims.

MR. RAY: We object to it, your honor please, formally as immaterial and irrelevant on the grounds to which we have objected to the other filing that there were no unappropriated waters in the river.

THE COURT: Objection may be overruled. You may have an exception.

Q Mr. Dixon, you desire to change the place of diversion of this water, do you? A. Yes sir.

Q From above to below?

A Yes sir; we changed the point of diversion according to law, and was approved, and also sustained by the Supreme Court of the state.

Q We will have that come in later. You may tell where you originally used this water or where it was originally used?

A I purchased by warranty deed from Joshua J. Meham 20 minute feet of "A" Class waters of provo river. The deed was recorded October 29, 1907, Book 102, page 120.

Q Where was this water used by Mr. Meham?

A South fork.

Q provo Canyon? A. Yes.

Q All right, proceed.

A I acquired of Hyrum Heiselt 8 minute feet of "A" class water Provo river, deed dated October 16, 1907, recorded October 22, 1907, Book 103, page 208. That was ~~used~~ used at the intake of the provo Reservoir's canal in Provo canyon, Then I acquired of John W. Hoover one hundred minute feet of "A" class water, Provo river, deed dated August 31, 1907, recorded October 22, 1907, Book 103 page 207. That was used on provo River below Charleston, and above the canyon, just out of provo Canyon. Then I acquired

of James H. Snider 40 minute feet of "A" Class waters of Provo river, recorded February 19, 1907. Book 103, page 75, that was used in the South Fork of --

Q Near the Mecham place, Mecham property?

A It was probably two miles above, Mile and a half to two miles above the Mecham property.

Q Now, where do you desire to have this water diverted now?

A In the year 1910 we diverted the water through the Provo Reservoir Company, at the intake of their canal near Heisat's, in provo canyon, and I have been using the water through there delivered by them ever since that date.

Q That is where you want it? A. Yes sir.

Q Diverted and taken out of the river at that point instead of these several places?

A Yes sir.

Q You say you have been using it last two or three years?

A Yes sir.

Q Under whose direction was this?

A Through the direction of the Provo Reservoir Company.

Q Who has the general direction of turning in the reservoir water?

A The water commissioner.

Q Now, I will ask you, Mr. Dixon, if you were a party in actual interest in the case tried in this court under the title of Caleb Tanner against the Provo Bench Canal & Irrigation Company?

A Yes sir.

THE COURT: Before you proceed with that, see if I understand, taken out by the Provo Reservoir Company's canal?

MR. JOHN E. BOOTH: Yes sir.

THE COURT: I see, in your answer you say through the Provo Bench canal.

Q Is that an error?

A The point of diversion would change to the Provo Bench Canal, so that we could make an enlargement of the canal and use the water through there, and I have been using the water, pending

this suit through the reservoir they have been delivering it through their system.

THE COURT: You desire to use it through the Provo Bench, is that the idea?

MR. JOHN E. BOOTH: No, Provo Reservoir.

THE WITNESS: This year we have used --

Q I will ask you where do you desire to have this water diverted from Provo River, through the Provo Reservoir or Provo Bench?

A I will explain this year the Provo Reservoir Company distributed the water to me through the Provo Bench Canal and through the North Union. My land lays adjacent to the Provo Bench Canal and North Union, but the Provo Reservoir have had such an arrangement with the Provo Bench Canal that they have actually distributed the water to me through these canals.

THE COURT: You did not hear the question, I think, at least, you have not answered it. Mr. Davis, read Judge Booth's last question to Mr. Dixon, and if you don't understand it, ask for an explanation, and if you do, kindly answer it.

(Question read)

A It makes no difference to me where the water is diverted, just so I get it through the Provo Bench Canal and through the North Union to my land, whether it is under the jurisdiction or whether it is under the jurisdiction of the Provo Bench Canal.

THE COURT: I might ask just one question. Have you made--

Q Is there an actual physical diversion you want through the Provo Bench Canal, do you?

A I want it through the Provo Bench Canal and North Union to my land, that was where the point of diversion was made.

THE COURT: I might ask you, Judge Booth, if the court should award Mr. Dixon the right to take his water through the Provo Bench Canal, have you made arrangements with them for carrying the water.

MR. JOHN E. BOOTH: I was going to call your honor's attention to that later.

THE COURT: You may proceed.

MR. JOHN E. BOOTH: As I understand from Mr. Ray now there seems to be no objection to us taking it through that canal.

MR. RAY: I don't so state, there is a suit pending, and if he has the benefit of that suit --the case which which went to the Supreme Court of the United States -- if he has the right to enlarge whatever rights follow on that we cannot object to it. That suit was in the name of Caleb Tanner.

MR. JOHN E. BOOTH: He was a party in interest.

MR. RAY: I understood Judge Booth to say the Provo Reservoir Company had succeeded to Mr. Tanner's right of enlargement.

MR. JOHN E. BOOTH: That is not involved.

MR. RAY: It involved considerable to us who puts water in our canal.

MR. JOHN E. BOOTH: That may be so, but as to Mr. Dixon's right, but I take it this question of Tanner against the Provo Bench is settled, I really don't know how much further they may go. There was a judgment of that kind in this court, there was a judgment, that judgment was affirmed in the Supreme Court of the state, It went to the United States Supreme Court and there it was affirmed. I don't know of any other way they are going to get^{to} appeal from that.

THE COURT: The court cannot give any opinion as to how you can appeal from it.

MR. A. C. HATCH: If the court please, there is a stipulation filed between Mr. Dixon and the Provo Reservoir Company yesterday in this case. I don't remember just what it contains, but I think it settles all that question, so far as where he takes his water and who delivers it to him, it was the Provo Reservoir Canal.

THE COURT: My question was prompted because I was confused by the language of the prayer and language of Mr. Dixon.

MR. JOHN E. BOOTH: I think we can settle this.

Q Now, Mr. Dixon, I call your attention to the Exhibit 127 and the signatures to that? A. Yes sir.

Q That is your signature? A. Yes sir.

Q That is your stipulation with the Provo Reservoir Company?

A Yes sir.

Q And under that you desire that you be awarded the right to make your point of diversion through the Provo Reservoir Company?

A Yes sir, the way I have been ~~ka~~ making it the last year. We have had the water furnished through the Bench canal and North Union, this year by the Provo Reservoir Company.

MR. A. C. HATCH: As I understood the court wanted to know where you wanted this water diverted from the Provo river. After it is diverted into the canal that would be come a question between you and the party diverting it. It is where you wish to have the water diverted from the Provo river, and in your pleadings you ask it be diverted through the Provo Bench Canal Company's canal. Now, you have stipulated, and the stipulation was filed here yesterday, it be diverted through the Provo Reservoir Company's Canal.

Q Do you wish to stay by the stipulation filed yesterday, or do you wish what you have asked for in your pleadings?

A My land is adjacent to the Provo bench canal and North Union.

MR. A. C. HATCH: Pardon me, it is not a question where your land is, it is a question who will divert your water from the Provo river, do you want it diverted by the Provo Bench Canal Company or Provo Res-ervoir Company? Their getting it to your land is a question between you and them.

A I answer that before that it doesn't matter to me whether the water is diverted through the Big Bench canal company or through the reservoir company, just so I get my water through the Bench

company and through the North Union to my land.

Q Mr. Dixon, you have stipulated with the Provo Reservoir Company, have you not?

A It makes a big difference to me whether the water is furnished through the reservoir company from the mouth of Provo canyon and that long run to my land, or whether it comes through the Big Bench canal and North Union. There is the proposition-- and the point of diversion that was originally made at the Big Bench canal.

Q The fact is you wanted this determined one way or the other, let us know which it is.

A According to the stipulation.

THE COURT: Then you may have permission to amend the prayer of your complaint to correspond with the stipulation.

MR. JOHN E. BOOTH: Yes, that will be all.

MR. A. C. HATCH: How was that finally determined?

MR. JOHN E. BOOTH: By the stipulation.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Dixon, are there any facilities now for using this water which you claim upon your lands through the canal of the Provo Reservoir Company?

A Are there any facilities?

Q Yes, taking it in at the intake of the Provo Reservoir and can it be carried then to your land? A. Yes sir.

Q It can? A. Yes sir.

CROSS EXAMINATION by Mr. Corfman.

Q Mr. Dixon, the Hoover water, how many minute feet did you acquire of Mr. Hoover?

A One hundred minute feet.

Q And theretofore that water was used at what point in Provo Canyon?

A On his ranch.

Q On the Hoover ranch?

A This side of Charleston.

Q That is about how many miles from the mouth of the canyon?

A I should judge two miles above the canyon, Provo Canyon.

Q And when it was there applied the return seepage was immediately to the river?

A I don't know where the seepage would go, I suppose it would, what seepage there was.

Q The ranch is right on the river?

A The ranch is right on the river, yes sir.

Q You spoke of acquiring some water in South Fork, of Joshua Mecham.

A Yes sir.

Q How much did you acquire there?

A 20 minute feet.

Q And that water was applied to lands immediately on the bench banks of that stream?

A On the South Fork Creek, yes sir.

Q And when applied there the return seepage was immediately to the south branch of Provo river?

A Yes sir, south fork.

Q That is true of the other water you seek to have transferred from the canyon and diverted on your land on Provo bench?

A No sir, I don't think that the James H. Snider water would find its way into the river.

Q Where was that water used before you acquired it?

A It was used on a high bench.

Q At what point?

A That irrigation from the South Fork Creek.

Q But in South Fork canyon.

A In South Fork canyon.

Q And all of that water would shed into the South Fork Creek after it had been used?

A. Yes sir.

RECROSS EXAMINATION by Mr. Ray.

Q All of these places of use, the Mecham, the Heiselt, the Hoover and Snider lands are above the point of diversion of the Provo Bench Canal, are they not?

A Yes sir.

REDIRECT EXAMINATION By Mr. John E. Booth.

Q And all above the point of diversion of Provo Reservoir?

A Except the Heiselt, it is right at the diversion of the Provo Reservoir.

Q The water can run into it?

A Yes sir.

Q It is above, isn't it?

A Yes, it is right at the point.

MR. JOHN E. BOOTH: I think that is all of the Dixon.

THE COURT: Now, Mr. Cluff.

MR. CLUFF: Then we will proceed with the parties owing land in the South Fork of Provo Canyon.

THE COURT: Very well.

MR. CLUFF: Before proceeding with that I would like to ask permission of court and counsel to make a slight amendment on Page 3 and Paragraph 3 of the affirmative matter in the answer, the last item in that paragraph; the defendant W. W. Ercanback has used class A water and irrigated twenty-five acres, as I have it here. Inadvertently I left off one. It should be 125 acres, and the same amendment in the prayer.

THE COURT: It has been changed in the copy I have, the one has been put in.

W. W. ERGANBRACK, called by the defendant W. W. Erganbrack, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q What is your name?

A W. W. Erganbrack.

Q Where do you reside?

A In Provo.

Q Do you own lands in what is known as the South Fork of Provo Canyon?

A. Yes sir.

Q Have you acquired any water by deed or otherwise to land up there?

A. Yes sir.

Q What water rights have you acquired by deed?

A We acquired by deed from the South Fork Cattle Company, four minute feet.

Q Four minute feet?

A Yes.

Q What was water that was decreed to that company in the case known as 957, the Chidester decree.

A Yes sir.

Q In this court?

A. Yes sir.

Q Have you a plat, Mr. Erganbrack, showing the lands you own in that fork?

A. Yes sir.

Q For reference just pin that on the board here.

(Exhibit 133)

Q I will ask you to state whether or not the South Fork of Provo canyon is a wide valley or narrow canyon?

A The South Fork from the Provo River?

Q Yes, about what is the average width of that fork or that canyon?

A Of the water?

Q No, the valley.

A Of the South Fork?

Q Yes.

A Well, it varies so much, taking from the Provo River, here is the

provo river, you take where the South Fork enters into the provo river it is about a ~~xxxx~~ quarter of a mile.

Q Wide.

A Between a quarter and half a mile at the mouth of the South Fork, as you go on up about a mile the canyon, the valley becomes wider, and it would be from the top of the north ridge or the foot of the north ridge to the foot of the south ridge, about a mile. When we get up farther, about two miles, it would be about a mile and a half. When we get up about three miles to the mouth of -- where the water enters in from the -- what we call the Big Spring District to the main channel of the South Fork, it will vary from one to three miles and a half.

Q That is giving the width of the canyon?

A The canyon and rolling distance in the canyon.

Q The bottom of the canyon where the creek runs is not the same or anyplace that wide?

A Oh no.

Q Narrow?

A Narrow.

Q Where is your land situated?

A Our land starts -- my land starts-- but not the land we are asking for water, but my land starts one mile from the mouth of the South Fork where it enters into the Provo River on the west side, then it goes, then it continues clear up until we get over the mountain looking into Wallsburg.

Q How many acres do you own in that canyon altogether?

A Well, I own a little over five thousand acres, and we have a party in connection that runs with me, he owns the same amount.

Q Mr. Ercanbrack, in the early spring season of the year, during what is known as high water season of provo River, have you irrigated any of that land aside from the water that is -- aside from this four minute feet?

A. Yes.

Q Of Class A water?

A Yes.

Q Will you tell the court what lands you have irrigated and when, how long you have been irrigating?

A We acquired this land in 1905, and 1906 and 1907. I irrigated some of the high water in Section -- in Township 6 Range 4 East, in Sections 5 and 6.

Q That would be out of what Fork of the South Fork?

A That would be out of the Big Spring District in Section 6, and out of the Middle Fork of the South Fork district.

Q How many acres did you irrigate there?

MR. A. C. HATCH: Just a moment, if the court please. The irrigation of the land, I take it, would give him no right to irrigate as against an appropriator under the statute. Has he made an appropriation of water, Mr. Cluff?

Q I will ask you, have you made any formal appropriation or application for water to the State Engineer?

A No, I have not.

Q You merely during the high water season of each year use --^{A.} just the high water season, up to the first of July.

Q For how many years?

MR. A. C. HATCH: Just a moment. We object then and move to strike it out as being immaterial, as it is no right.

THE COURT: Well, without passing on the question whether it does or not, the objection may be overruled, and he may have his evidence in the record to base any contention he may desire to upon it.

MR. A. C. HATCH: Very well, note out objection.

Q You may proceed and state to the court how much land you have used the waters on?

A In 1907 why, I used the high water, maybe it was about put on 20 acres. 1908 I increased it a little, and have been increasing it a little until we can put it on about 125 acres at the present time of the bottom.

MR. A. C. HATCH: If the court please, may out exception

go to all of this testimony?

THE COURT: Yes, your exception may extend to all the evidence of this character.

Q Now, Mr. Ercanbrack, these lands that you have placed this high water on, you may state whether or not they lie immediately adjacent to the creek? A. Yes sir.

Q South Fork Creek? A. Yes sir.

Q And the seepage water, where does it go?

A Goes back into the creek.

Q You say you have for some years past been placing ^{water} upon about 125 acres? A. Yes sir.

Q Have you, Mr. Ercanbrack -- for how long have you been acquainted with the South Fork?

A Since 1905.

Q What has been your business there?

A Sheep and cattle.

Q Have you made any examination, demonstration or test of any kind to determine whether or not the South Fork stream is increased or decreased during the latter part of the year when we have what is known as low water season here?

A When all the farmers, Conrads and myself, all those that have used any water up above -- I have crossed my sheep what we call Bunnell Canyon, it has been known as that.

Q That is a fork of the South Fork?

A That is a fork of the South Fork, about a mile and a half from the South Fork. I have crossed my sheep down here that is below where all the water is used. The water is all used above there, and I have crossed the young lambs in the early part of June, across this stream, and have been unable to cross them in July or August on account of the water being so much higher at that time of the year. The water is lower in June than it is in July or August to such an extent that I would be unable to cross the lambs at that time of the year.

Q Along in July and August?

A Yes, I would not be able to cross the lambs, the water is so high.

Q In the month of June would you say whether or not the melting snows at the head of these forks was coming out?

A In June?

Q Yes. A. Yes.

Q Would it be the water from the melting snows that would increase in July and August, or would it be from some other source?

A The snow would be about all gone, but it seemed like when the water is -- all the water is taken out up above it comes into the channel down below.

Q So that to place water on your lands and the other lands of the parties in that Fork in the early season of the year serves a sort of reservoir for the stream, does it?

A Yes sir, if the whole stream could be held up until the first of August they would have twice as much water. It would seep through that land. That land has an under seepage that comes out in the channel down below.

Q Finds it way right back into the creek?

A Yes sir.

CHARLES W. THOMAS, called by the defendants Charles Giles and Charles Thomas, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q What is your name?

A Charles W. Thomas.

Q Mr. Thomas, are you jointly interested in any lands in the South Fork with anyone? A. Yes sir.

Q With whom?

A Charles E. Giles.

- Q From whom did you obtain your land?
- A Edwin C. Mecham and Amos Mecham.
- Q How many acres do you own?
- A 162 and some odd tenths.
- Q Did you acquire from them any water rights?
- A Yes sir.
- Q What?
- A 40 minute feet.
- Q Of the Class A water as mentioned in the Chidester decree?
- A Yes sir.
- Q Aside from the Class A waters this 40 minute feet mentioned in the Chidester decree, have you used on your land in the South Fork of provo canyon what is known as the Class B waters in that case?
- A Yes sir, in early spring.
- Q In the early spring? A. Yes sir.
- Q That would be the high water?
- A Yes sir.
- Q You may state to the court just what you have done with class B or the high waters?
- A We have turned it out onto lands that we use for grazing pasture in order to grow feet in the later season.
- Q How many acres have you irrigated with the Class B or high waters?
- A About 20 or 25 acres.
- Q That is aside from the land you irrigated with the 40 minute feet? A. Yes sir.
- Q Decreed to you, Class A water, I will ask you, Mr. Thomas, have have you made any demonstration as to what becomes of the water placed upon your land in the early spring of the year?
- A Yes sir.
- Q State to the court what it is?
- A Water applied on the land in the early spring will come up, and form springs lower down the canyon, in the later or the latter

Part of the season. After commenced irrigating about half to three quarters of a mile below us two big springs developed, and after we quit irrigating in the fall of the year those springs dry up, proving that the water used on the lands higher up in the early season is used as a reservoir, rather reservoirs, it stores it up for the latter part of the season.

Q And aside from the 40 minute feet decreed to you by the Chidester decree, you claim waters of the Class B or high waters of Provo river to irrigate how many acres?

A About 20 or 25 acres.

Q How many years do you know that that ground has been irrigated from those waters?

A We have irrigated it since 1909.

Q And prior to that time were they irrigated?

A The man claimed 16 years before that time that he used the high waters on those fields of pasture.

Q Is that water necessary for the cultivation of crops and growing grass?

A Yes sir, since that time we have plowed up this ground that he used as pasture and seeding it down to hay and grain; we have used that water undisputedly.

Q Have you ever made any formal application to the state engineer?

A No sir, but we have protected that right.

Q In what way?

A Other people have made filings upon that water and we have protested in 1911.

Q What was the result of your protest?

A Result of the protest, they granted us the water.

Q From what part of the South Fork do you take your water?

A We have all the water from the unnamed spring, the balance is used out of the main South Fork stream, which is above Bunnell Fork.

Q That unnamed spring was mentioned in the Chidester decree, wasn't it?
A. Yes.

Q Giving all the water and sufficient of the other to make up the 40 minute feet? A. Yes sir.

THE COURT: I understand this spring is a part of the 40 minute feet?

MR. CLUFF: Yes.

Q All the balance you say you take from the Bunnell Fork?

A No.

Q How?

A The 40 minute feet, we take all the water from this unnamed spring and enough out of the main fork above Bunnell Fork to make up the 40 minute feet, but the water that we have appropriated since that time we take from the Bunnell Fork stream.

CROSS EXAMINATION by MR. A. C. Hatch.

Q You say 20 or 25 acres, can't you approximate it nearer?

A I could have given the figures, we had it measured by the engineer about two weeks ago, and he failed to submit the figures. I called him up at Eureka yesterday and he said by tomorrow he could submit the figures, and I could give them to the court later. The ~~an~~ exact acreages, he measured it two weeks ago, and I was in hopes to have it for this court.

MR. CLUFF: Who was that engineer?

A John Stewart.

MR. CLUFF: You say he ~~was~~ will be here in the morning?

A He said he would be here tomorrow morning.

Q How much class B water were you awarded under the Chidester decree?

A I believe all of our water was under Class A in the Chidester decree.

Q Why do you refer to it as Class B under the Chidester decree?

A I don't believe I referred to it as Class B. The class B water has been appropriated and used since that time.

Q When did you appropriate Class B water?

A It was appropriated by Ed. C. Mecham, and we purchased the ground in 1909.

Q When did Mecham appropriate it, if you know?

A He testified before the notary he had used it for 16 years prior to 1911.

Q What had he used it for.

A For ground that he used as pasture.

Q Do you know what time of year he used it?

A He used it five to six months in a year.

Q You have since broken up that land and applied it to the raising of grain and meadow? A. Yes sir.

Q When did you break it up?

A We broke it up a year ago last fall, fall of 1915.

Q How long did you use the water in any one year you used it, after your purchase from the two mechams?

A We have used it since 1909 each year, for five months out of each year.

Q And you call that a class B water? A. Yes sir.

Q Why do you put five months use of the water as Class B?

A Well, we have used it that long, it has been undisputed, I don't know why I should call it Class B.

Q That is long enough to produce any kind of a crop you produce there, isn't it.

A Yes sir.

Q How much land have you there all told under cultivation?

A About seventy-five acres.

Q And you irrigate that with Class B water? A. No sir.

Q And with the 40 minute feet of Class A water?

A Yes sir.

Q How much do you irrigate with the 40 minute feet of Class A water?

A I judge about 30 acres.

Q How many acres did you say altogether you had under cultivation?

A Seventy-five, about that, I can give you the correct figures.

Q Thirty-five acres you used to irrigate with your --

A About thirty acres.

Q And twenty or twenty-five acres under the Class B?

A Yes sir.

Q Where do you get the water to irrigate the balance of the land?

A Balance of the land that --

Q That you have under cultivation, or don't you irrigate it?

A Don't irrigate it, it has not been yet.

Q Produce crops without irrigation?

A No sir, it produces grass and feed, some of it is in groves.

Q Wouldn't this twenty or twenty-five acres of Mecham land produce grass or pasture without irrigation?

A Some of it might, yes sir.

Q The major portion of it ?

A. No sir.

Q How much of it would produce pasture without irrigation.

A very small amount.

Q Can you give me an estimate?

A Some of it is side hill, it won't produce without water.

Q How much of it is in the bottom and will produce without water, without irrigating the surface?

A I don't think any of it would.

Q Where are these two springs that develop after you commence irrigating in the spring?

A Down what is known as the Tanner and Dixon. It is owned now by Mr. Eakurs and Mr. Sprague, I believe.

Q How long after you ~~know~~ commenced irrigating before these springs developed?

A Six weeks to two months.

Q How long after you quit irrigating before they dry up?

A About the same length of time.

Q Do you know the quantity of flow in either of those springs?

A No sir, I could just guess, I have never measured it, it is a good irrigation stream.

- Q Who made the application to appropriate the water there in 1911?
- A Who made the appropriation?
- Q Made the application to appropriate, the one which you contested?
- A Mr. Sprague, Alfred C. Sprague.
- Q Where did you make your protest?
- A State Engineer's office.
- Q Did you say the State Engineer awarded you the water?
- A Yes sir, I think it was awarded fo us.
- Q Have you any writing from the State Engineer to that effect?
- A No sir, I don't think we got a definite answer. We complied with all the -- we protested in each case and answered all the correspondence.
- Q You stated the water was awarded to you, now have you anything showing that?
- A No sir, not from the State Engineer's office.
- Q Do you know of your own knowledge it was not awarded to Sprague after your protest?
- A Only just his word, he said it was not.
- Q Who said?
- A Mr. Sprague said that it was not awarded to him.
- Q Did you get any notice to that effect from the State Engineer's office?
- A No sir. I will state, however, that the commissioner Mr. Thomas, H. F. Thomas, we measured the water in that fork, he notified Mr. Sprague to stop using that water.
- Q Did you file a written protest in the State Engineer's office
- A Yes sir.
- Q Who signed that protest?
- A Ed C. Meeham.
- Q I am asking if you did?
- A No sir, I have the protest in my pocket if you would like to see it.
- Q I would, I understood you to say you filed one?

A We did, we have been partners in the ranch, I am here representing my partner and myself.

Q This is not a protest, this is the answer.

A This is the answer.

Q Where is the protest?

A I could get that.

Q I wish you would.

A I have it at home, I have all this correspondence.

Q Also get the measurement of that land.

A This is the answer to the second letter. After we sent our protest then we received another answer from the State Engineer's office, and this is our next answer.

Q This purports to be an answer of Alfred J. Sprague to the protest of Ed C. Meclam.

A Go ahead and read and you will find it is us protesting, still protesting. You have to protest and continue to protest in the State Engineer's office to get anything.

Q And then sometimes you don't get it?

A Sometimes we don't.

Q Now, as a matter of fact, you never got anything from the State Engineer's office by reason of the protest, did you?

A No sir, only that we --

Q What did you mean when you said that the water was awarded to you by the State Engineer, or by anybody?

A Because we were permitted to continue its use of it and the other man was prohibited the use of it, and it looked as though it was given to us.

THE COURT: I understand Mr. Thomas to say he has at home all of the documents that he has received in reference to this matter. Possibly it would be well to have him bring them here, then you can cross examine him as to those documents after you see them.

Q Will you bring them this afternoon?

A I can do that, yes sir.

Q I wish you would, then we will take this up later.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Thomas, can you tell me where the lands to which you succeeded from Edward C. and Amison Mecham are from the lands of Joshua Mecham which were deeded to Mr. Dixon, are you familiar with that?

A Yes sir, we join on the east.

THE COURT: Mr. Thomas, when you come this afternoon, bring all you have in connection with this protest, all letters and papers in connection with it.

A I will.

MR. CLUFF: In order to save time and encumbering the record, I would like to know if you gentlemen would not stipulate as to the Trout Company. As I understand it is stipulated between the parties to this ~~case~~ action in reference to the South Fork Trout Company that it is the owner and entitled to all of the flow from the Ellen and the Pine Bug and Rhoda springs, situated on the lands of the defendant, South Fork Trout Company, and to ten second feet of the waters of South Fork, tributary of Grove River, all for fish culture purposes. After said use on the premises of said defendant the whole of said waters from said springs and creek are to be returned to the natural channel of the South Fork stream.

W. F. GILES, called by the defendant, South Fork Trout Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Cluff.

Q What is your name? A. W. F. Giles.

MR. RAY: As far as we are concerned there may be no examination on that with that limitation on the use.

Q Do you hold any official position with the South Fork Trout Company?

A I am a director of the corporation.

Q How long have you been such?

A For about five years, the South Fork Trout Company, and I was a director of the Rainbow Trout Company that the South Fork Trout Company succeeded.

Q And the South Fork Trout Company is the successor in interest of what interest in the South Fork?

A What interest -- to 160 acres of ground and fish hatcheries and equipment therefor, ponds and so on.

Q D^o you know what interest was decreed to the land you now own under the Chidester decree?

A As I understand it, half a second foot.

Q To whom?

A To George J. Duke originally.

Q So that the South Fork Trout Company is now the successor in interest of the rights of George J. Duke?

A Yes sir.

Q As mentioned in the Chidester decree?

A Yes sir.

Q And under that decree he was given and now owns thirty minute feet?

A. Yes sir.

Q Or half second foot? A. Yes sir.

Q Of class A of the waters of Provo river?

A Yes sir.

Q Now, Mr. Giles, aside from the Class A waters decreed there, does the South Fork Trout Company, and has it and its predecessors in interest used any of the high waters for irrigation purposes?

A Yes, when the creek is high in the spring of the year and some seasons when the river is high, the ~~xxxx~~ ^{whole} season through above seventeen thousand feet, we haven't paid any particular interest to our half second feet. We have used as much as we wanted.

Q Always turned out all the water you wanted?

A Yes sir.

Q About how many excessive acres over and above a half second foot have you used?

A I think a half second foot would irrigate probably fifteen adrees of our ground, and we have around thirty acres that is producing grass and crops at different times.

Q So that you claim of the high waters water enough to irrigate about fifteen acres?

A Yes sir.

Q In the spring of the year?

A Yes sir.

Q About how wide is the canyon at the point of your hatchery?

A You mean from the base of the mountain?

Q Yes, the bottom of the canyon?

A Oh, I should judge it is not over six or seven hundred feet.

Q And what becomes of the waters that are applied on your lands there, the seepage water?

A Why, part of the land it is pretty near impossible to get enough water over the surface to run fifteen rods. You can't hardly get enough water on there; it seems to go down and go down to the lower end of the ground near the creek, and there it rises again and flows into the creek.

Q Goes right into the creek again; A. Yes sir.

Q part of the land is gravelly? A. Yes sir.

Q And all slopes toward the natural channel of the stream?

A That is part of it, a part of the ground is very easily irrigated where it is flatter, it don't only require a small stream to run a little while, and it will sub irrigate and the water will raise to the surface.

CROSS EXAMINATION by Mr. Hatch.

Q You never made any application to the State Engineer for water other than that awarded to you by the Chidester decree?

A Not for irrigation purposes that I know of.

Q Did you for any purpose?

A I think we made an application for fish culture purpose only.

Q That doesn't take any of the water, that is, does not decrease the quantity of water in any way, what you applied to fish cultivation, does it?

A No, I believe we have increased the waters of South Fork by reason of being in the fish business, because we had to dig drains and save the evaporation of a whole lot of water by conveying it direct into ponds.

MR. CLUFF: Mr. Conrad, the other party I represent in the South Fork doesn't seem to be here and I will have to put his case in. I have some parties on the River Bottom I would like to take up.

THE COURT: very well.

MR. CLUFF: I will state these are some individuals that own lands just north of Provo City here, just north of Provo Pressed Brick Company. They were made parties to this action this summer.

JACOB A. BAUM, called by the defendants Lafa. Baum, Elmer Baum, et al, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Cluff.

Q What is your name?

A Jacob A. Baum.

Q How old are you?

A Thirty-eight years old.

Q What is your father's name?

A George Baum.

Q Where do you reside?

A Pleasant View.

Q Do you own lands in Pleasant View Precinct?

A Yes sir.

Q Where is that land situated?

A In Section 25, along City creek.

Q From whom did you obtain your land?

A I bought some of George Baum and some of Samuel Cluff.

Q How many acres of land do you own?

A I own ten acres and eighty-one hundredths.

Q From what source do you obtain water for those lands?

A Out of City creek and the drain.

Q From City creek?

A. Yes sir.

Q What ditch, particular ditch do you divert and use as a diverting channel to your land?

A I have two ditches, one is known as the Baum ditch and one is known as the Alfred Young ditch.

Q What?

A Alfred Young ditch.

Q Do you know how old the Alfred Young ditch is?

A No, it was there as long as I can remember.

Q One of the original ditches in this section of the country and the land you are irrigating is some of the oldest land to be irrigated around here?

A Yes sir.

Q Now, Mr. Baum, have you made any test or demonstration as to the amount of water that it takes to water your land?

A I have

Q By the way, what kind of land is it?

A Well, it is different in the place. You will find in the field most of it is sandy loam, and gravel under it.

Q With an undergravel.

A Yes sir, gravel under it.

Q Land that is made in the river bed there?

A Yes sir.

Q What crops do you raise?

A I raise grain, sugar beets, strawberries, corn, hay, grain.

Q This land productive? A. Yes sir.

Q With water? A. Yes sir.

Q necessary to have water to raise crops?

A Yes sir, if you don't you can't raise anything.

Q Now, what test or demonstration have you made as to the amount of water necessary for you to irrigate these lands properly, mature your crops?

A I have took the stream out and timed myself. I have different kinds of ground in the field, it takes longer to water some of the ground than it does others.

Q What size stream would you have?

A I have from two to two and a half second feet.

Q How long does it take you to water an acre of land with a stream two second feet?

A Well, about six hours most of it.

Q How often do you have to water that land in order to produce crops?

A Every eight days.

Q Have you made any demonstration as to trying to do with less water, not water so often? A. Yes sir.

Q What?

A I cannot raise my crops.

Q What has been the result where you have attempted to raise a crop by watering every two weeks?

A I haven't had within two-thirds of the crop I could get by watering every week.

Q By watering every eight days have you been able to mature bounteous crops there? A. Yes sir.

Q What particular class of crops have you tested that on?

A Well, I have tested it mostly on sugar beets and potatoes.

Q Have you ever been under any regulation whatever?

A No sir, nothing only just when one of us gets through with the water the next man takes it.

Q The land that you now own and water, lands that were formerly

owned by your father and S. S. Cluff?

A Yes sir.

Q From your test and from what demonstration you made in irrigating your land there and raising crops, what would you say would be the necessary duty of water?

A What do you mean, how much?

Q How many acres ~~to the~~ would one second foot of water take care of during the summer?

A Well, some of it you could not get it over an acre of ground all summer, second foot of water, turn it on today and it will stay there, and never see it anymore, never get to the end of twenty rod run.

Q In seeping away where would it go?

A I don't know, must go to City creek.

Q Your land lies right along City creek?

A Yes sir.

Q You say actual demonstration it took you about six hours to water an acre with two second feet?

A Yes sir, most of it, some of it I can water in three hours.

Q Some of it you can water in three hours ?

A Yes sir.

MR. RAY: Six hours to water how many acres?

MR. A. L. BOOTH: One acre.

THE COURT: Mr. Baum, I don't think I understand yet how much water you claim is necessary to water your land. Can you tell me.

A We use from two to two and a half second feet.

THE COURT: How often?

A About every eight days.

THE COURT: How long?

A We just have it long enough to water it, and then turn it off and next man below us takes it.

THE COURT: That is indefinite, that don't give the court any information as to the time, can you tell the court

how long you need two or two and a half second feet? each eight days to water your ten acres of ground?

A It takes from twenty-five to thirty hours to water it.

THE COURT: And you need it that length of time?

A Yes sir.

CROSS EXAMINATION by Mr. A. C. Hatch.

Q Do you irrigate all the land that you own up there?

A No sir.

Q How much do you irrigate?

A About, less than an acre.

Q I didn't understand you, you say you irrigate less than an acre?

A No, as you asked me if there was any land I didn't irrigate.

I said yes.

Q How much did you say you own all told?

A That I don't irrigate, little less than an acre.

Q How much do you own all told?

A I own pretty nigh eleven acres.

Q You irrigate ten acres of it?

A Yes sir.

Q How much water did you say it takes to irrigate it?

A We generally have about two to two and a half second feet in the stream.

Q How long did it take to irrigate it?

A Take me twenty-five to thirty hours to water it.

REDIRECT EXAMINATION BY Mr. Cluff.

Q Mr. Baum, are you acquainted with the land owned by S. S. Cluff, Jr., there? A. Yes sir.

Q And by Elmer Baum? A. Yes sir.

Q And Lefe Baum and James Amicone?

A Yes sir.

Q Lands similar? A. Yes sir.

Q And they use from the same ditch as you do? A. Yes sir.

S. S. CLUFF, JR., called by the defendants Lafe. Baum, Elmer Baum, et al., being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Cluff.

Q What is your name?

A S. S. Cluff, Jr.

Q You are a son of the S. S. Cluff that is mentioned in the Morse decree? A . Yes sir.

Q The lands that are owned by S. S. Cluff and Dixon lands that came under the waters decreed to S. S. Cluff, Sarah D. Dixon and Provo City in the Morse decree, is that correct?

A Yes sir.

Q Has there ever been any regulation of the use of water, to your use of the water on the lands you own there?

A Never was that I know of.

Q How many acres do you own?

A 13.21 deed calls for.

Q How many acres do you irrigate and use for the growing of crops?

A Twelve acres.

Q What is the character of your soil and land?

A It is a sandy loam wash from the river, similar to the adjacent lands there.

Q Some of it gravelly?

A Some of it is gravelly, yes sir.

Q What crops do you grow?

A I grow hay, grain, potatoes and general farm crops.

Q Land are productive with the use of water?

A Yes sir.

Q Have you made any test to determine how much water it takes?

A Yes sir.

Q What have you done?

A I have taken particular notice last year and this year. I have a portion of the ground into hay, and there is where I made my test. Last year I didn't water it at all prior to cutting

the first cutting of hay, I didn't think it was necessary. Immediately after cutting the first cutting of hay I gave it a good thorough watering, and I didn't give it any more until after I cut the second cutting which I noticed decreased, and I received no third cutting at all, did not get high enough to cut. That was last year, 1915. This year I immediately put the water on it some time during the forepart of the month of May. Of course the latter part of May we received an awful frost and it stunted the growth of the hay so that I didn't realize very much of a cutting off of it and I proceeded to water it again along the first of June. About the tenth I harvested that crop, didn't amount to much, on account of the frost. I put the water immediately onto it again, and about every eight days I watered it and kept it watered, and the result this year I received just as much again hay the second cutting as I received last year first cutting, I also received a good third cutting this year.

Q In the growing of grain, potatoes and so forth how often do you have to water those crops?

A It is necessary, I think it is, to water for hay and potatoes every eight days.

Q Have you made any demonstration as to how much water it would require to water an acre of ground there?

A Well, the stream I had on this hay ground measured at the head, of course it has to run some distance, in the neighborhood of two and a half second feet, and it took me to water that, neighborhood of two and a half acres thereabouts, and it took me, staying right with it to get it over that, and get it over as it should be watered thoroughly, it took me eight hours constantly being right with it.

MR. A. C. HATCH: How many acres did you say?

A Approximately two or two and a half acres, not more than that, by staying immediately with it.

Q Now, what ditches do you take your water from?

A I take it from what is known, on this piece, the Jacob Baum ditch.

Q You use then some from the Jacob Baum ditch?

A I do.

Q Some from the Alfred Young ditch?

A Yes sir.

Q You also use some direct from the river, do you not?

A I have a ditch direct from the river.

MR. A. L. BOOTH: From the river or City creek?

MR. JACOB EVANS: Is it the George Baum ditch or Jacob Baum ditch?

MR. CLUFF: It is known as the Baum ditch.

CROSS EXAMINATION by Mr. Jacob Evans.

Q There aren't two Baum ditches?

A No, it is one and the same ditch.

Q It is the George Baum ditch, isn't it?

A George Baum ditch, I presume that is the name of it.

CROSS EXAMINATION by Mr. Hatch.

Q What other crops do you raise besides hay and potatoes?

A I have pasture land and I have fruit.

Q How often is it necessary to irrigate the pasture?

A Well, some of it is pretty near absolutely necessary to have the water on it all the time.

Q How much of it?

A About four acres, four acres of that.

Q And how much fruit land?

A I have about half an acre immediately around the house.

Q How often do you have to apply the water on that?

A Strawberries require about every eight days, really ought to be oftener while bearing.

Q So that you think every eight days you should apply the water

to all of your lands up there except the pasture land and that should have the water running upon it all the time, is that right?

A. Yes sir.

Q Why does the pasture land require water running upon it all the time?

A Due to its formation, gravelly formation, being immediately in the river bottoms.

Q Does the river run through this land?

A Doesn't run through my land.

Q Do any of the creeks?

A City creek does.

Q Runs through it?

A City creek.

Q Is there any sub irrigation of that land at all?

A None whatever, not where I am located.

Q Have you ever dug down to see how far it was from the surface down to the standing water?

A Yes sir.

Q How far was it?

A Direct down, right back of my house in just about an average level of my whole land and it was just six feet from the top to water.

Q And the water running in the ditches above the land?

A Yes sir, that was in February.

Q How was it in the summer, if you know, when you are irrigating?

A I presume it is a little higher, especially when the water is in the Alfred Young ditch.

Q You never have made any test in the summer time?

A No sir.

Q February the ground water is the lowest any time of the year?

A I think so, yes sir.

Q Can you tell us how much land you irrigate under each of these three ditches?

A There is approximately under the George Baum ditch two acres and a half.

Q Two and a half. A. Yes sir.

Q And the Young Ditch?

A Under the Alfred Young ditch I haven't had it measured, but I would judge there was about four or four and a half acres.

Q And under this ditch direct from the river the balance of the twelve acres?

A The balance of the twelve acres is watered direct from the river, seepage water.

CROSS EXAMINATION by Mr. Ray.

Q Mr. Cluff, how big a stream does it require all the time on the four acres of pasture land there?

A Well, I would judge there was -- of course it run right off the land into City creek again, I take it out of the river and runs through my land into City creek, there is not less than a second or a second and a half half feet at any time.

Q Runs right back into the river?

A Goes back into City creek.

RECROSS EXAMINATION by Mr. A. C. Hatch.

Q Have you had actual measurements made of your land up there under the several ditches?

A Actual measurements?

Q Yes.

A No sir, I have not, not under the several ditches.

Q If it should develop there was 1.49 acres say of the land you had under the Young ditch?

A How much.

Q One and a half, less than one and a half acres.

A Under the Young?

Q Yes.

A I said there was four and a half.

- Q I say if it actually measures only one and a half, what would you say to it, less than one and a half?
- A If it measures less than one and a half?
- Q Yes.
- Q The actual amount of the actual land there now?
- Q Actual land irrigated and cultivated under the Young ditch. That is the testimony in this case, I understand it, actual survey of the land, less than one and a half acres, exact figures 1.49 acres.
- A I am satisfied there is four and a half or more acres.
- Q Irrigated?
- A That I irrigate under the Young ditch, yes sir.
- Q Of your own lands?
- A Of my own individual lands.
- Q And under the Baum ditch you say two and a half acres?
- A There is approximately two and a half acres.
- Q Now, what would you say if the testimony heretofore shows it is only 2.02 acres?
- A The testimony?
- Q Yes.
- A Not my testimony.
- Q No, but the testimony already introduced in this case by the surveyor that measured the land?
- A Well, I would say he was wrong, that is what I would say.
- Q You never have measured it, have you?
- A I never have measured it.

REDIRECT EXAMINATION By Mr. Cluff.

- Q You mentioned to counsel there you get some seepage water, what is that?
- A That I get some seepage water?
- Q Yes, you mention the water you take direct from Provo River, call it seepage water.
- A Oh, I would presume it is seepage water because it is after

everything has been taken out of the river, and it is what comes down the river in connection with the spring that comes in at Baum's land there.

Q Then there is a spring to the west side of Mr. Baum's land, sort of slough there you have tapped, and bring that water across City creek in a flume?

A My father, prior to me owning the land has always fetched that in there, yes sir.

Q You say your deed calls for something over thirteen acres?

A 21.13 acres, or 13.21 acres.

Q And practically all your land you use for either the growing of crops or for pasture?

A Everything with the exception of what ~~is~~ City creek bars me from the use of.

Q All of that land has been used as long as you remember?

A Every inch of it has been watered.

Q Does the seepage water from all your land here come in above the intake of Provo City-- you know where Provo City's intake is?

A Yes, their union gates, with the exception of the small corner-- City Creek comes in this way, east of south. There is a corner, on the west of south that I have there, I don't presume gets back into City creek, goes in to the river.

Q All the balance is in above --

A All the balance is in above.

Q Provo City's intake? A. Yes sir.

RECROSS EXAMINATION By Mr. A. C. Hatch.

Q The nature of the land, any cottonwood trees growing on it?

A There is cottonwood trees on some of it, yes sir.

Q About how much of it?

A If it was all together, it would be about perhaps two acres now, I have been clearing it right along.

Q How long since you cleared the last?

A Since I owned it, since I became proprietor of it.

A Three years.

Q How much have you cleared in the last three years?

A What time I have put on and cut it constantly, I have cleared in the neighborhood of four acres, thereabouts.

Q And have you seeded that since?

A Yes sir, planted it, raised a crop on it last year.

Q So that prior to three years ago you had only eight acres seeded under cultivation?

A When I purchased it, yes sir.

Q You have not been under any regulation whatever as to the use of water at any time, have you?

A No sir.

Q This pasture land, how is the surface of it as to having trees and brush on it?

A There is some of that has got trees.

Q About how much?

A Trees, no brush, I have the brush out. It consists of these two acres, thereabouts.

Q You cut the brush out since you owned it?

A Yes, part of it, and part of it of course I have not.

REDIRECT EXAMINATION by MR. Cluff.

Q Prior to the time you cleared this off and planted this particular land, what was done with it?

A Pasture.

Q Did it grow good grass for pasture?

A It did when watered, yes sir.

Q Has done for years? A. Yes sir.

MR. A. C. HATCH: The high water of the river overflows it, doesn't it?

A No sir, hasn't done for twenty years to my knowledge.

CROSS EXAMINATION By Mr. Tucker.

Q Can any of the seepage water from your land get into the East

Union below the measuring box?

A Below the measuring box; I don't know I know where the measuring box is.

Q Can any of the seepage water from your land get into the East Union below the junction of the East Union with the Factory race and City creek?

A Practically all of it, yes sir.

Q It all gets into the East Union below that junction?

A And I will state here when I moved down there the City creek, I think, changed it entirely, I have moved the City creek back out around farther, so that it gets practically all the seepage water I use on my ground.

REDIRECT EXAMINATION BY Mr. Cluff.

Q Let me ask you, counsel asked you if your seepage water gets in below those gates --

A Gets in above, yes, above those gates.

Q There cannot any of it get in below those gates ?

A Not that I know of.

MR. TUCKER: Then I understand it, none of your seepage water gets in below the measuring gates of the East Union, Factory race or City creek?

A No.

MR. TUCKER: That is correct, that is all.

ELMER BAUM, called by the defendants Lafe. Baum, Elmer Baum, et al, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q What is your name?

A Elmer Baum.

Q You own any land in the river bottom below Provo City?

- A yes sir.
- Q How many acres?
- A Nine acres and nine hundredths.
- Q From whom did you obtain your land?
- A George Baum.
- Q From what source do you get water to irrigate that land?
- A Out of the George Baum ditch.
- Q How many acres do you irrigate out of the George Baum ditch?
- A Between seven and eight.
- Q What crops do you grow?
- A Strawberries, beets, wheat, little pasture.
- Q The George Baum ditch takes its water out of City creek, does it?
- A Yes sir.
- Q Have you made any test to determine how much water it requires for you to water an acre?
- A Take me about three hours.
- Q Three hours to water an acre? A. Yes sir.
- Q Do you know how large a stream you usually have there?
- A Two and a half second feet.
- Q How often do you have to water in order to produce crops?
- A Every eight days.
- Q Have you ever come under any regulation?
- A No sir.
- Q Lived right there in the bottoms and have always used all the water you wanted? A. Yes sir.
- Q You have proven or tested it requires water about every eight days? A. Yes sir.
- Q And takes you about three hours to water an acre?
- A Yes sir.
- Q With a stream two and a half second feet?
- A Yes sir.

CROSS EXAMINATION By Mr. A. C. Hatch.

- Q how much of the land of the 9.9 acres do you irrigate?

A How much of it?

Q Yes.

A Between seven and eight acres.

Q You don't know just how much?

A No sir, just about seven and a half, I should judge.

Q How much of it is covered with cottonwoods and brush?

A There is about two and a half acres.

Q What do you do with that?

A I pasture part of it, some of it is right along the river side.

Q Does the river run through this tract?

A Run against the tract?

Q Run through it?

A No sir, it runs right along the side, cuts off a little bit on the west side.

MR. JOHN E. BOOTH: If the court please, my I have just a moment. Yesterday we had David S. Park on the stand and proved his part. The Branch Young estate is also interested and I have been trying to locate those people during the week, and last night I found they are at Mona, I cannot have them here until probably tomorrow morning, and in case the primary call should be before that--

THE COURT: As long as we have anything to occupy the court they will not be called.

12:00 Noon, Recess to 2:00 P.M.

MR. JOHN E. BOOTH: Through the courtesy of Mr. Cluff, I may be permitted with your Honor's permission to introduce the matter of Hyrum Heiselt, it will take but a brief time, there is no contest.

HYRUM HEISELT, called by the defendant Hyrum Heiselt,
first being duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. John E. Booth.

Q Your name is Hyrum Heiselt? A. Yes sir.

Q Where do you live?

A Provo Canyon.

Q You have some land in there known as the Heiselt place?

A Yes sir.

Q You know the Steele farm, do you?

A Yes sir.

Q It joins you? A. Yes sir.

Q How long have you been there?

A Been there about thirteen or fourteen years.

Q How long have you known the place.

A That long.

Q Who had it before you ?

A My place?

Q Yes.

A Enos Carter.

Q How long have you known of his being there before you got it?

A Why, a good many years, I don't know how long.

Q Been a good while?

A Yes, he was there several ye-ars before I got it.

Q There is some springs that arise on your ground?

A yes sir.

Q And some adjoining you on the Steele place?

A Yes sir.

Q Who else has used that water besides you and the ~~pis~~ people on the
Steele place from those springs?

A Nobody.

Q And have you used it all? A. Yes sir.

Q During the irrigating season? A. Yes sir.

Q And all the time that you have been there?

Q Yes sir.

Q And no interference from anybody? A . No sir.

Q What do you use the water for?

A Well, I use it for irrigating and fish pond. After it leaves the fish pond I use it for irrigating my orchard.

Q Mr. Heiselt, I hand you a paper marked Exhibit 134, purporting to be a stipulation between your self and the Provo Reservoir Company, and ask you if that is a stipulation that you and the Reservoir Company entered into?

A Yes sir.

MR. RAY: Judge Booth, does that stipulation in anywise provide for a change of the place of use of this water?

MR. JOHN E. BOOTH: No sir. Then we ask to make this a part of the record, your honor please.

THE COURT: It may be filed.

MR. JOHN E. BOOTH: It is already filed, I believe that is all from this witness.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Heiselt, you have used this water, you say, for thirteen or fourteen years? A. Yes sir.

Q prior to that Mr. Enos Carter used it?

A Yes sir.

Q You still have the same amount of land?

A Yes sir.

Q using the same quantity of water?

A Yes sir.

Q Have you transferred any water last few years?

A Not in those springs.

Q Have you sold any of the water which you formerly used on your place?

A Yes sir, I sold some river water that was decreed to me.

Q You sold some decreed river water? A. Yes sir.

Q Who did you sell it to?

A To Dixon.

- Q That was water which you say had been decreed to you ?
- A Yes sir.
- Q Are these springs sufficient for the irrigation of your place?
- A They are on that side of the river.
- Q Was the water which you sold to Dixon on the same side of the river?
- A. No sir.
- Q What has become of the land which you sold to Dixon?
- A Still farm it.
- Q What do you raise on it.
- A I use river water, what little I have left. I had nine minute feet decreed to me, and I got up against it for money and had to let some of it go.
- Q You sold how much to Dixon?
- A Seven feet, I remember.
- Q And you still have two minute feet?
- A. Yes sir.
- Q Do you still you two minute feet upon it?
- A Yes sir.
- Q Is that sufficient for its proper irrigation?
- A It is, for some crops, what I am using it for now, I am raising corn.
- Q What did you have in before?
- A Alfalfa.
- Q There is not enough for the alfalfa?
- A. No sir.
- Q Did it ~~td~~ take five times as much water for alfalfa as for corn?
- A I think it does, the way I farm it.
- Q When you used that water, that nine minute feet of water on this ground, there was quite a run off, wasn't there?
- A I will tell you that water wasn't measured I know of when I was using it. When I was using it there before I sold it was the only ditch taken out and I would go there and take what water I wanted.
- Q Did you ever use nine minute feet?
- A I don't know how large a stream that would be, I used to fill my ditch whenever I wanted to.

Q You don't know whether it was more or less than nine minute feet?

A No, I couldn't say.

Q When you used whatever right was decreed to you on your alfalfa on that ground all the run-off and seepage was back into the river?

A. Yes sir.

Q And land was so situated that water found its way immediately back into the river?

A. Yes sir.

MR. JOHN E. BOOTH: That is all of that, your honor please.

LAFE. BAUM, called by the defendants Lafe Baum, Elmer Baum, et al, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q What is your name?

A Lafe Baum.

Q How old are you?

A Thirty-two.

Q Are you a son of the late George Baum.

A Yes sir.

Q He is dead now, is he? A. Yes sir.

Q You own some land he formerly owned?

A Yes sir.

Q In the river bottoms? A. Yes sir.

Q The Elmer Baum and J. A. Baum that testified this morning are your brothers? A. Yes sir.

Q How many acres do you own there?

A 9.09.

Q Of that amount how many acres do you irrigate?

A seven and a half.

Q How long have you irrigated that seven and a half acres?

A As long as I can remember.

Q As long as you can remember? A. Yes sir.

Q Your father prior to you?

A Yes sir.

Q What crops do you raise there?

Q Why, I have raised beets, potatoes, mostly; now in strawberries.

Q Mostly in strawberries now? A. Yes sir.

Q Out of what ditch do you take water?

A Well, I take most of it out of City creek, and also own a spring which flows a small stream of water, I use them both.

Q The spring is at the north end of your land, is it?

A Yes sir, on the west side of the railroad track, and city creek is on the east side.

Q So that the spring water that you use there does not mingle with the City creek at all?

A No sir.

Q What is the name of that spring?

A I don't know there is any name to it, just a spring is all.

Q Does the water raise on your land?

A No sir.

Q Whose land does it raise on?

A On Mr. Foote, just joining.

Q He uses part of that spring water himself?

A Yes sir, he and I are the only ones can use it.

Q Then you take some water from City creek?

A Yes sir.

Q What ditch do you take it through?

A George Baum ditch.

Q The water you take from the spring is not sufficient to water seven and a half acres,? A. No sir.

Q The remainder you take from City creek?

A Yes sir.

Q Have you made any test to know about what amount of water it requires for your land there?

A We use the same ditches my brothers do, two and a half second feet

Q You have the stream when you irrigate?

A Yes sir.

Q How often is it necessary for you to irrigate to raise crops on that land?

A On my berries I have to irrigate about every five days. Beets, potatoes, anything like that, goes about eight days.

Q Do you know how long it takes you to water one acre of ground with that two and a half second feet of water?

A About three hours.

Q You have tested that out, have you.?

A Yes sir.

Q And using the water the very best you could to work it over the ground?

A. Yes sir.

Q Takes you about three hours to one acre. What is the character of that soil?

A Well, it is mostly sandy loam.

Q And the sub soil is gravel river bottom?

A Yes sir, regular river bottom.

Q River bed, I take it all the seepage water from your land finds its way into City creek?

A Yes, and the river.

CROSS EXAMINATION BY Mr. A. C. Hatch.

Q How many acres do you own?

A 9.09 acres.

Q How much of it is under cultivation?

A Seven and a half acres.

Q Since when did you put the major portion of it into berries?

A Sir?

Q When did you put the major portion of your farm into berries?

A Well, been about three years since I started, I just planted a few, and this spring I planted more.

Q Requires more water for the berries than the crops you formerly grew,

A Oftener, yes sir.

Q And the same quantity each time and oftener?

A Yes sir.

Q How many acres have you now in berries?

A About three acres.

Q Then you have -- you are now having what would be an unusual use upon about half of the cultivated land?

A In berries.

Q I didn't understand you.

A What is it you mean, I had half of it into berries?

Q About half?

A Yes, somewheres around.

Q You say it takes about every eight days on the other crpps?

A Yes sir.

Q What kind of other crops?

A Beets, corn, potatoes, hay.

Q You think the corn requires irrigation every eight days?

A Yes sir.

Q As a matter of fact, wouldn't do your land have crops grow without irrigation? A. NO sir.

Q Have you tried it?

A yes sir, I tried it this year with oats.

Q I am asking as to corn?

A Yes sir, has to have water.

Q Tried to raise oats this year without irrigation?

A Yes sir.

Q How many acres?

A I had about an acre, cut it for hay.

Q Why did you cut it for hay?

A Well, I just needed a little hay to feed, was all.

Q Wouldn't it have matured, the oats crop?

A No sir, not good.

Q If you had allowed it to stand?

A No sir, not fully.

Q But it would produce a crop of hay without irrigation?

A It did this year, pretty fair.

Q Wouldn't it any year?

A I couldn't say to that.

Q Sir?

A I couldn't say whether it would or not.

Q Do you have any regulation of your use of the water?

A No sir.

Q Never have had?

A Never have had.

Q Then you were not favoring the berries at the expense of your other crop?

A Not what?

Q You were not favoring your berries at the expense or injury of your other crops this year?

A No, I don't know I was.

Q If you have no regulation why didn't you irrigate your oat crop this year?

A Why didn't I?

Q Yes.

A Well, I don't know, I just didn't irrigate it was all, just cut it for hay.

Q There was no reason why you should not have irrigated it if you had wanted to was there?

A I could, yes sir.

Q You had plenty of water?

A I had enough, I guess, yes.

Q How much land with the spring irrigate?

A Well, I can't say as to that, there is about half a second foot of water in it, enough to run down eight rows of berries, that is all it will water.

REDIRECT EXAMINATION by Mr. Cluff.

Q Acquainted with the land owned by James Amicome up there?

A Yes sir.

Q How long have you known that ground?

A As long as I can remember.

Q As long as you can remember? A. Yes sir.

Q That would be twenty-five years?

A Well, say eighteen or twenty.

Q And was that land cultivated when you first knew it?

A Yes sir.

Q All of it? A. Yes sir.

RECROSS EXAMINATION By Mr. A. C. Hatch.

Q In how many parts was the George Baum tract of land divided at his death?

A Three.

Q How much did each of the three parts contain?

A I can't give it. Where mine is situated, each gets 9.09. My other brother on the other side of the track I don't know how much land he got. Mine is on one side of the track and his on the other.

Q How much of yours has been brought into cultivation during the last four years?

A It has all been cultivated.

Q Prior to three or four years ago was it all cultivated?

A It has been cultivated as long as I can remember, outside of this acre and a half.

Q As to your brother Mr. Baum who testified here this morning.

A Yes sir, I have two brothers.

Q What other parties have a part of this tract?

A Elmer Baum, that is on the same side of the track as mine, that is the same piece, part of the same piece.

Q The piece on the other side of the track, who got that?

A That belongs to Jacob A. Baum.

CROSS EXAMINATION BY Mr. Ray.

Q What is a second foot of water?

A I don't know.

THE COURT: Mr. Baum, I don't know I understand yet what your evidence is with reference to the quantity of water that you use from the creek. Now, how much land do you irrigate?

A Seven and a half acres.

THE COURT: Part of that you irrigate from the spring that raises on Mr. Foote's land?

A Yes sir.

THE COURT: How much do you use of the water you take from the stream.

A I can run it all in the same ditch.

THE COURT: You run it all in the same ditch?

A Can, yes sir.

THE COURT: Is the stream that you refer to as having two and a half second feet in it, the combined flow from the spring and creek?

A No, that is known as the George Baum ditch.

THE COURT: That is the George Baum ditch, and you stated you can use that stream containing two and a half second feet on your land, and took you about three hours to irrigate?

A Yes sir.

THE COURT: Do you aim to irrigate all your land you do irrigate in three hours with that stream?

A To the acre.

THE COURT: Three hours to the acre.

A Yes sir.

THE COURT: How long do you use it to cover all the land you irrigate every eight days -- you get that every eight days or five days on the berries. We will assume now you get it every eight days, how long would you use it?

A Take about twenty-one hours.

THE COURT: That is what I wanted to get at, you use it twenty-one hours in every eight days, is that the idea?

A Yes sir.

THE COURT: In addition to your spring water?

A Well, yes; of course, I may not use two and a half second feet with the spring water.

REDIRECT EXAMINATION By Mr. Cluff.

Q You run the spring water into the George Baum ditch and commingle the streams together?

A I can do, yes.

Q Is that the way you do.

A Yes sir.

THE COURT: When it is commingled, that is when there is two and a half second feet of the water?

A That is what I meant.

THE COURT: You use that twenty-one hours every eight days?

A Yes sir.

Q Counsel asked you what a second foot was, how do you know that the stream you had there was about two and a half second feet?

A Well, it was measured there in the flume.

Q You have a weir and flume? A. Yes sir.

Q It is measured in?

A In the City creek ditch, that is the George Baum ditch that comes from City creek, I was just judging by that to the size of the spring stream.

Q You say it was measured out to you as a stream that size?

A Yes sir.

Q By whom?

A Brother Wentz, I think, measured it.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Where does the water flow when you are not using it from this spring?

A It runs into the river.

Q The Provo River? A. Yes sir.

Q Or City creek?

A Runs into the river.

Q And when you are not using the water from City creek does it go down City creek?

A Goes down City creek, yes sir.

Q Is this spring so situated that you could irrigate your entire tract from it? A No sir.

JAMES AMICONE, called by the defendants, Lafe Baum, Emer Baum et al, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q Your name is James Amicone? A. Yes sir.

Q I will ask you, Mr. Amicone, if you own any land in the river bottoms north of Provo City here?

A Yes sir.

Q About how many acres?

A I have 3.92 acres.

Q 3.95 acres? A. Yes.

Q From whom did you purchase that land?

A From the Sam Cluff.

Q S. S. Cluff? A. Yes sir.

Q Out of what ditch do you irrigate that land? what is known as the-

A From the same ditch.

Q Known as the Alf Young ditch?

A Young ditch.

Q Do you irrigate all your land, every bit of it?

A Yes sir.

Q Have done? A. Yes sir.

Q Do you know how many years that land has been irrigated?

A I don't know, I got it myself in 1910.

Q You got it in 1910? A. Yes sir.

- Q Do you know it had been farmed and irrigated?
- A It was cultivated before I had it.
- Q How often is it necessary for you to irrigate your crop on that land there in order to produce crops?
- A All we can, all we can irrigate when we come to produce.
- Q I didn't understand you?
- A It don't produce enough crop if I don't give it enough water.
- Q How often do you have to water it?
- A Got to water it anyway.
- Q Do you need to water it every week or every eight days?
- A Need it every week.
- Q What crops do you raise there?
- A Hay, potatoes, and corn.
- Q And if you have plenty of water to water it every week--
- A No sir.
- Q I say if you do have you raise good crops, do you?
- A If I have it I raise good crops, but I cannot water it all, the stream is not big enough.
- Q You cannot raise without any water? A. No.
- Q

CROSS EXAMINATION BY MR. Thurman.

- Q Don't you know how long it had been watered before you got it?
- A No, I don't know how long they watered these before. You can tell it was old cultivated before I buy it.
- Q You owned it since 1910? A. Yes sir.
- Q How long did it take you to water it?
- A Take twenty-four hours.
- Q Twenty-four hours to water the three acres?
- A I got to leave some without water.
- Q You don't know how much of a stream you use, do you?
- A Two and a half second feet on the dam, but when it goes to the end on my place I cannot get that much.
- Q How far does it run before it gets to you?
- A Little over half a mile.

DIRECT EXAMINATION By Mr. Cluff.

- Q Mr. Cluff, you were a son of S. S. Cluff, are you?
A Yes sir.
Q You know this five acres or four acres Amicone owns?
A Yes sir.
Q How long have you known that?
A I have known it for at least twenty-five years anyway.
Q As far back as you can remember?
A Yes.
Q Your father owned it and you have farmed it?
A Yes sir.
Q And has that land all been irrigated and farmed all that time?
A Every year, each year since that time.

MR. CLUFF: I have another individual proposition.

Mr. B. B. Richmond.

B. B. RICHMOND, called by the defendant B. B. Richmond, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

- Q You may state your name?
A B. B. Richmond.
Q How old are you?
A I will be seventy years old in a little while.
Q You formerly owned land in the river bottoms, did you?
A I have owned it there for forty years?
Q For forty years? A. Yes sir.
Q Where is that located?
A That is in Section 23 and 4.
Q About how far north of Provo City?
A Three miles and a half.
Q Do you know where the lands are that are owned by the company

known as the East River Bottom Company?

A Land owned by them?

Q Do you know the land owned by the East River Bottom people?

A Yes sir.

Q Where is your land with reference to their's?

A I am at the upper end.

Q Upper end?

A Of main river bottom.

Q Do you belong to the East River Bottom Company?

A No sir.

Q You have an individual right?

A Yes sir.

Q How many acres of land?

A Well now, do you want all the land I own there or just these two pieces?

Q We want all the land you have water right and claim water right for?

A Of course, I have given ten acres to my two oldest girls.

MR. A. C. HATCH: Just a moment; I understand Mr. Richmond has not appeared personally in this case up to the present time, and has filed no answer. I may be in error as to that; if he has not I take it he should first file his answer before testifying what his water right is, personal water right.

Q Haven't you been served and filed any answer in this case?

A I had a notice last fall, summons, two of them, I believe.

MR. CLUFF: I didn't know about that. If the court please, if that is the case I will ask leave to file an answer here. I understood Mr. Richmond had put in a claim since this suit was commenced and since the claim had been filed why he sold his property, and it is now owned by other individuals. However, I understood he would want to make a proof of the water right there.

THE COURT: Have you filed an answer for him?

MR. CLUFF: No, I have not, I was just spoken to about

it today.

MR. THURMAN: Does he own the claim now?

MR. CLUFF: He doesn't own the claim now, he owns the land.

MR. THURMAN: What is the use of putting in an answer.

MR. A. C. HATCH: That is the reason I was questioning. I understood he was testifying to his own water right at this time.

MR. CLUFF: I understood since this suit was commenced, and since he had been served and put in a claim he had sold his property, and of course he sold with it his water right.

MR. A. C. HATCH: Have you an attorney or anyone representing you in this case?

A No, I have not.

MR. A. C. HATCH: Have you ever filed an answer to the complaint filed herein?

A No.

MR. THURMAN: Who do you appear for, Mr. Cluff, in this interest?

MR. CLUFF: My brother William C. Cluff, we bought eighteen acres.

MR. THURMAN: Why don't you put in an answer for him?

MR. CLUFF: He has not put in any answer, he just bought the ground.

THE WITNESS: He don,t know anything about it.

MR. THURMAN: Put the answer in for him and use Mr. Richmond as a witness.

MR. CLUFF: That is what we will have to do.

MR. A. C. HATCH: It should be done today before the matter is closed.

MR. A. J. EVANS: What about the two girls, there will have to be a separate answer for them.

MR. A. C. HATCH: My idea is some attorney ought to

represent all these interests, particularly in view of this stipulation that we are entering into at this time.

MR. CLUFF: yes, indeed. I will appear for William C. Cluff who owns now -- how many acres is it.

A Over sixteen acres, I think sixteen or seventeen acres.

MR. CLUFF That he has just purchased from Mr. Richmond, and I will ask leave to file his answer and claim. I don't know whether it would be proper to take the testimony relative to that now or not.

MR. A. C. HATCH: We have never entered any defaults in the case believing it would be proper to let anyone come in even up to the time of closing the case.

THE COURT: I take it that is all then for the present, Mr. Richmond.

MR. A. C. HATCH: I suggest, if the court please, that the parties appear before we take the proof.

THE COURT: Yes, you can probably adjust that by morning.

MR. CLUFF I will endeavor to.

THE COURT: And know whether you appear for all the parties who succeeded Mr. Richmond's interests.

MR. RAY: My I ask at this time whether or not any service has been made upon the daughters claiming a right here, or if service was made prior to the transfer to them. They should be brought in.

MR. A. C. HATCH: The service was made while Mr. Richmond was still the owner of all this land, and there has been no appearance made for any of the tract that he owned, I understand.

THE COURT: Do you know whether there was any answer filed?

MR. A. C. HATCH: No, there was not.

MR. CLUFF: Mr. Thomas is here now.

CHARLES W. THOMAS: recalled.

DIRECT EXAMINATION By Mr. Cluff.

Q Have you the paper Judge Hatch requested of you this morning?

A Yes sir, I think I have sufficient to appear we protested that--

MR. CLUFF: I suppose, Judge Hatch, you will take the witness, it was you that asked for him.

MR. A. C. HATCH: Yes, the only question was the award to them of the water.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Are these all the papers?

A That is the papers, there is the protest and answers and receipts for the money which was very important.

Q Have you among these papers any notice of the action of the State Engineer in regard to your protest?

A No sir.

Q Did you ever receive any?

A I don't think so.

Q Notice of the action of the State Engineer with regard to these protests?

A I don't think so.

Q I will call your attention now to what purports to be answer to the answer of Alfred J. Sprague, protest of F. C. Meham; that is a copy, is it, of the original?

A The original I suppose is filed in the State Engineer's office.

Q This seems to indicate that an application referred to therein as 2947 of Sprague was approved by the State Engineer, look that over.

A Yes sir, where it says his application number 2947 has been as claimed by Mr. Sprague, has been approved, claim had been approved and we protested.

Q This is the 21st of August, 1911, that is the last paper you filed with the State Engineer, isn't it? that you have any know-

ledge of?

A I think that is the last protest we made.

MR. A. C. HATCH: I will read this into the record, if the court please. In the Office of the State Engineer of the State of Utah. In Re Application No. 3334 of Alfred J. Sprague to appropriate water from Bunnell Fork Creek in South Fork in Provo Canyon, in Utah County, State of Utah. Answer to answer of Alfred J. Sprague to protest of Ed. C. Meham. State of Utah, County of Utah, ss. Ed C. Meham being first duly sworn, on oath deposes and says: that in addition to the 40 minute feet of water awarded him by the Chidester decree, he is entitled to and has used for the past sixteen years without protest, the waters of Bunnell Fork. That if the application No. 2947 as prayed by Mr. Sprague has been approved appropriating this water it should not have been so approved, as the affiant herein has used said water for said length of time uninterruptedly that he has gone through the files of the two newspapers published at provo for the past two years, and fails to find the notice published in them of said Application No. 2947, or he should certainly have protested same; and that if same was published it must have been published in some other newspaper which he believes to be contrary to the requirements of law in such case made and provided. Wherefore he still protests to the approval of said application No. 3334. Signed Ed C. Meham. Subscribed and sworn to at Provo, Utah, this 21st day of August, 1911, Julius C. Anderson, Notary Public. My commission expires March 8, 1914. With a Notarial seal. It is marked duplicate, in re said application of Alfred J. Sprague to appropriate water from Bunnell Fork of South Fork. Affidavit in rebuttal of protest made by Ed C. Meham. Filed in the State Engineer's office August 22, 1911.

REDIRECT EXAMINATION by Mr. Cluff.

Q You say, Mr. Thomas, that was made in your behalf, you and Mr. Giles' behalf?

A. Yes sir.

Q And Mr. Sprague has never used any of the water since then?

A No sir.

Q And there has been nothing done with it by Mr. Sprague?

A No sir.

Q And you have used the water?

A Yes sir.

MR. A. C. HATCH: I will say at this point, if the court please, we question the right to appropriate water any way except as provided by statute, that the use of the water is inff insufficient. It would not apply to the use of any water made before this statute went into effect, of course. As I understood this witness testified to the increased use of the water on certain portions of his land up there, particularly pasture land, that increased use, without first making an application to appropriate would not give him the right to the use of the water.

THE COURT: Yes, I think I understand your position.

MR. CLUFF Of course, our contention is these parties have been using this high water for years and years and prior to any appropriation of the plaintiff in this case, and it is known as the Class B water in the Chidester decree .

MR. A. C. HATCH I did not so understand, I may be in error, I didn't understand Class B water under the Chidester decree didn't get any, only got Class A water.

MR. CLUFF: I understand it was Class A water that was decreed.

THE COURT: I don't know that I understood Mr. Cluff; was it your suggestion there was awarded some class B water in the Chidester decree?

MR. CLUFF: Yes.

THE COURT: To Mechem or some predecessor there?

MR. CLUFF: No, I don't think there was any special award to them, no.

THE COURT: Then your suggestion is merely it is of

the same character of water as was classed as Class B?

MR. CLUFF: Yes.

MR. A. C. HATCH: We understand it now.

MR. CLUFF: That is all I have, if the court please.

THE COURT: Are there any other claimants ready to proceed. If not I will proceed to call the defendants.

MR. McDONALD: Your honor please, there is one claim of a man by the name of James Stewart whose home is in Colorado, and has not been served with a summons. He has some relatives here who are interested in the water right. I was just talking with Mr. Evans, and it was suggested that in order that the record might be complete and his right might be protected-- I have no authority to appear for him-- that the same amount of water be decreed to him in this decree that has been heretofore decreed in connection with this group of persons that have just testified.

MR. CLUFF: He takes water from the Alf Young ditch there has never been any specific segregation made. That water was heretofore decreed to S. S. Cluff, Sarah D. Dixon and Provo City.

THE COURT: I doubt whether we can effect his right in any way, if he has not appeared and you have no authority to appear for him. Your appearance would not be binding, we cannot protect his rights by giving him any water or withholding any in this case.

MR. McDONALD: We could not withhold any, that is true. I thought in order that there may be no conflicts hereafter it may be mentioned in the decree he has an interest.

MR. RAY: If he wanted to make a conflict that could not avoid it.

MR. A. J. EVANS: I think there are several others similar to this; we may have to institute a separate proceeding later.

THE COURT: We cannot affect his right or establish

any right for him unless he is here. The court has no jurisdiction to determine anything with reference to him.

MR. MCDONALD: We could not take anything away from him.

THE COURT: Could not give him anything that would bind anyone.

MR. MCDONALD: And the right will remain the same?

THE COURT: Certainly, his right is not affected by this law suit anymore than if it had not been brought if he is not brought into the case. Now, I will call the defendants, and there is any further evidence in chief you wish to introduce they may indicate it.

OMISSION.

Discussion as to Heber City stipulation.

THE COURT: I will take some of the first. Has Provo City any further evidence to offer in evidence. I am not calling these names for the purpose of rebuttal, because all the affirmative matter should be in first. Lincoln School District.

MR. CLUFF: Just a moment, it is understood, I take it, Mr. Thomas was not able to give the exact acreage and stated his engineer who made the survey would be here in the morning, we can put that in?

THE COURT: Yes. Has the Lincoln School District anything further to offer? Provo Bench Canal & Irrigation Company.

MR. RAY: I may have two tabulations to put in from Mr. Wentz. I have one at least, I think, if it^{is} not contained in his latest report.

THE COURT: Lake Bottom Canal Company, Little Dry Creek Irrigation Company.

MR. RAY/ May it please your Honor, that raises the question as to the tabulations contained in this year's report filed with the court, and I ask the tabulations now, as far as they affect the quantities of water distributed to the Provo Bench Canal and Timpanogos Irrigation Company may be considered as the evidence of Mr. Wentz in this case upon that subject, if there is any question about it.

THE COURT: The report of this year has it been filed?

MR. RAY: It has been filed.

THE COURT: And not offered in evidence?

MR. RAY: And not offered in evidence. I haven't read it, but Mr. Wentz tells me those tabulations are in.

THE COURT: Probably all the tabulations ought to be offered in evidence.

MR. RAY: On behalf of the commissioner then, your honor please, I offer the entire report in evidence in so far as it is

material to my clients.

THE COURT: It may be received unless there is some objection, and if any of the parties after examining it desire to attack it they may move to strike any portion they might regard as incompetent.

MR. A. C. HATCH: That is the report of the commissioner for this year?

MR. RAY: Yes, 1916.

MR. A. C. HATCH: Did you offer it in evidence?

MR. RAY: In so far as material, yes, and that will include it all subject to a motion to strike immaterial or irrelevant matter.

MR. A. C. HATCH: That will be all right, possibly.

THE COURT: It may be received that way. Upper East Union Irrigation Company, the Timpanogos Canal Company, the West Union Canal Company, the East River Bottoms Water Company, the Provo Pressed Brick Company, the Utah-Idaho Sugar Company, Zions Savings Bank & Trust Company,

MR. JACOB EVANS: I take it neither of those parties have introduced any evidence at all.

MR. THURMAN: Major Young has spoken to me two or three times about it over the phone. I told him he would be permitted to put it in I thought at the last. I don't know why he is not looking after it.

MR. JACOB EVANS: I would suggest they be notified to be here tomorrow.

THE COURT: Mr. Clerk, notify Mr. Young that the probabilities are that the evidence will close tomorrow, and if he has any evidence on behalf of these defendants he had better be prepared to introduce it in the morning. Spring Dell Resort Company, Wildwood Resort Company, South Fork Trout Company, Sego Irrigation Company.

MR. TUCKER: Your honor please, that matter was in the hands of the late Judge Whitecotton, and Mr. Bagley. We

were notified at noon we were expected to take charge of that, and are working on it now, and will have the evidence to present tomorrow, if that is satisfactory.

THE COURT: Very well, how long will it take?

MR. TUCKER: It will be short, probably half an hour or an hour.

THE COURT: We are crowding into tomorrow considerably.

MR. TUCKER: We will make it as short as we can.

(WHEREUPON the court proceeds and calls the names of the defendants)

MR. THURMAN: The case of Esthma Tanner is ready for trial. Your honor called that, I didn't wish to interrupt you.

THE COURT: I called them for this purpose, not for the purpose of precluding anyone who may have their evidence ready, but for the purpose of giving an opportunity and calling attention to the several names here so that is parties have any affirmative defense or evidence in support of the cross complaint or claim for water that it may be called to their attention. Now, if there are no other names except those who are in these other counties in the upper valley, I will not call them any further, because they have all been attended to in that hearing there, as I understand it. I will hear the evidence in support of the claim, Mr. Thurman;

MR. CLUFF There is one client of mine, Charles Conrad in the South Fork I have not been able to get hold of. I thought he would be here I will try and have him tomorrow.

CALEB TANNER recalled by the defendants Esthma Tanner and A. L. Tanner, testifies as follows:

DIRECT EXAMINATION By Mr. Thurman.

Q Mr. Tanner, are you acquainted with the claim here under the title Esthma Tanner defendant?

A Yes, it is a claim of Esthma Tanner and A. L. Tanner. In the list of defendants A. L. Tanner appeared for a small claim under the Smith Ditch Company, and that is the reason his name is omitted mentioning in connection with this claim, but the claim is together.

Q State what this claim is?

A A. L. Tanner owns 48 acres of land in Section 25 and Esthma Tanner owns 63 acres of land in Section 25, part of which is shown upon the map Exhibit 129. This land lies immediately south of the Carter land and is under this claim all irrigated from seepage and percolating waters that arise largely on the Carter land and flow down through the Tanner land in what is locally known as Spring Creek. The claim is covered in its entirety in a previous decree commonly called the Morse decree, under Article 12, under the name of Myron Tanner. Of the total area in the ownership of A. L. Tanner and Esthma Tanner 88 acres are irrigated from the seepage and spring water, 35 acres to A. L. Tanner and -- I have not segregated that 88 acres in total to both interests. I haven't the figures of the segregation. The claim in the pleadings was 35 acres for A. L. Tanner and 60 acres for Esthma Tanner. Since the pleadings were made these parties have stipulated with the plaintiff and the stipulation is on file here. Instead of claiming the extent of their claim in the pleadings they have reduced it to ^a total of 88 acres instead of 95 acres. The pleading also is in error in two places in addition, the specific statements in the pleadings being 35 to A. L. Tanner or irrigated land and 60 to Esthma Tanner, but when it is added in the pleadings they have added 85 instead of 95.

Q The pleadings should be corrected in that respect? But you say the 95 has been reduced to 88?

A To 88 under the stipulation.

Q Is that about the right acreage? A. Yes.

MR. A. C. HATCH: Is that the total area irrigated now?

A That is the area irrigated from this spring and seepage water out of the total of 111 acres owned by both parties.

MR. THURMAN: If the court will permit me to make that correction in the pleadings, it is purely a mistake in addition, 60 and 35 is 95, and they have got it 85 in two places.

THE COURT: The correction may be made.

A The particular points at which the irrigation ditches, irrigating the Tanner land, point where they divert from Spring Creek, are shown on Exhibit 129, one diverting at the extreme north boundary of the land marked on the plat in the ownership of Eliza Carter Ashton, and irrigates the western portion of the land in question. The other ditch is diverted from Spring Creek in the property of A. L. Tanner, and irrigates the land lying on the east of Spring Creek.

Q Was that land ever watered from the river?

A This land was all watered from the river in my early boyhood, through what has been called in this case the Carter ditch, that I described in the testimony that I gave yesterday with reference to the claim of Caleb Tanner. Subsequently in the course of the development of the irrigation on Provo Bench and the Smith ditch bench water began to rise under the margin of the bench, as springs and seepage inflow, in considerable volume, beginning as shown upon plat 129 near the center of the plat, at the point marked about head of seepage, the flow augmenting in volume down through the lands of John H. Carter, and being charged with a very large supply from a spring that is located in the western part of John H. Carter's land. This tributary entering the main Spring Creek channel at the north boundary of Amos L. Carter's property. There are also two additional inflows in the south boundary, or near the south boundary of Amos L. Carter's and in the north boundary of Mary Ann Emmons,

NOTICE OF ASSESSMENT

Name of Corporation: PROVO RESERVOIR WATER USERS COMPANY.

Location of Principal place of business: Provo, Utah.

Notice is hereby given that at a meeting of the Board of Directors held on the 27th day of October, 1925, an assessment (No. 2) on the capital stock of the corporation was levied as follows, to-wit:

PROVO DIVISION ALPINE AND OREM DISTRICTS

Rate per share

Maintenance	Gen'l	Dis't.	Total
Full Water Right	\$1.29	\$1.21	\$2.50
Late Water Right	.77	.84	1.61

JORDAN DIVISION WELBY DISTRICT

Full Water Right	\$1.08	\$4.25	\$5.33
Late Water Right	.49	3.73	4.22
Early Water Right	.59	.52	1.11
Jordan River Pumped Water Right	.49	3.73	4.22

JACOB DISTRICT

Full Water Right	\$1.08	\$4.59	\$5.67
Late Water Right	.49	3.73	4.22
Early Water Right	.59	.86	1.45

Said assessment is payable immediately to R. J. Murdock, Secretary, Room 15, Knight Building, Provo, Utah. Any stock upon which this assessment may remain unpaid on Monday, the 30th day of November, 1925, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on Thursday, the 31st day of December, 1925, at the hour of 4:00 o'clock p. m., to pay the delinquent assessment, together with the cost of advertising and expense of sale.

R. J. MURDOCK, Secretary.

Office: Room 15, Knight Building, Provo, Utah.

First and only publication, November 1, 1925.

all of which occur above the point of diversion of the Upper ditch used for the irrigation of the land of A. L. Tanner and Esthma Tanner. Also some little increase from seepage in the districts down from there, as Spring Creek runs through the lands of Eliza Carter and some small inflows in the Tanner land itself. In addition to the diversion as I have heretofore specified, there is another diversion I have not marked on the map which lies on the land of Esthma Tanner, marked in yellow, ^{and} as taken from Spring creek near the northern boundary of Esthma Tanner's land, and called on the plat irrigation ditch from Spring creek.

Q Mr. Tanner, I see in addition to your claim for water you speak-- you have a claim here for water developed by drainage, will you state what that is?

A In the early operation and cultivation of these lands and within my memory all of the land of A. L. Tanner and Esthma Tanner required irrigation, first from Provo River and subsequently from Spring creek from the seepage inflows referred to. As time went on, and particularly in the neighborhood of ten years ago, the inflow of seepage and percolating waters from irrigation of the higher lying land on the Provo Bench where the irrigation developed, has been extended and is still extended, resulting in larger inflows into these lands which are right underneath a low bench, the low bench following roughly the margin of the lands of A. L. Tanner and Esthma Tanner. The brow of the hill being practically the west boundary of the lands of these parties. Underneath this hill the land is somewhat lower lying than the lands on the banks of Spring creek, so that the water will run from Spring creek west to the margin of the bench. This inflowing seepage and percolating water accumulated upon the lands particularly bordering the bench, and in the southwest part of Esthma Tanner's land. In order to protect the land from being ruined for crop production a drain was built approximately on the line shown drain, about the year

1907 or '08. This drain was approximately four feet deep, and carried a portion of the seepage waters out of the land, and dropped them into Spring creek. This drain was temporarily efficient, but as time went on the lands were growing still boggy and Ethma Tanner was under the necessity of sinking a drain to the depth of six to six and a half feet, which threw the outlet water below Spring creek, and from Spring creek she cut a drain out to the margin of the river bed, of Provo river, the point at the river bed being approximately from nine to fifteen feet below the level of her lands that had been drained, the upper part of the drained land being about fifteen feet above the outlet at the river bed, and the lower part about nine feet. In addition to this drain, additional drains have become necessary out toward the central part of the land so that in the central part of the land marked here, is a lateral drain, with some extensions and interceptions that conduct the water down and flow it into the main drain at the extreme southern boundary of the property of Esthma Tanner. Under the pleadings it is her intention to carry the water recovered from the ground by these drains, carry it into the bed of Provo River and recover from the flow of Provo River at the mouth of Provo Canyon a volume equal to that which is supplied by the discharge from the drain into the natural flow of Provo River at a point east of her property which is above many of the appropriations from Provo River, particularly Provo City, the Lake Bottom Canal Company, Little Dry creek and so forth. Those are the main ones.

Q How much water has been developed and turned into the river by those drains?

A The water has not as yet been turned into the river bed. It is partly choked at the crossing of the Lake Bottom canal. The ground from the Lake Bottom canal over to the river bed is an open porous gravel and if this drainage water were turned in there under present conditions it would vanish away

into the gravel. The intention being and she turns it through that channel which is made of concrete, the bottom and sides, so that the water won't be wasted in transit over that open material. It is now being discharged into what is locally called Spring creek, and it packs the water up into her drain about a foot and a half.

Q The claim here, however, is only for so much as is actually turned into the river? A. Yes.

Q Whatever it may be.

A Yes.

Q When it is complete? A. Yes; the drainage system is not yet completed .

MR. RAY: Judge Thurman, may I interrupt. I cannot see the materiality of this, don't see it is part of the river after it is used and redeveloped. I don't understand it is subject to appropriation, I don't understand the plaintiffs make any claim to it as part of the water of Provo River.

MR. THURMAN: While that may be true and yet I heard there was some claim as to it, as to being a part of the water of the river. We have got it in here--

MR. RAY: If there is any I just suggest that Judge Thurman would know.

MR. THURMAN: We see no reason why it cannot be determined in this proceeding as a matter of economy.

Q Did you state how long the water, going back to the water right, Spring creek, how long you had known that water right?

A Known it since my earliest recollection.

Q Considered an old water right?

A Yes.

Q Spring creek formed after this right was begun from the river?

A Yes, and the decree, Article 12 of the Morse decree provides in case the supply of Spring creek should fail these lands should have the right to their pro rata share of the flowing water in Provo River.

Q What is the requirements of water upon that land in their normal condition, you speak of them as having become somewhat water logged after they are reclaimed?

A These lands when they are reduced to the best state for crop production are practically identical with the Carter lands that lie above.

Q What is the duty of those, if you remember?

A Well, I don't think that there has been any evidence presented as to the duty, only as to the quantity that was given in the Morse decree and I don't know the acreage.

Q This is covered by the Morse decree, that is right?

A Yes, and the stipulation.

Q What do you say as to the quantity of water under the Morse decree being sufficient, more than sufficient or less, what is the fact for the irrigation of these lands?

A The quantity distributed to ~~these~~ these lands by the Morse decree is not a specific volume, but the lands are practically in the same relationship with reference to the river and character of the land as the Carter land, and the stipulation which these parties have entered into with the plaintiff is that whatever duty the court shall find for the Carter land shall apply to these lands.

Q That is the stipulation? A. Yes.

Q How do you ascertain the quantity of water for these lands under the Morse decree? What was determined.

A There never has been any determination of quantity.

Q Do you remember the terms of the decree in that respect?

A Myron Tanner has heretofore irrigated his lands that he has under irrigation in the same Section 25 from springs and seepage water, and they, under normal conditions are sufficient for the lands he has irrigated. When these supplies shall fail he will have his pro rata share from the natural flow of Provo river to be taken pro rata from the quantity distributed to what was called in the Morse decree the River Bottom rights, and

the matter was so full of uncertainty there is no way of coming at a definite quantitative statement of what that was in volume.

Q You had better try to make it definite now, if you have any idea what these lands require; you say they require about the same as the Carter land?

A Yes, the duty as fixed to the Carter land. They have an area-- the area I don't know-- they have a definite volume.

Q That is fixed in the Morse decree?

A Yes sir.

Q Your stipulation to the plaintiff is the duty may be the same to those lands? A. Yes.

Q Now, I will ask you -- I believe you have stated that the lands are similar in their requirements for water?

A Yes.

CROSS EXAMINATION BY Mr. McCorkman.

Q You don't propose to use this water on the land these seepages arise on?

A The seepage water?

Q Yes.

A We cannot use it on the land it arises on.

Q Where would it go?

A It goes now through the drain. If they were open completely it would run ^{into} under the river bed of Provo River at a point in the extreme southeast part of the map on Exhibit 129.

Q Where would that take it with reference to Provo City water?

A It would take it above part of the rights to Provo Ckty.

REDIRECT EXAMINATION BY Mr. Thurman.

Q Would it be available for use by parties below?

A Yes, after it is discharged into the river bed.

Q By parties who take water from Provo River?

A Yes.

Q To just identify it, can you recall any of the parties that would

be below it that take water from Provo River?

A The Tanner race takes water from Provo River below it, Little Dry Creek from Provo river below it, and all of the rights that are carried through the brick plant race, are lower in elevation than the outlet of the drain in the extreme southeastern part of the map, and it perfectly practicable to conduct the water over to the head of all of the rights of Provo City.

RECROSS EXAMINATION By Mr. Corfman.

Q And it has been a part of the water that has been ~~was~~ used by Provo City and these rights that you have just testified to?

A Oh no, I wouldn't say that.

Q It would run into the river and be available for their use, wouldn't it?

A No, I ~~xxx~~ wouldn't say that.

Q It would drain there?

A No, I wouldn't say it would ever get into the river, this drain where the main supply of water runs near the margin of the hill, and as we cut the drain down toward the extreme south end in the angling section that runs south to the point of crossing Spring creek, heavy deposits of clay approximately a hundred feet broad were cut through, and when this clay body was cut through the water escaped very ~~much~~ more in quantity for a week or so than it ever did before. The water might, part of it, go off toward the southwest and part off to the south. Now, before the drains were dug at all, this water from the main drainage line went off as an overflow, that that went over as an overflow went directly to the south. None of it went as an overflow into Spring creek because Spring creek is higher.

MR. CORFMAN: May it please the court, this is entirely a new proposition, that is, I have not been advised of any such claim being made as now being made by Mr. Tanner, and I would ask permission of the court we may have until tomorrow sometime to investigate this claim, this counterclaim, I am not advised

concerning it, to what extent it might affect the rights of Provo City and other water users taking water direct from the river.

THE COURT: The court expects to call upon you to introduce any rebuttal you have tomorrow.

MR. CORFMAN: We would ask time for further cross examination.

THE COURT : You want to further cross examine Mr. Tanner?

M. McDONALD: I desire to ask a question or two.

CROSS EXAMINATION by Mc. McDonald.

Q As I understand, Mr. Tanner, the purpose of gathering this water is for speculation, putting that water into-- this water that is being gathered together -- putting it into some source or stream and trading it to somebody up above for some other water, is that right?

A No.

Q What is the purpose of it?

A The purpose of it is to use the water.

Q How will you use it, where?

A The quantity that flows from the drain into and commingles with the water of Provo River, the same quantity it is proposed to take from the river at the mouth of Provo Canyon, and conduct it through the prove bench canal on to lands that are now un-irrigated and non productive on account of lack of water.

Q What lands?

A I could specify the lands if I had the plat. There are lands in several sections.

Q Who do they belong to?

A They belong to numbers of individuals, I could not recall the individuals.

Q So that the purpose of it then is to take this water and exchange it or trade it for some water above, I understand you?

A No, as I recall the matter now, anybody spilling into the natural channel of a running stream water that does not deteriorate it or render it inefficient for its purpose, is entitled to recover the water either above or below the point of commingling.

Q What effect would it have if you take that water say into a pipe line and run it away from the lands applied?

A It is in a pipe line now.

Q Yes, but only part way, isn't it?

A It is as completely in a pipe line now as it ever will be.

Q Don't they use a portion of this water, or all of it?

A No.

Q In connection with the group of persons and the Tanner people in there?

A I think probably there might be some small fraction of the Clyde land that might be affected, but I don't know of any. I think all the Clyde land is irrigated from the Lake Bottom canal or from Spring Creek by a diversion higher up. I might say in explanation of what you say that all this land in the extreme south part was very swampy land before the drain was built.

Q So that all of the water--

A And overflow occurred on to the Clyde land, that particular Clyde land you have in mind, and since the drain has been built Mr. Clyde and the people interested in that immediate neighborhood have taken water from Spring Creek and conducted it down on the extreme west side of Esthma Tanner's land, and irrigated the land bordering it.

Q So that all the water you have now what you call accumulated water was there before? and somebody was using it?

A Oh no, there was a little that ran off as a superficial overflow on to Mr. Clyde.

Q Wasn't there a defined channel stream there?

A No, that originally made a small ditch through the high place that separated this low back country from Spring creek, and it

choked and the water backed up inundated the land and when the land was completely inundated you could not see any flow, a small amount of water standing over there, flowed onto, or moved onto Mr. Clyde's land. Before the drain as it is now in operation, I presume the amount of water that is present in these lands increased. There was when the first drain was dug, there was about a half to two-thirds of a ^{second} foot flowing in it. Since the drain has been deepened and the land reclaimed so that it is now all in productive condition, there is in the season of maximum flow about in the month of August, or early part of September, approximately two second feet.

Q You have in mind anybody to whom you expect at this time to sell the water to?

A No, I don't think I have anybody in mind, I am going to sell any water to, or Mrs. Tanner either.

Q Is this your water you are claiming, or somebody else's?

A This land that contains the drain belongs to Esthma Tanner, and Esthma Tanner is my wife.

Q Oh, I see. I think that is all at this time.

RECORSS EXAMINATION By Mr. Corfman.

Q Where does the water drain to, where did it go during the season of 1916?

A During the season of 1916, the water-- we cut a little by-pass shown on the extreme south end of the map, and ran the water into the Lake Bottom Canal. However, the drain is made under the Lake Bottom canal and continues as the line shows, out to the river bed. The reason it was not run over there is because the drain is incomplete in that Section and it would simply waste the water on that open river gravel.

Q If the water had been left -- your drainage system not put in there, wouldn't it have drained into the river?

A No, I don't think so.

Q You know that it didn't?

A Well, as certain as I can be with that physical evidence I know.

This land down here at the river bed is dry, and this water land here had water standing a foot deep on it. The water here was seven feet higher than the level of the dry land there, and it was also a good deal higher than Spring creek water level.

Q You have studied the physical conditions there, where in your judgment would the water go before you installed your drain system?

A I think it went off to the south and southwest, that is my judgment.

Q Do you know whether that had a tendency to subirrigate some of the land to the south and southwest?

A I think it would tend to sub irrigate that part of the lands of Mr. Clyde that was immediately below it, that is marshy land even now, with the drain in.

Q Would a portion of it go in what is known as the Tanner Race? and didn't it drain into the what is known as the Tanner race?

A No, I don't think so, it would get in probably some of it would get into Spring creek. That Spring creek is the intercepting channel before it gets to the river.

Q There are several water users below there and companies, Fort field for instance.

A I don't see how they could be affected by this.

Q They are all below it?

A They are all below it.

Q And drainage is all that way, isn't it?

A And there is deep channel of Spring creek that intercepts the drainage that might come from this area going toward the east. Whatever effect it has in my judgment, it would have an effect upon the Spring creek users and not upon the river.

Q Wasn't the water of Spring Creek been used heretofore for irrigation purposes ?

A Oh yes, it is used now.

Q And you say that Spring creek in your judgment intercepts this

water?

A Portion of it, yes.

Q Considerable portion of it?

A Well, I don't know how much, but I don't think a great deal of it because it is a larger stream, continually augmenting stream; it is getting larger year by year as the irrigation above increases

Q This drain will have a tendency to cut down the water level through that section of the country somewhat, will it not?

A The land immediately south of it is still wet right to the surface.

Q I know, but would it affect the water level of any of the land in that locality?

A As I say, ^{there} it is dry and narrow tract immediately south of this fence that belongs to Mr. Clyde, and that land is still wet, the water is standing on the surface within four or five rods south of the fence along which the drain is dug.

Q You don't mean to say this drainage water has all accumulated on the land of Esthma Tanner or the land you own there?

A Why clearly it has accumulated there.

Q Its source of supply?

A Its source of supply is that irrigation on prove Bench and on the ^{Smith} big ditch bench, I am satisfied of that.

MR. THURMAN: If the court please, in relation to the case just had here, that is the water right for the 88 acres, it seems it is provided for in the Morse decree. I don't understand there will be any contest particularly as to that, and I don't care to lengthen it out by putting on further testimony as to that point. The drainage proposition I understand that will be locked into and contested, but the other part of it, the water right, do you know whether there is any contest or not?

MR. RAY: There is no fixed duty as to the requirement of the land at all, what its necessities are. Upon the testimony the court could not decree anything except it have the water it needed. The Ghidester decreenor ~~not~~ the Morse decree

does not provide, I understand as to the duty of water upon the Carter land, the specific duty, it provides for portion.

MR. THURMAN: It provides for fractional part.

MR. RAY: It provides for fraction part, that is gauged by supply, not necessity at all.

MR. THURMAN: It is in evidence by Mr. Tanner these lands require the same amount per acre or for a given quantity, as the Carter land.

MR. RAY: Is there evidence in this case what the Carter land requires?

MR. THURMAN: Yes, the evidence is the quantity of water awarded under the Morse decree is satisfactory and sufficient.

MR. RAY: Judge, my objection to that is that the Morse decree and the Chidester decree say when there is a certain supply they shall have so much, and when it goes down they shall have a much lesser quantity, it goes down to one third. Now, that certainly is not based on ~~ness~~ necessity, because in the later season they don't need but one third of the water they have in the early season. It is gauged entirely, as I understand, upon supply and not upon necessity for beneficial use.

MR. THURMAN: Well be it so.

MR. RAY: Then I say no duty is fixed if that is so.

MR. A. G. HATCH: We will call another witness to prove the duty.

MR. RAY: Mr. Wentz says he testified to the duty of water on the Carter land under Spring Creek.

MR. A. L. BOOTH: I think Mr. Wentz' testimony covered all the ground in this county.

MR. THURMAN: The same duty is fixed by Mr. Tanner.

MR. RAY: And I think by Mr. Wentz too.

THE COURT: Now, is that all under this claim, Mr. Thurman?

MR. McDONALD: If the court please, at this time I desire to move the court to strike all the ~~at~~ testimony of Mr.

Tanner given relative to the speculative claim of drainage whereby he proposes to supply somebody down below with water, and take some water up above, for the reason that it is wholly speculative.

THE COURT: The motion is denied.

MR. McDONALD: Exception.

MR. A. L. BOOTH: May we be heard now in relation to the Wild Wood Resort?

THE COURT: I asked Mr. Thurman if he had anything further in relation to this matter.

MR. THURMAN: I have nothing further. I believe it is tied up with the Carter land.

MR. A. L. BOOTH: We presented the stipulation yesterday between the plaintiff and the Wild Wood Resort Company, and this is merely to show they have succeeded to the right.

ERNEST D. PARTRIDGE called by the defendant Wildwood Resort Company, being first duly sworn, testifies as follows.

DIRECT EXAMINATION BY MR. A. L. Booth.

Q State your name?

A My name is Ernest D. Partridge.

Q You live in Provo?

A Yes sir.

Q Are you acquainted with the Wild Wood Resort Company?

A Yessir.

Q To whose right did the Wild Wood Resort Company succeed under the Chidester decree, if you know?

A Mr. Taylor.

Q George I. Taylor?

A George I. Taylor.

Q And the company now owns all the land that Mr. Taylor owned?

Tanner given relative to the speculative claim of drainage whereby he proposes to supply somebody down below with water, and take some water up above, for the reason that it is wholly speculative.

THE COURT: The motion is denied.

MR. McDONALD: Exception.

MR. A. L. BOOTH: May we be heard now in relation to the Wild Wood Resort?

THE COURT: I asked Mr. Thurman if he had anything further in relation to this matter.

MR. THURMAN: I have nothing further. I believe it is tied up with the Carter land.

MR. A. L. BOOTH: We presented the stipulation yesterday between the plaintiff and the Wild Wood Resort Company, and this is merely to show they have succeeded to the right.

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A Mr. Taylor.

Q George I. Taylor?

A George I. Taylor.

Q And the company now owns all the land that Mr. Taylor owned?

A yes sir.

Q And also the water right that was obtained with that land?

A Yes sir.

Q What is the land used for now?

A For resort purposes and pasture land.

Q What do you mean by resort purposes?

A We have houses built there where people go and spend the summer, nineteen or twenty houses, live there during the summer months with their families. It is a resort, Provo Resort.

Q Have you been connected with the company from the beginning?

A Yes sir.

Q What use, if you know, has been made of the water since the Wild Wood Resort Company owned this land?

A Used water for irrigation and culinary purposes.

Q Used it every year? A. Yes sir.

Q You remember the amount that was decreed to Mr. Taylor?

A As I remember it it was 8 minute feet. It seems to me that was it.

Q There was also something stated about a fish pond, if you remember; you have been using that water, have you?

A The springs spoken of doesn't use water any more, apparently dried up and water taken to some other channel, and using water from the river.

Q You have been using it for culinary and domestic purposes?

A Yes sir.

Q As well as for irrigation?

A Yes sir.

Q Has that been sufficient for your needs, reasonable needs?

A I could not say we have used just that amount. We have been underregulation under the direction of the water commissioner, and whenever we have been using more than he thought we should use, we have taken what he gave us.

Q Under this regulation has the resort company received reasonably sufficient supply of water?

A Yes sir.

Q And if that should continue as provided by the stipulation that has been entered into, would that be satisfactory to you in the future?

A Yes sir, the water we have had would be satisfactory. Of course it may be we have used more than that, I don't know.

MR. A. L. BOOTH: That is all on that.

THE COURT: Has the city some further evidence to offer?

MR. THOMAS: Something in rebuttal, I believe, your honor -- ready for that now?

MR. A. C. HATCH: We have some further tabulations we wish to present. There is one or two errors in them we have discovered since bringing them into court. The tabulations were promised by Mr. Tanner when he testified first in the case, and they are only now prepared and discover one or two errors, and would like until tomorrow morning to correct them.

THE COURT: Very well.

MR. A. C. HATCH: There is another matter I would like to ask the court now in regard to before we close, as to the direct evidence. The proof as to the quantity of water flowing in Telluride -- Utah Light & Power Company's flume, our measurements don't correspond with theirs, and we have deemed it would be accepted in rebuttal. and your honor will remember they testified to measurements only during recent years, all long since we made our appropriation or application and what we wish to do is to introduce evidence showing what their appropriation and use was prior to the date of our appropriation. That is going back further than their measurements, and whether or not that would be admitted in rebuttal--

THE COURT: Technically I am inclined to think it would not be rebuttal, but yet the court will permit you to introduce it as rebuttal, owing to the fact Mr. Storey or no one representing their company is present now, and I think it probably ought not to be presented when he is not here.

MR. A. C. HATCH: Of course, Mr. Corfman is one of the counsel for the company.

THE COURT: I didn't remember that.

MR. CORFMAN: I will say to the court I called Mr. Story's attention to that, he handled that matter exclusively, and secured the testimony that was offered to the court, and he asked me to request counsel and the court he might be ~~pre~~ permitted to be present and would be present tomorrow morning at half past nine o'clock.

THE COURT: Mr. Corfman, on behalf of that defendant, Utah Power & Light Company, will you make any objection to this evidence on the ground that it is not strictly rebuttal.

MR. CORFMAN: I don,t think we will make any objection at all.

THE COURT: Then the court will permit you to introduce it as rebuttal, whatever evidence you have on that subject. Now, are you prepared to proceed with the City's rebuttal without waiting for the evidence in chief of all these other parties? There are some whose evidence is not in. Mr. Story desires to supplement his evidence with reference to some measurements, and there are some private claims, I think.

MR. THOMAS: Asto these private claims, I don,t know, I don't think our rebuttal would in anywise be dependent upon the direct testimony.

THE COURT: I think that would be true, and you may commence with the rebuttal now.

MR. THOMAS: I think we can proceed now.

THE COURT: You may proceed with it if you desire to.

THOMAS C. THOMPSON recalled by the defendant, prove
City, testifies as follows:

DIRECT EXAMINATION BY Mr. Thomas.

Q You have been sworn, just take the seat, you have already been sworn in the case?

A Yes sir.

Q You are the watermaster of Provo City?

A Yes sir.

Q Mr. Thompson, I want to direct your attention to the testimony of Mr. John H. Stratton who testified in behalf of Provo bench. I want to direct your attention to the East Union ditch and the drains or the waste ditches running therefrom. at the end of the ditch; I will ask you if you are familiar with those ditches and waste ditches?

A Yes sir.

Q Are you familiar with the waste ditches that are running from what is known as the Bullock or Borden Springs?

A Yes sir.

Q Are you familiar with the land that is irrigated from what waters emanating from the Bullock springs?

A Yes sir.

Q And you are familiar with the land, are you, that is irrigated from the lower ditches that come out of the East Union ditch running down adjacent to this land irrigated by the Bullock spring land?

A Yes sir.

Q You recall the testimony of Mr. Stratton to the effect that on July 10, 1916, there was about six second feet of water going down the county road toward the Bullock farm and passed the James Gray farm?

A. Yes sir.

Q And that that water joined with the water in Spring creek and went off into the lake?

A Couldn't do it.

Q And was unused?

A Couldn't do it.

Q Why?

A Because there is no ditch to carry it there.

Q If there was any water running across the road at that time where did that water come from?

A It came from the Union.

Q From the East Union? A. Yes sir.

Q Now, on July 10th, about four o'clock in the morning, what water, if any, was diverted at that point, and to what land was it diverted?

A W. A. Nuttall took it at four o'clock in the morning on July 10th; that is on the east side of the county road.

Q That is down near the county infirmary?

A No, this side about a mile. James E. Daniels took it about at five o'clock that morning, about forty to sixty rods farther south and on the opposite side of the county road, on the west side of the county road.

Q The water that was running across the county road at that time was going to the Daniels place?

A Yes sir.

Q Do you know whether it was apportioned to the Daniels property at that time and place?

A Yes sir, he took it out at five that morning.

Q How much land has Mr. Daniels there that he was irrigating from this stream?

A About thirty acres.

Q Was any other land to be irrigated by that stream at that place following Mr. Daniels' use of the water?

A He has it there sixty hours.

Q Sixty hours at that time?

A Yes sir.

Q What acreage is there that has water from the Bullock spring?

A 559½ acres.

said

Q That was the territory was it, that Mr. Stratton, amounted to about

120 acres?

A. yes sir.

Q Has the city any control of the Bullock springs water?

A No sir.

Q Please explain how the city has control of the ditches through that 559 acre tract?

A The city and upper east Union and all the farmers in that district has appointed Provo City -- I don't know the words you would use.

Q Agent.

A Agent, to take charge of cleaning that Bullock drain to the lake, so each year we clean it and I ~~xxxx~~ assess so much per acre for every acre that is adjacent to that drain.

Q Does the water that drains over the land irrigated by the East Union got into ~~the~~ or flow into the Bullock springs sometime?

A Part of it, yes sir.

Q That is, if there be any waste water it goes into that spring?

A Yes sir.

Q Now, what land adjacent to those springs is irrigated from the East Union?

A The Bullock farm.

Q Can you describe the topography, or give us the topography of that farm?

A It is seep soil and clay and gravel mixed, but baked very hard, get glossy in the furrow.

Q Are the runs short or long?

A Runs are short, and ~~as~~ it has got to run five or six hours to do any good at all. Just, ^{as} well keep it off if you don't let it run that long. In twenty minutes it will be through, but has to run that long to give you an irrigation.

Q Does this create an amount of waste water then at the end of the Bullock land?

A Yes sir.

Q Is that waste water used to any beneficial purpose?

A It goes right into the Bullock drain and they use it again

on the land below.

Q Does anybody else other than the Bullocks use that waste water?

A Yes sir.

Q Who?

A Well, there is James A. Bullock, he uses it, and Ben Bullock, he uses it, Will Price uses it, County Infirmary uses it, Ralph Bullock uses it, Ben Roberts uses it.

Q I want to direct your attention to the Olaf Eddenburg tract of land. I will ask you if that is similar in topography to the land you have just described?

A Yes sir.

Q Are the runs short on that tract of land?

A Yes, average about twenty rods, I judge about that.

Q And does the waste water from that land find any beneficial use on other land near by ?

A I have never allowed these people water for three years, to have a drop of water out of the Union.

Q You say these people, you mean who?

A I mean William Farrer, Robert ^{Bee} and Benjamin Bullock. This land lying under the Eddenburg land they have their gates--

Q Let me interrupt you, you say lying here, you mean south?

A It is south of the Eddenburg land.

Q And under it?

A Lays under it and it slopes rapidly to that land.

Q State under your system if you have the water, the waste water from the Eddenburg land apporportioned to the Bee land and other lands near by?

A. Yes sir.

Q Farrer and others?

A. Yes sir.

Q I want to direct your attention to the testimony of Mr. Stratton wherein he referred to the South Meadows, which is at the bottom of Fifth West?

A. Yes sir.

Q Where is says on the tenth of July there was about eight second feet or there was eight second feet of water flowing down into the lake.

MR. A. C. HATCH: Mr. Thomas, wasn't that the fifth

of July?

MR. THOMAS: I believe not, Judge.

MR. RAY: That was the tenth.

MR. THOMAS: July tenth is the date given here. July fifth, I think Judge, was referred to in other testimony, but under Mr. Stratton's testimony July tenth is the date we have here.

MR. A. C. HATCH: I just have my recollection of it, I haven't any notes.

Q But leaving that, let me go back, Mr. Thompson, and direct your attention again to this Bullock springs, are you familiar with the outflow of water from the Bullock springs?

A Yes.

Q What would you say was the quantity of water which come from the Bullock spring flows across the county road?

A Why, along in August and September that increases as the irrigation, more irrigation larger the stream is. There would be about five second feet or something like that.

Q Were you familiar with the flow of water July tenth, 1916?

A Why, I saw it every day, it would be somewhere ~~xxxx~~ about five second feet.

Q That is water that the city has no control over?

A No control over whatever.

Q Now, directing your attention to the south meadows, or the ditch at the bottom of Fifth West, Mr. Stratton said there was eight second feet of water flowing at that point into the lake?

A Yes.

Q How large is that ditch at that point, bottom of Fifth West?

A It would carry at the bottom of Fifth West, it will carry sixteen second feet.

Q How much water is put into that ditch at the upper end?

A About sixteen.

Q At the upper end of that ditch? A. Yes sir.

Q How many streams are taken out of it before it arrives at the

Fifth West?

A Eight.

Q How much in each stream?

A In each of them, the first one would have at least two. It has four, there is four ditches takes out of one, that is the one goes down through the park right by Mr. Daniels' home. There is about four in that.

Q What would be taken out at the other streams?

A They would be about a second foot too, the town ditches, and there is one takes --

Q How many of those town ditches take out of those stream?

A There is eight all told.

Q Eight ditches all told?

A Yes sir, that takes out from 5th West,

Q How much under ordinary circumstances, what quantity of water would be flowing in that ditch at the bottom of Fifth West?

A We never allow a Fourth, it is very seldom they get that amount at the lower end.

Q What would you say was the amount flowing in the ditch there

July 10th, four o'clock in the morning?

A I wasn't down there. Those fellows are strictly on time. Every morning I am at the upper end and take measurements and see that is regulated proper, then I take my rounds up through the east part of town.

Q Through the apportionment that is made by you would there be that amount of water in the ditch at the bottom of Fifth West at that time in the morning?

A No sir.

Q Would there be more than four feet of water under any circumstances?

A No sir, not that time of night.

Q Does that water at that time of the year-- let me change that.

Was that water in the ditch at the bottom of Fifth West used after it left the bottom of Fifth West before it got into the lake?

A I could not say for they got strictly their time there.

Q Let me put it this way: State if that water was apportioned to anyone for use? A Yes sir.

Q To whom?

A I haven't got that with me.

Q Can you get that information? A. Yes sir.

MR. RAY: Your honor please, this is rebuttal, I don't say that it is immaterial whether it was apportioned to anybody or not. The only contention made for it was it was not being used by anybody.

MR. THOMAS: That is true, Mr. Ray, we proposed showing it was used. It was not only apportioned at that time, but was used.

MR. RAY: Then show the user and not the apportionment.

MR. THOMAS: we will get at that.

Q I hand you a book of apparent duplicate receipts. I will ask you to describe that.

A Yes sir, this is L. L. Nelson.

Q I will ask you to describe what this book is; is this a book of receipts issued by you?

A It is time book.

Q Time book?

A Yes, for the different individuals, time that they use the water during the whole season.

Q The originals of these are issued by you?

A Yes sir.

Q As chief deputy watermaster? A. Yes sir.

Q And these are handed to the individual water users each year?

A White one is handed to the individual.

Q When you say the white one you mean the original?

A Yes sir.

Q And that indicates the time apportioned to the individual water user by the city? A. Yes sir.

Q Will you refer to No. 530, refresh your memory on that and state

who was apportioned the water at that time? we are speaking of?

A L. L. Nelson.

Q Turn to No. 532.

MR. JACOB EVANS: What time was that you have reference to?

A He takes it Sunday of each week from eight P. M. until ten A.M. of Monday, on nineteen acres of land.

Q Now, turn to 532.

A Edward P. Hardy, he takes it Monday morning at 4:30 P.M. until 10:30 A. M. On Tuesday, on eighteen acres of land.

Q Can you state of your own knowledge whether those men use that water at those times?

A I cannot.

Q I want to direct your attention to the water or rather-- strike that out-- I want to direct your attention to the testimony of Mr. Stratton where he said that he found other streams at the South Ward Pasture or First Ward pasture eight or ten second feet going down through the Mill race and off into the lake, what do you say as to that?

A We had about three second feet noted in my tabulation on that date, and quite a number of days along there, going from the head where we put it in every night, taking all the water out of the Mill race to divide among the farmers at night, and we allowed about three second feet to go down through the Mill race. We take out two second feet for First West. When we come on down to 4th North, we take out a second foot there, called the Watson ditch. When we come down here to Center we take out about three, and have a tight plank gate in there. There is about eight second feet that raises in that race.

Q By seepage?

A By seepage.

Q Below the point where you turn in the water?

A Yes sir.

Q Is that seepage water used at any points below?

A It is used down here, part of it on Center, we use part of it out of the Watson ditch above the woolen mills, and then up above we take out two second feet for First West out of the Mill race.

Q Is there any other land down in the First Ward Pasture that is also irrigated from that stream?

A Yes sir.

Q What land, if you know.

A There is the Stubbs land we have control of.

Q To which you furnish and direct water?

A We furnish direct to them, yes sir.

Q Is it watered out of this stream?

A It is watered out of the Mill race.

Q Do you recall the times the Stubb land is entitled to water?

A No, the only way we do that some nights we have it, he watches if he can get it. He gets it sometimes once a week, sometimes three weeks if the water is there he gets it. He has to raise it pretty high. If it is not a fairly good stream he cannot get it over. He hasn't got a very good dam across the race.

Q And is his turn for the use of water early in the week?

A Not very, he has no regular turn there.

Q Uses it whenever he can get it?

A Whenever he can get it, he has no regular turn.

Q Was this water being put to any use, if you know, on the First Ward Pasture at that hour of the day?

A I have nothing to do with the First Ward Pasture, I have no regulation on that whatever.

Q That is water that does not come under the control of the city?

A No sir.

MR. RAY: What do you mean by that, whether the water that goes through the Mill race doesn't come under the control of the city?

MR. THOMAS: No, in the first ward pasture. The testimony of Mr. Stratton was not very clear, he mixed the City's water

with the water of the First Ward Pasture. He found certain waste, and he mentioned the First Ward Pasture, South Ward Pasture and City streams all in one breath. The city has nothing at all to do with the First Ward Pasture.

MR. RAY: I will interrogate him about it. The water concerning which Mr. Stratton testified was water measured below all diversions going through the Mill race? and running thence directly to the rushes in the lake, that is the way he referred to it.

MR. THOMAS: He had a very lengthy way of referring to it, because he mentioned all the city ditches and went all over the territory. In Mr. Stratton's testimony he said there was fourteen streams, lot of the town streams -- as he expresses it, there was east of town where the water dumps over the hill here east part of town, there was five of those town streams, about one second foot to the stream dumping down in there going to waste in the First Ward Pasture.

Q What do you say about that?

A There is no such a thing, there is no five ditches going over the hill.

Q Is there are streams that are carrying water dumping to waste over the First Ward Pasture?

A No sir, only the East drain.

Q By the East drain you mean that ditch that drains the land in the east part of the city?

A Yes sir.

Q And carries water down through the First Ward Pasture?

A Yes sir.

Q Has the city any control of that drain water?

A No sir.

Q Are you familiar at all with the run off or waste water from the Upper East Union? A. Yes sir.

Q At the extreme lower end of the system?

A Yes sir.

Q What is the condition there as to that run-off?

A In ten minutes after Mr. Boardman put the water on his land we will have fifty per cent of it in the Union.

Q What is in the East Union Canal?

A That is in the East Union canal.

Q Is that water then taken by the users of the East Union Canal and put to beneficial use?

A As a rule, it is, yes sir.

Q You say as a rule, isn't it always?

A Well, they may not always be there to catch all the waste water, but they nearly always have their gates set at the lower end of both canals, the Upper East Union and the Union, they join together and goes into the Bullock drain. We have a gate across the two of them where they come together and the ditch running along south half a mile. Now, the people there keeps that gate in so that it won't go into the Bullock drain and run it on to the land further south, on to Gutton's farm and infirmary.

Q Does the county infirmary have any land that comes under the city system?

A. Yes sir.

Q East and west of the road?

A West of the road.

Q West of the road only?

A Yes sir.

Q That is land that is irrigated from the East Union?

A East Union, yes sir.

Q Is that water taken across the road?

A Yes sir.

Q At what point with reference to the Bullock springs?

A Well, it would be, not quite, pretty near quarter of a mile south of the Bullock springs.

Q You may state if any waste water south of the Bullock springs sometimes finds its way back into the Bullock springs?

A Yes sir.

Q And is that water, that waste water that is thus caught, augmented

with the flow of the Bullock springs?

A It commingles with the Bullock springs.

Q And state if that water, when it is thus commingled is put to beneficial use?

A Yes, whenever it is irrigating season.

Q Directing your attention to the water that is used upon the east side of the city Mr. Thompson, after it has found its way down to the end of the ditch, is the water gathered there and put to any other use?

A Yes sir.

Q What use is it put to and where?

A These two first ditches here on 1st East Monday morning --

MR. JACOB EVANS: I object to this as not proper rebuttal, I think that was all gone into on the examination in chief.

THE COURT: I think so.

MR. THOMAS: This part was and strictly is not rebuttal unless the court deems it is really explanatory of what is to follow, it is strictly not rebuttal.

THE COURT: I would not sustain an objection on that ground, but I understand you went into all that matter, didn't you, showing the use you put the water to down the street here in the ditch.

MR. THOMAS Then I will withdraw that question.

THE COURT: That is my recollection of it.

MR. A. C. HATCH: The only rebuttal he should offer here is to rebut the testimony of Stratton as to the particular matters that Stratton and others testified to.

MR. THOMAS: I submit that is correct.

Q Directing your attention, Mr. Thompson, to the dates referred to by Mr. Stratton, namely July 10th, July 17th, July 24, can you state if there was water which came from the city streams which went to waste directly into the lake without having been put to beneficial use?

A No sir, there was not.

Q I want to direct your attention to the --

A In the East drain, the east drain carries four second feet of water.

Q And that is water as you have already testified that comes out of the sloughs in the east part of the city?

A Yes sir.

Q And is not out of the Provo River?

A No sir.

Q I want to direct your attention to the 27th day of July, can you state if there was any rainfall at that time in Provo City?

A Yes sir.

Q Was there any rainfall on the 28th day of July?

A Yes sir.

Q Can you now state what that rainfall amounted to and over what area the rain fell?

A No, I haven't got that. I can remember, that is all. I called up the Reclamation, they told me 97 hundredths of an inch.

MR. RAY: Move that be stricken.

Q That is hearsay.

A Well that is all, a very heavy rain.

Q Can you state if you went over the city after that rain?

A I was out all night nearly, that night.

Q What was the effect of that rain with reference to the use of water in the ditches the day following?

A Didn't have a thing left to irrigate when morning came.

Q What was the effect of the rain which fell on the 28th of July?

A That wasn't near as heavy.

Q You may state if the effect of those two rain storms was sufficient to irrigate the lands within Provo City?

A Yes sir.

Q You may state if the water was taken out of the ditches at that time?

A. Yes sir.

Q Did the farmers and water users in Provo City and lands adjacent use the water following the rain storm, as they had just prior

to the rain storm?

A. No sir.

Q What was the effect of that so far as the water supply was concerned?

A I turned it in the Mill race for the mills to use at night, day and ~~at~~ night?

Q On the 27th and 28th?

A 28th and evening of the 27th. That morning, the morning of the 28th -- rather the evening of the 27th, I had to go and turn it out of the Union, turn back into the race all but one stream.

Q Why did you turn it out of the Union, was it because the rain had been sufficient to irrigate the land?

A Yes sir.

Q What other ditches did you turn the water out of that time?

A I left one stream in the ditches, that is, good irrigation stream, about eight second feet.

Q Then during those two days, 28th and 29th, did you turn the bulk of the water into the mill races?

A I did.

Q What was the effect of that?

A The mills were away behind, had been hollering for water to catch up with their orders, and I left the water in there there the 28th, 29th and 30th.

Q During that time then you may state if there was any amount of water or had been the same amount of water used for irrigation in Provo City and adjacent farms, as prior to the rain?

A There was none used scarcely.

Q Did that cause a large amount of water then to pass down through the race to the lake?

A Yes sir.

Q Does that statement apply to the other irrigation streams in the city?

A. Yes sir.

Q If Mr. Stratton stated that he saw flowing into the lake on July 29th, 1916, 65 second feet of water, what would you say?

A Just about that in the mill race.

Q There would be that amount of water in the Mill race passing through the city ?

A About 50 second feet we had turned in. That is all our weir would hold and carry.

Q Mr. Stratton called attention to the stream of water running around the north side of the cemetery about 1 second foot in quantity, which he said went down the north side of the cemetery in to the bottoms there into the drain; are you familiar with that ditch ?

A. Yes sir.

Q To what land does this ditch convey water?

A On the north side --

Q On the north side of the cemetery.

A Mr. Farrer.

Q Can you state if Mr. Farrer had water apportioned to him on the 24th of July, 1916?

A. Yes sir

Q And if that water so apportioned was diverted through this ditch on the north side?

A. Yes sir.

Q Can you state of your own knowledge whether Mr. Farrer used the water upon his own land through this ditch at that time?

A Yes sir, I was there.

Q And you saw the water running?

A Yes sir, at seven o'clock.

Q Can you state if that water was running into the drain any time during that time .

A It cannot do it.

MR. RAY: That was what date?

MR. THOMAS: July 24th, 1916. I didn't get the answer.

A It cannot go into the drain, there is no ditch for it to go in there. It has to go on his land or not go at all.

Q The testimony of Mr. Stratton, Mr. Thompson, was substantially as to the 17th day of July as to the waste of water occurring during that morning and through the ditches which he designated. What do you say as to that testimony.

A I will have to look at my time to tell anything about that. There

was two streams taken out of the Union down at the Eddenburg home.

MR. A. C. HATCH: I didn't understand.

A Two streams taken out of the Union running west through the Eddenburg home. There was one stream Mr. Eddenburg was using, and Mr. James C. Daniels was using one.

Q I am directing your attention to the 17th day of July.

A That is what I am speaking of, yes sir.

Q So that all the water was flowing across the road or in those ditches at that time was being put to beneficial use, was it?

A Yes sir.

Q And under your direction?

A Yes sir.

Q Can you state whether any part of that water was flowing down into the lake unused?

A No sir.

Q It was not?

A It could not get into the lake way it was going.

Q On the 17th day of July Mr. Stratton said he found about 49 second feet going into the lake through the various ditches. Directing your attention to the Carter's farm, he said there was four second feet going to waste there.

A We have nothing to do with that whatever.

Q Little Dry Creek.

A We have nothing^{to} do with that whatever.

Q That there was 7 second feet going to waste in the South Ward Pasture?

A I could not say as to that.

Q Does the city have control of that ?

A Yes sir.

Q You may state if that water was apportioned to anyone for use at that hour? A. Yes sir.

Q To whom?

A I haven't got that.

Q Was it Bent Johnson?

A It was one of the Johnsons down there, Mr. Goddard has that.

Q I will take that up later.

A I attended to the east end.

Q That there was 18 second feet going down through the First Ward Pasture through the Mill race on the morning of the 17th of July?

A Not without counting sewerage. The might count sewerage and get part of it.

Q Was the sewer water going through that place at that time?

A Yes sir.

Q What amount of water is used for sewerage purposes?

A About eight or ten second feet.

Q Would you say there was ten second feet at that time?

A No, I would say eight, that is about the average.

Q Then what other waters would go into the Mill race at that point where these gentlemen said they saw it.

A There would be some seepage water going down the race, probably four second feet.

Q below any point of use?

If

A For Mr. Stubbs and the First Ward pasture was not using it, it would go to waste, of course.

Q Can you state whether these people were entitled to the use of that water at that time, Stubbs and others?

A There is only just the two.

Q Stubbs and who else?

A First Ward Pasture.

Q Would you say there was 18 second feet of water at that season of the year at that point going down into the lake?

A I wouldn't think so.

Q What is your judgment?

A There might have been four second feet of seepage water going. The balance that was there would be sewerage.

Q Can you recall whether the gates were shut tight above this point

in that ditch?

A Down here.

Q Yes. A. Yes.

Q When I say down here, I mean along through the Mill race.

A Down here at Center it is shut off tight, not what you would call right tight, maybe a second foot pass, but that is all. We turn out all we can there at night.

Q Do you have a tight dam at the head of the Mill race?

A No sir, there is about three second feet goes through at the head.

Q For other water users below?

A For the ditches that go into the race.

Q Would you say you had turned out any more than three second feet from the head?

A No, I give it full measurement when I said three second feet. My record shows I think I allowed ample.

OMISSION.

Discussion as to entering of default.

THE COURT: Now, can we take up some matter while waiting for Mr. Ray.

MR. JOHN E. BOOTH: I have a little matter to close up about which I spoke yesterday. Take but a few minutes. Mr. McBride, will you come forward and be sworn. This is the answer of Branch Young estate, Hatty Y. Goodwin, et al. We had the testimony of David S. Park with regard to himself and Lewis W. Buttall the other day, and this is on the Barton and Young ditch I desire to ask about at this time.

BRICE McBRIDE called by the defendant, Barton & Young Ditch, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. John E. Booth.

Q What is your full name?

A Brice McBride.

Q Where do you live?

A On the mouth of Prove Canyon.

Q Are you acquainted with what is known as the Barton & Young ditch on the west side of Prove river?

A Yes sir.

Q Have you some land under that, or your people?

A Yes sir.

Q Are you acquainted with the holdings of the Branch Young estate?

A Yes sir.

Q Hetty Y. Goodwin? A. Yes sir.

Q Ada Y. Littley? A. Yes sir.

Q Rudolph Riard? A. Yes sir.

Q And McBride people? A. Yes sir.

Q How long have you been acquainted with this land?

A Seven years.

Q How much land is there in the Branch Young estate that is irrigated under this ditch?

A About forty-seven acres.

Q That includes Hetty Y. Goodwin and Ada Y. Littley?

A Yes sir.

Q Who are heirs of the Branch Young?

A yes sir.

Q Rudolph Riard?

A there is 45 in the piece and about 35 under the ditch.

Q How much have you people in the McBride tract?

A The McBride interests are under the Park & Nuttall ditch.

Q And included in the same irrigation ditch as David S. Park and the Lewis W. Nuttall? A. Yes sir.

Q But you know the Barton & Young ditch and these others?

A Yes sir.

Q Are they near together? A. Yes sir.

Q I will ask you if in 1914 you made some measurements, Mr. McBridg as to the water used?

A Yes sir.

Q In the ditch?

A In the Barton & Young ditch.

Q That is the one we are now discussing?

A Yes sir.

Q Have you those figures? A. Yes sir.

Q Will you submit them. You made these measurements yourself?

A Yes sir.

Q How did you make those measurements.

A By taking a measurement on the weir in the ditch set under the direction of Mr. Wentz.

Q The water commissioner? A. Yes sir.

Q All right, you may give those figures, amount of water that was used. This water that was in the ditch was used on this land that you have described?

A Yes sir.

On July 1st there was 2.4 second feet;

July 2nd, 2.2

5th, 2.6

7th, 1.7

9th, 1.5

11th, 1.5

12th, 1.5

14th, 2.7

15th, 3.

19th, 2.9

20th, 2.8

22nd, 2.9

26th, 2.7

Aug. 1st, 2.7

15th, 1.3.

That is all I have.

Q Have you during the last several years been acquainted with the ditch and water flowing therein?

A Yes sir, I have irrigated with them.

Q I will ask you how that compares with generally during the season?

A I would say that was average.

Q That is the average of all the years you have been there ?

A Yes sir.

Q Have you an average of it?

A Average about two and a fraction feet.

Q You haven't the fraction figured out?

A No sir, I have not.

Q Could you do that for us in a few minutes, perhaps you can do it there.

A I would say about 2.5.

Q Is this the water that has been distributed to you by the commissioner?

A Yes sir.

Q Under the Morse and Chidester decrees?

A Yes sir.

Q I will ask you if that has been sufficient for your economical use of water for your irrigation?

A This amount has, yes sir.

Q Have you the total acreage there -- I can give it in detail-- we want the total acreage under the Barton & Young ditch, you may tell me which ditch they apply to -- these people answer together. Branch Young estate 47½ acres?

A Yes sir.

Q That is under that ditch, is it? A. yes sir.

Q Rudolph Riard? A. Yes sir.

Q That is 45 acres, is that all under the Barton & Young ditch?

A Yes sir.

THE COURT: Let me understand, I thought Mr. McBride said the Branch Young estate had 37 acres.

MR. JOHN E. BOOTH: Hetty Y. Goodwin and Ada Y. Littley are two of the Young heirs, besides that, and they have five acres each, making 47 altogether.

Q Rudolph Riard irrigates 45½?

A 45 altogether.

Q How much under the canal?

A Thirty-five.

Q The whole of the Branch Young Property, is that irrigated?

A Yes sir.

MR. JOHN E. BOOTH: I believe that is all.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Is this 2½ second feet of water used all the time upon these lands, or just at times?

A It is used biggest part of the time.

Q About what part of the time is it used?

A Well, I should say practically all the time, taking it year in and year out.

Q There is part of the time when the water is not being used by

the parties under the ditch for irrigation, isn't there?

A Very seldom.

Q Isn't there considerable of the land, the 35 acres of the Riard, hills and knolls that they cannot irrigate?

A No sir.

Q Is this river bottom land?

A Yes sir.

Q Covered with Cottonwoods, any part of it?

A No sir.

Q What about the Branch Young land is that all used for cropping purposes?

A Not quite all of it.

Q About how much of it?

A There is about five or six acres as near as I can say, not used.

Q What is that five and six acres you say not used?

A Not used, yes sir.

Q That is of the $47\frac{1}{2}$ acres? A. Yes sir.

Q And it is not irrigated?

A No sir.

Q I understood you to say that all of the $47\frac{1}{2}$ was irrigated?

A This part is on the east side of the Huber ditch, and the water is not flumed across. It could be used, but is not at present.

Q And never has been used?

A Not to my knowledge.

Q Then what is the total area that has actually been irrigated and cultivated of the Branch Young estate land?

A I couldn't say.

Q You have no knowledge of that? A. No sir.

Q Have you of your own knowledge information as to the Riard 45 acres, how much is irrigated?

A Yes sir.

Q Have you ever measured it? A No sir.

Q How did you obtain the information as to their being 35 acres?

A It was surveyed. When the land was surveyed that much was figured

under the canal.

Q Is all of that under the canal irrigated?

A All but about two acres.

Q The testimony is already in here there are only 26.94 acres irrigated of that Riard tract.

A I haven't the actual measurements, but that is what I always understood there was about 35 acres under the canal, and there is about two or three acres not irrigated.

Q You have no definite information in regard to it?

A No sir.

Q Where is Mr. Riard?

A He is dead.

REDIRECT EXAMINATION BY Mr. John E. Booth.

Q The amount of water that you have used in that ditch, Mr. McBride, was that under the direction of the water commissioner as given to you?

A It was the amount that was turned in the ditch, yes sir.

Q By him? A Yes sir.

RECROSS EXAMINATION BY Mr. A. C. Hatch.

Q Are you under regulation up there, Mr. McBride, as to irrigating?

A How do you mean?

Q Do you have turns and the water measured to you and timed when you may irrigate?

A No, the water comes in the ditch for the two places, and we have a turn between us, but the water is always in the ditch.

Q How much land do you say you irrigated from the Park & Nuttall ditch?

A About fifteen acres.

Q That is of your own? A. Yes.

Q Or yours and Riard's?

A Yes, together, we own the piece together.

Q And do you know the exact acreage of the tract?

A No sir, I don't.

Q Just an estimate on your part?

A Yes sir.

MR. JOHN E. BOOTH: I believe that finishes up all that I have.

THE COURT: Now, Major Young, you may proceed with your matter, Utah-Idaho Sugar Company.

MR. A. C. HATCH: If the court please, we would now like to introduce the tabulations made by Mr. Tanner so that the parties may have them, Provo river irrigation survey of 1914 and '15.

MR. COLEMAN: Just a minute, Mr. Thomas wants to be here when this matter comes up.

THE COURT: Major Young, you may proceed, and if Mr. Thomas has any objection he may make it when he comes in, to this paper. As I understand this is the Utah-Idaho Sugar Company.

MR. YOUNG: Utah Sugar Company.

THE COURT: And some other defendants?

MR. YOUNG: No sir, Utah-Idaho alone. The firm of which I was formerly a member represented both the Idaho Sugar Company and Zions Savings bank. Mr. Snow now represents Zions Savings Bank & Trust company, and told me last night he should make no appearance here. I think the Zions Savings Bank merely represents as trustee some of the bonds, and he feels the interests are looked after by the other parties. If the court please, Utah-Idaho Sugar Company is the owner of 7307 acres of land situated under the Lake Bottoms canal, of which land 63.97 acres were purchased from Jesse Knight, some six acres from one Benjamin Shirts and 3.1 from Mr. Mads Jorgenson. Our claim is, it is set up in our answer and cross complaint that we have irrigated all of this land. The facts which we shall endeavor to show are that some 45 acres only of the land have been irrigated, the rest of the land being non irrigable or being meadow land,

which does not require irrigation, and that we have had a sufficient quantity of water for the irrigation of that amount of land from time immemorial, and also that we have enjoyed water for domestic and culinary purposes throughout the entire year. I understand the proof will show most of this water has originated within the canal itself, Lake Bottoms canal below the point of intake from the river, but that the right has existed for the purpose of irrigating this land to take water from the river when necessary. We also have used some five second feet of water since the year 1901 in our mechanical purposes, that use beginning each year somewhere after the 15th of September and close to that date, and extending along toward the middle of February; and I would here ask leave to amend my cross complaint by inserting the 15th of February rather than the date which is therein stated, the 15th of January. The proof, I think, will show we have used it. This water, I am informed originates, and I shall offer to prove to that effect, originates entirely in the Lake Bottom canal, and none of it, during the history of our factory has been derived from the river? We claim this water we have used for domestic and culinary purposes under the 11th paragraph of the so-called Morse decree, which decrees to Mads Jorgensen, Lars Jacobson, W. L. Camp and Jesse Knight the water in question, with the exception of the Shirts piece of six acres, which I have not seen just where that is taken care of, but he was a party to the suit, and I understand his interests were properly adjudicated. I will call Mr. Goodrich. I will state, if the court please, I have in my hand an abstract of title issued under the date of the tenth of August of this year by the Jones Abstract Company of this city, showing title in the Utah-Idaho Sugar Company of the lands that I have mentioned which I understand it is unnecessary I should introduce, and I understand our ownership is admitted to this land.

THE COURT: There is a stipulation to that effect

unless it is challenged by someone.

W. W. GOODRICH, called by the defendant, Utah-Idaho Sugar Company, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Young.

Q Mr. Goodrich, please state your name?

A W. W. Goodrich.

Q You are living now at Garland?

A Garland, Utah.

Q How long have you lived there?

A Nine months.

Q prior to that where did you live?

A I lived at Lakeview.

Q In this county? A. Yes sir.

Q For what length of time?

A About twenty-six years; that is, I was away two years, I have been here thirty-one years, outside of two years I was in the south.

Q You are in the employment of the Utah-Idaho Sugar Company?

A Yes sir.

Q How long have you been in the employment of that company?

A Sixteen years.

Q In what capacity?

A Agricultural, fruit.

Q Were you connected with what is known as the Utah-Idaho Sugar Company of Provo slicing plant?

A Yes sir.

Q That is situated upon the lands that I have just referred to in my statement as the Jesse Knight and Shirts property, isn't it? A Yes sir.

Q Under the Lake Bottom canal? A. Yes sir.

Q How long were you associated with that slicing plant?

A Fifteen years.

Q From the time that it first started?

A Yes sir.

Q When was that?

A That factory was built fifteen years ago this summer.

Q You have been connected as an officer with the Lake Bottoms Canal Company, have you?

A Yes sir.

Q In what position?

A Board of director and also president.

Q President for how long?

A Four or five years, I am not sure which.

Q Are you familiar with the source of the water supply of that company?

A. Yes sir.

Q Are you familiar with the lands now owned by the Utah Sugar Company, Utah-Idaho Sugar Company to which I have referred?

A Yes sir.

Q For how long have you been acquainted with those lands?

A For about thirty-one years.

Q Are you able to state of your own knowledge whether they have been and to what extent they have been irrigated during that length of time?

A Yes, they have been using water through what is known as the Lake Bottoms Canal Company for that length of time to my knowledge.

Q Are you able to state approximately what acreage has been irrigated through that canal during that length of time?

A About 47 acres, that is including the land we have of Mr. Shirts too.

Q 47 acres out of the total of 73 acres?

A That was watered continuously, some of the meadow lands are just irrigated occasionally.

Q That is in addition to the 47 acres?

A. Yes sir.

Q That was occasionally irrigated, was it?

A Yes sir.

Q But generally what has been the fact with the irrigation of that land?

A You mean the meadow land?

Q The meadow land, yes.

A The overflow of the river usually kept it wet. Along in July, latter part of August, have to run a little water on it.

Q How often had that occurred?

A Well, some of it has been watered ever since I was there.

Q That is some meadow land?

A Part of it.

Q In the latter part of August?

A Yes sir.

Q How many acres would that be?

A That would include about seven acres of the ~~ix~~ meadow land that was on a high gravelly point we had to irrigate.

Q So that in addition to the 47 acres which has been regularly and continuously irrigated there has been seven acres of the meadow land that each season in the latter part of August has received a little water?

A Yes sir.

Q And the rest of the land has received no water at all?

A No sir.

Q What can you say whether the water that land has received has been sufficient or not to raise crops?

A Yes sir.

Q Year after year? A. Yes sir.

Q That has all come through the Lake Bottom canal?

A Yes sir.

Q Under what rules and regulations has that distribution been made to the Utah-Idaho Sugar Company?

A It has been measured by the water commissioner in connection with the proportion that is due the Lake Bottom canal.

- Q You mean the water out of the river?
- A Yes sir.
- Q When water has been received out of the river?
- A All the percolating water has been measured at our head gate.
- Q What head gate?
- A Head gate of the Lake Bottom Canal Company.
- Q What percolating water do you mean ?
- A Why; the ~~sa~~ water that seeps from out the Provo Bench through the river bottoms, from Carterville on down.
- Q What do you call that head gate, that is not on the river then?
- A Yes, right by the side of the river. When it is not in use it is turned back into the river there above the Fort Field country.
- Q Are you informed whether the commissioner has turned out any water from the river into this Lake Bottom canal in order to furnish those who are defreed in the Morse decree under paragraph 11 as being entitled to water, that is Jesse Knight and Mangus Jorgensen.
- A The commissioner stated he had turned water there for the company, been measured in connection with the Lake Bottom canal.
- Q Are you able to state what quantity of water has been measured out to the Utah Sugar Company for those lands?
- A No sir.
- Q And has any measurement at all been made?
- A That that comes through the canal before it is taken out?
- Q No, of the water that you have received separately.
- A No sir, never been measured only the way they run that canal the board of directors went along and use their own judgment as to the distribution of the water according to the number of shares that each gate should draw, on account of the canal being in the condition couldn't put no weir dams in, having to run a drag through the canal to push the moss down, couldn't put a dam in.
- Q The Utah-Idaho Sugar Company is not a shareholder in that canal?

A No sir, stockholder.

Q But water has been distributed to the Utah-Idaho Sugar Company on the basis it was a shareholder?

A On the basis of about ten shares of the stock of the canal, that is, they figured the sugar company had about equal to about ten shares of stock in the Lake Bottom canal.

Q And the Sugar Company has paid to the Lake Bottom canal on that basis for maintenance?

A Yes sir.

Q Do you know what each share is supposed to irrigate?

A No, I don't.

Q I guess that has been proven?

A The acreage has been figured up that is under that canal company, I couldn't state as to the number of acres that has been irrigated under it.

Q Now, Mr. Goodrich, a certain amount of water has been used in that slicing plant for manufacturing purposes, has it?

A Yes sir.

Q Are you able to state about how much water has been used for that purpose?

A For slicing purposes?

Q Yes.

A I never have had any experience in measuring water, therefore I couldn't say, but I should judge from,-- oh, possibly one tenth of the water that is decreed in that canal.

Q During what season of the year has that been used?

A The earliest it has been used to my knowledge is somewhere near the fifteenth of September up until along in the forepart of February.

Q And that use has been continued since 1901?

A That is for the mill purposes, then we have used water all winter for washing and cleaning out the pulp bins there and other purposes until spring.

Q I intended my question to include all the purposes.

A We use it until the first of June for that purpose.

Q That is for cleaning out ashes and so on?

A Yes.

Q Then I had better confine myself to the mechanical purposes, that is for the floating of beets and washing of beets and other processes in the mill during the operation of the mill?

A That would go up to about the fifteenth of February.

Q That would include, you say, about what proportion of the entire stream?

A I should judge about one tenth going in that stream.

Q As it is flowing during those months ?

A Yes sir. Well, as it flows through the summer, about one tenth of the water we take in that canal any time.

Q What proportion of the stream flowing during the fifteenth of September and early part of February?

A About one third of it.

Q What is the origin of these waters, do they come out of the river?

A No sir, springs come out under the Provo bench along in the river bottom.

Q In the length of the canal itself?

A Yes sir.

Q And that is the waters find their way into the canal?

A Yes sir.

Q And during the time you are connected with this plant no part of the waters came from the river?

A No sir.

Q You had an ample supply?

A Absolutely.

Q Out from of the canal from seepage and springs?

A Yes sir.

Q And that was about one-third of the entire stream?

A One-third of the entire stream that came down ^{at} that time.

Q You are not able to state what that was in second feet?

A No, I am not.

Q Was there ever been any question of the right to the use of that from any source at all?

A No sir.

Q Was there any understanding with the stockholders under the Lake Bottom canal as to our use of that water when we first got it?

A I understand the board of directors that was in power at that time --

Q You were not a member of the board?

A No sir.

Q But you were connected with the factory?

A Yes sir.

Q And had that information?

A I got that information from one of the board of directors that the Sugar Company was allowed to use their share of the water they owned in that canal any time during this period, provided they needed it.

Q How about the use of water for domestic purposes in the drinking purposes and watering of stock and other domestic and culinary purposes, has that water been supplied from this Lake Bottom Canal? A. No sir.

Q Where has it come from?

A For household and domestic purposes there has been a flowing well. For stock purposes we have a spring that comes through the farm there.

Q After the factory ceases to operate along in the early part of February, have you any water supply flowing into the plant at all, or onto the ground?

A Yes, small stream.

Q From the Lake Bottoms canal?

A No, this is a spring that comes up underneath the canal.

Q So that during that part of the year until irrigation begins you have no water out of the Lake Bottoms canal?

A No.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Do you know of your own knowledge of any water ever having been turned directly from the Provo river into the Lake Bottoms canal for the use of the stockholders ?

A Yes sir.

Q When?

A Every year.

Q During what period of the year?

A I have been a stockholder in the Lake Bottom Canal for thirteen years, and I have helped turn water from the Provo river in I think ever year.

Q What time in the year?

A Usually, well, some seasons little earlier than others, usually along in the forepart of July, last of June.

Q How long has it continued, that is, the flow from the Provo River into the Lake Bottom canal in any year?

A How long has it run there?

Q yes, directly from the river?

A Well, ever since I can remember they have taken water from there. You mean in the fall of the year?

Q The year, yes.

A Along about the fifteenth of September.

Q The water usually increases in the Lake Bottom Canal by seepage after irrigation begins on the Provo Bench, does it not?

A Yes sir.

Q So that later in the season a less quantity is required from the Provo river than is required in the beginning of the season when it is first turned in, is that true?

A Well, usually to my knowledge what water we have ever turned in from the river, we usually keep it all the time, we usually take pretty near all the water that is passing the dam at that time, make as tight a dam as possible, and it is left right in there.

Q That is seepage and spring water altogether, isn't it?

A Some of it comes down the river bottoms, down the river bed.
Q Do you know whether the acreage of the Utah-Idaho Sugar Company is included with the amount of acreage that was testified to here as irrigated from the Lake Bottom canal?

A No sir, it is not. It is separate from the Lake Bottom canal.

Q You didn't understand my question, read it to him.

(Question read)

A No, it is not, it is separate from the Lake Bottom canal; that is, the acreage watered.

Q But I am speaking of testimony.

A I wasn't here, I didn't hear the testimony, I don't know any thing about it.

Q And asking you as to that whether it is included within that area as testified to as being irrigated from the Lake Bottom Canal, you don't know as to that, do you?

A I guess I don't understand your meaning. There is a certain amount of land watered that had a water right off the Lake Bottom canal. That is long before this water was decreed separate from the Lake Bottom canal to the Jesse Knight farm.

Q But it is irrigated through the Lake Bottom canal?

A Yes, has to go through that canal for a short distance.

Q We have some testimony here as to the area irrigated from that canal; what I wanted to know--

A No, this Utah-Idaho Sugar Company property is not included in the acreage supposed to be irrigated.

Q I understand that, but whether or not it was included within the area testified to as receiving water from that canal, that is what I am asking you?

A I couldn't say.

MR. YOUNG: If the court please, if I may interject a little explanation. Several years ago this was the condition of affairs; the water commissioner, I am so informed, had refused to turn out any water from the river into the canal when that was necessary, under the plea that the water that was decreed

to out land in paragraph 11 was indefinite and uncertain, and the Lake Bottom Canal Company are endeavoring to get us to get in this suit a definite decree which would entitled us to so much water for the irrigation of those lands in addition to the waters which had been decreed to them specifically in the Morse decree, so the water has come through the canal, of course, but whether it is included within that acreage or not, I suppose the witness cannot say.

MR. A. C. HATCH: We have testimony here as to the area irrigated from that canal, and I wanted to determine whether or not this was included.

THE COURT: I might suggest, Judge Hatch, probably the better plan would be to ask the person that made that estimate.

MR. A. C. HATCH: we are trying to find him now, your Honor.

THE COURT: It appears this witness doesn't know anything about that.

Q I will ask you if there is not an overflow at times from the Lake Bottom canal?

A Very seldom.

Q There is at times?

A Occasionally the people up the river bottoms when they are irrigating it is all right, and if they happen to turn their water down of a Sunday, possibly a small overflow, or when they are not using it.

Q Now, call your attention --

A That is the dumping ground for waste water, and sometimes the water runs off from the Provo bench, waste water from some of those irrigated farms which creates an overflow, but the regular stream there has never been any overflow unless it was caused by waste water running off the Provo bench just for a short time.

Q I will call your attention to the point known as Carey's point?

A Yes sir.

Q Know where that is?

A. Yes sir.

Q Isn't there considerable of the time an overflow at that point from the Lake Bottom canal?

A Not during irrigation season; there is during the winter months and late in the fall.

Q Where does that water go when there is an overflow?

A It runs back into Provo River.

MR. YOUNG: Now, if the court please, in order to connect up the proof as to the amount of water we have used during the winter months, I have some indication here from this document which I understand is on file as the measurements of Mr. Wetnz of the flow of the various streams in question, and this document shows that there are rising rises in Spring creek in August 16.96 second feet and in the twenty-second of September, when this measurement was made I presume, 15.77 second feet, so the witnesses estimate we use substantially one third of the entire flow of that stream conforms with my allegation in the complaint we have been using five second feet.

THE COURT: I understood Mr. Goodrich's testimony to be that during the winter time, that is from September 15th to February 15th, you used approximately one tenth of the quantity of water which flows in this canal during the summer time, and approximately one third of the quantity in the canal at the time when you use it.

MR. YOUNG: Yes sir, it is in order to show your honor the amount that originates in the stream in the winter time is 15 second feet and one third of it would be five second feet.

Q There is one other question I want to ask. This overflow from the Lake Bottom Canal, does it find its way to the river and pass under the bridge, or does it find its way into the slough and go into the lake?

A It goes into the river above the Fort Field irrigation ditch. At one time did run into a slough but they dug a ditch and diverted it back into the river, so as to be used by the Fort

Field people.

Q When did they dig this ditch to carry it back into the river?

A Why, I just couldn't say, it is seven or eight years ago. Mr. Taylor dug a ditch there that out off part of that, and the balance of it has always run into the river, runs in to the river above the railroad track.

Q Do you know whether they break that dam when there is considerable overflow, and let it pass on down the slough?

A No sir, there has no water run into that slough for several years.

MR. A. C. HATCH: In this connection we would like at this time to let Mr. Stewart testify as to this, or make a statement with regard to whether or not this sugar company land was included.

THE COURT: Is Mr. Stewart here?

MR. A. C. HATCH: Yes.

SCOTT P. STEWART, recalled by the plaintiff, testifies as follows:

DIRECT EXAMINATION By Mr. A. C. Hatch.

Q You are the party who testified as to the area of the land irrigated from the Lake Bottom canal?

A Yes sir.

Q I will ask you whether or not you included in that area the land owned and irrigated by the Utah-Idaho Sugar Company?

A Yes sir, the Utah-Idaho Sugar Company land was included in the land estimated for the Lake Bottom canal.

CROSS EXAMINATION By Mr. Young.

Q Do you remember, Mr. Stewart, how many acres you estimated for the Utah-Idaho?

A I do not, it was neighborhood of twelve hundred acres. I would

have to refer to my previous record on that.

MR. RAY: Is that the total area or the Utah Sugar Company area?

A The total area.

Q You don't now remember how many acres you estimated for the Utah-Idaho Sugar Company?

A No, I don't, not at this moment.

Q Do you know the number of uses that is divided into?

A No sir, I don't.

THE COURT: Have you any further testimony, Major Young?

MR. YOUNG: No sir.

THE COURT: Then I take it we may take up the cross examination of Mr. Thompson.

MR. CLUFF: Mr. Conrad that was not here yesterday is here this morning to finish the South fork of Provo river.

THE COURT: I would rather we could go on with Mr. Thomas' case.

MR. A. C. HATCH: If the court please, in regard to the witness Parker for Utah-Power & Light Company, we are ready to admit that he would testify to the same facts in corroboration with the testimony of Mr. Swenson.

MR. STORY: And that is an independent witness in no way employed by the Power Company.

MR. A. C. HATCH: If you so state.

MR. STORY: That is a fact.

MR. A. C. HATCH: If he were here and could testify-- he is sick and probably is not able to get here, and we make this admission as to the plaintiff, and we are ready to go on with the rebuttal whenever the court shall say so, as to the Utah Power & Light.

THE COURT: I think we will proceed with this other evidence. We probably had better put in all the evidence before we proceed with the rebuttal.

THOMAS G. THOMPSON recalled.

DIRECT EXAMINATION By Mr. Thomas continued.

Q I call your attention again to the 17th of July, I will ask you if ever on that date there were six feet of water running from the Bullock farm? A. No sir.

Q To waste? A. No sir.

Q Was there any at that time running to waste?

A No sir, no water on Bullock's farm.

Q Mr. Stratton's testimony was there were several city streams aggregating above five second feet of water which found their way down into the lake in that direction, what do you say as to that.

MR. COURT: Mr. Thomas, probably you don't remember, but he testified on that date there was no water flowing into the lake at all.

MR. THOMAS: Mr. Thompson?

THE COURT: Yes.

MR. THOMAS: Mr. Swan reminded me I hadn't completed the 17th.

Q Directing your attention to the 24th of July, Mr. Stratton's testimony was in the Carter ditch there was 24 second feet of water running to waste into the lake?

A I don't know anything about that.

Q That is not in the ^{city} system? A. No sir.

Q That in the South Ward Pasture there was an amount equal to seven second feet of water running to waste?

A I couldn't say.

Q That is not under the control of the city?

A Yes, but I wasn't there.

Q At that time? A. No sir.

Q Now, with reference to the South Meadow and Fifth West ditch, there was about nine second feet of water running to waste, what do you say as to that.

A I wasn't down there that morning. I couldn't say only what I know from the measurement above.

Q What was there above?

A Veyy short that morning.

Q Was there nine feet of water in the ditch up above?

A Oh yes.

Q How many ditches were taken out?

A Eight.

Q Before it arrived at the end, at this point where Mr. Stratton said there was nine? A. Yes sir.

Q With reference to the First Ward Pasture or Mill race, Mr. Stratton said he saw approximately fifteen second feet of water going to waste.

A The is impossible.

Q Why?

A because they have a tight canvass dam at the head of the Factory race, no water going through whatever.

Q There was found one stream running to the north of the cemetery coming out of the East Union, carrying a second foot of water, do you know where that water was running to?

A Yes sir.

Q To whom was it apportioned?

A Farrer.

Q For use upon the Farrer land?

A Yes sir.

Q And at the hour Mr. Stratton saw it?

A Well, he took it at about five thirty in the morning.

Q Do you know whether on that date that water was so used on the Farrer land? A. Yes sir.

Q Did you see it?

A I did.

Q Did the water run into the drain at all?

A There is no ditch to the drain, couldn't do it.

Q That day, on the 24th of July, Mr. Stratton said he saw five

city streams carrying approximately a second foot each.

A There is no five city streams.

Q That statement then is not true?

A No sir.

Q On the 29th, 30th and 31st --

A Beg pardon, is that on the east side, did you mean, the five?

Q Yes.

A There isn't such a thing.

Q On the 29th, 30th and 31st of July Mr. Stratton said there was a large quantity of water, approximately 65 second feet on the 29th and down to 62 second feet of water on the 31st of July running to waste, what do you say as to that?

MR. RAY: If your honor please, that was all gone into yesterday, he explained rainstorms and all about it and what he turned into the Factory, and why.

Q All right, on August 11th, Mr. Stratton said in making a trip to Benjamin somethree and a half second feet of water running to waste out of the East Union at 10:40 A. M.

A It didn't run to waste.

Q Where did it go?

A Ben Roberts had it a mile west of the county road.

Q Was Ben Roberts apportioned that water at that time?

A Yes sir.

Q For use upon land of his own?

A On best land, yes sir.

Q And that water was being put to beneficial use at that time?

A Yes sir.

Q On the 27th day of August, 1916, Mr. Stratton reported in the South Ward pasture there was seven foot waste, what do you say as to that?

A I couldn't say.

Q The South Meadows three?

A I wasn't there.

Q The First Ward Mill race twelve second feet?

A There would not be, it would be impossible to be over eight, if

there was anything in and we had three tight dams in, quite tight, the last one is tight, we take two second feet out above Hoover's mill, now there is 8 second feet of seepage water in the Mill race.

Q At what point?

A Oh, all the way through, we take out 2 second feet up just below the ice plant for First West. We take out one second foot on 4th North. We take out all we can get down here up to five second feet right here by the Center Street. Just south of Center there we have it as near tight as we can make it in there, plank dam.

Q Now the sewerage flows into this race, does it, lower down?

A Yes sir, right at the end of the Smoot tail race.

Q What is the quantity of water which generally comes from the sewage .

A About eight second feet average.

Q On this date, August 27th, Mr. Stratton said he found three second feet of water running from the Bullock farm?

A There was no water on the Bullock farm on that date. I would like to make a statement, on the 27th of August, if it is proper.

Q Go ahead?

A Now, it is impossible. Mr. Stratton says the boys made a mistake there, there was some waste water on the 27th of August.

Q Where?

A Out there, but it was all from the Bud Eddenburg farm and run down into the Bullock race.

Q Was that water being used for beneficial purpose at that time?

A Not without the boys at the Utah Lake springs was using it. I should have been out at four o'clock in the morning, but I didn't get over. The boys passed me at a quarter to dix. I was that late, two hours nearly. The man changed the water at one o'clock at night and went home. It is a short

run and there was between a second foot and a half and two second feet run off when I got there.

Q Well, am am I to understand then you were late that morning?

A Yes sir.

Q How late?

A An hour and three quarters from what I should have been.

Q Was the water then going to waste during that hour and three quarters?

A It run off from Eddenburg's land if the boys didn't use it, and Bullock's drain was going to waste.

Q Do you know whether it did go to waste or not?

A No, I don't.

Q On July 25th Mr. Stratton said there was water going to waste from the town stream, amounting to about three feet?

A I could not say as to July 25th.

Q On the 25th?

A I didn't get around until about ten o'clock; I could not tell that early in the morning.

Q You wouldn't cover any part of that then?

A Not along the bottom of the town on July 25th.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Thompson, where do the lots east of here get their water, from the streams running south on each side of the street, the lots are watered from the streams running south on each side of the street, aren't they?

A They get it from the East Union.

Q These city streams right here, the water is carried into the lot from the streams running along by the sidewalk?

A They come from the East Union.

Q Now, how many tiers of blocks are watered east of Academy Avenue?

A From 4th East.

Q That would be eight streams wouldn't it?

A No.

Q How many?

Q Third East only has one; 1st East has two; 2nd East has 2;
3rd East has one; 4th East has one.

Q That would be six? A. Yes sir

Q So that east of Academy Avenue there are six city streams?

A Yes sir.

Q You didn't mean to be understood there weren't six city streams?

A There isn't that many outlets, there is only three outlets.

Q I am asking you about the number of streams, and where do
those streams end?

A The streams on 1st East goes down into the Stubbs Addition,
across on the railroad track.

Q And go right over the hill there, don't they?

A No, they don't go over the hill, they go down on 5th South
into Academy Avenue, then down and under the railroad track
and there, irrigates that on Monday.

Q Where do those on 2nd East go?

A On 2nd East, go straight down under the railroad track, the
two joins together into one.

Q That is below the hill?

A Right at the point of the hill where they join together.

Q Where do those on 4th East go?

A That goes into 5th.

Q Where do they go when they join?

A The 4th runs west one block and empties into 5th East.

Q And over the hill?

A Yes, right at the brow of the hill on 5th South.

Q Do you know where the James Gray farm is?

A Yes sir.

Q That is north of the infirmary?

A Yes.

Q Mr. Stratton testified that on July tenth there was six second
feet of water going to waste there and joining into the Stubbs
spring or any other --

A Bullcock Spring.

Q Into the Bullock spring, isn't that possible?

A No, sir.

Q Where would that water go, going down from the James Gray farm?

A It would turn across the county road, then down there --

Q South ?

A South about forty rods, maybe, or thirty, or forty, along there, and then go west.

Q If it kept going west where would it stop?

A It would land down on what we call the old race track on Ralph Bullock's farm, if it went clear through.

Q And join with the waters of the Bullock spring, wouldn't it?

A No sir, never.

Q It wouldn't ? A. No sir.

Q But would continue right on into the bull rushes, wouldn't it?

A No, it would go right onto his farm, and then it would go in -- his farm comes -- is right between the lake there and of course it would go either way from there.

Q So that is Mr. Stratton followed that stream as is testified to the bull rushes, it would be past the point of any beneficial use, wouldn't it?

A He --

Q Notice my question, if he followed it to the bull-rushes it would be past the point of a beneficial use?

A But he couldn't follow it to bull-rushes.

Q If he did follow it to bull-rushes, it would be past the point of beneficial use, wouldn't it?

A Yes, if he followed to it, but he ~~did~~ could not follow it to it.

Q Now, in the morning you didn't know what was happening to those west side streams, did you, at five o'clock?

A No sir, I did not.

Q So what was going to waste there you don't know of your own knowledge.

A Anymore than what I put in there at the head, that is as far as I know.

Q You merely assigned the water, but whether they were using it at five o'clock in the morning you don't know?

A Not on the west side, no sir.

Q You take the 5th West ditch? A. Yes sir.

Q At the head, that has about 16 feet in it normally?

A Yes, 16 to 18.

Q And it would have 16 or 18 feet at 5th West if the city streams were not taken out, wouldn't it?

A At the lower end, yes.

Q If those gates were closed during the night time it would go down the 5th West street?

A If they were not closed?

Q If they were closed?

A Oh yes, if they were closed.

Q You were not there to know whether they were closed or not, you were up at the head of the stream?

A Yes sir.

Q Now, the point at which Mr. Stratton said that he observed the First Ward pasture stream was above the ~~point~~ point where the sewage came in, wasn't it?

A I don't know.

Q Didn't he so testify and didn't you hear him so testify?

A No, I didn't.

Q If he did so testify of course the fact the sewage came in below wouldn't make any accretion to the stream above, would it?

A Not, not if he was above the sewage it would not, certainly not.

Q Now, you stated that on certain of these dates, just made a broad denial in answer to the questions of Mr. Thomas that there was no water going to the lake without being put to a beneficial use?

A That was on the east side, wasn't it?

Q No sir, that was on the date.

A Not wasting a bit.

Q You don't know whether it was or not, do you, on the west side?

A No, I say I don't, on the west, but on the east side, I do.

Q You had along in the latter part of July a very plentiful supply of water, didn't you?

A No sir.

Q Pretty shy, was it?

A We were.

Q But you said that on the 28th of July you turned the water to the Mill race all night? A. Yes sir.

Q Because of a rainstorm? A. Yes sir.

Q And you turned it on the 29th?

A 28th and 29th.

Q And 30th? A. Yes sir.

Q That was because of that rainstorm? A. Yes sir.

Notwithstanding you had been very dry prior to that?

A Yes sir.

Q That rain was a complete irrigation.

A Yes sir.

Q As I understood your original testimony, Mr. Thompson, you said it took about seven to nine inches to completely irrigate Provo City ground?

A At each application.

Q At each application.

A I don't remember.

Q Wasn't that your testimony?

A I don't remember.

Q Do you now want to be understood one half inch of rain or water applied to the soil is a complete irrigation of Provo City lots?

A No sir, I don't.

Q Well, half inch is all they had on the 28th, isn't it?

A But we had nearly an inch on the 27th.

Q Is that a fact, may I see the report of the commissioner, Mr. Wentz, containing the water reports, please. The weather report here which is introduced in evidence shows that on the

27th of July you had five hundredths of a foot or half an inch.

A Is that in Provo City ?

Q That was in the middle of Provo City, at the station in the middle of Provo City.

MR. A. C. HATCH: You said five hundredths of a second foot.

THE COURT: Do you mean to say five hundredths?

MR. RAY: I meant to say half an inch, five tenths of an inch.

Q You mean to say five tenths of an inch was a complete satisfactory irrigation of the lands of Provo City ?

A No sir.

Q Want to change your testimony in that respect then, you didn't need water?

A. No sir.

Q You say you had been very dry before that and lacked water before, that the rain was sufficient that you were able to turn all the water to the Factory race?

A We had to turn it on every piece of land we could to save our canal that night from breaking over. I irrigated over a hundred acres of land that night with that rain.

Q I understood you to say yesterday they didn't need the water.

A On the night of the 27th?

Q Or the 28th.

A Oh no, not the 28th.

Q You still turned it ^{to} the Factory on the 28th, didn't you?

A The morning of the 28th we turned the water --

Q The night of the 28th, turned it all to the Factory?

A Yes sir.

Q And the night of the 29th?

A Yes sir.

Q And the night of the 30th ?

A. Yes sir.

Q So that rain had been a sufficient irrigation that for three days you didn't need to irrigate the land?

A It had run off from other canals.

Q Notwithstanding the drought you had suffered prior to that?

A Yes sir.

Q Where does the stream on the north side of the cemetery empty ?

A On Mr. Farrer's land.

Q And if it goes through Mr. Farrer's land, where does it go?

A Then it would go down into a ditch that irrigates the Utah Railroad land.

Q And then on into the tooles, wouldn't it?

A No sir.

Q Where would it go?

A Go on the First Ward pasture.

Q Would it irrigate the First Ward pasture?

A It would irrigate part of the First Ward Pasture, right at the gas plant.

Q Now, do you turn water through the stream at the north of the cemetery for the purpose of irrigating the First Ward Pasture?

A No sir.

Q You don't? A. No sir.

Q So that if there was water running there at five o'clock in the morning it was not for the purpose of irrigation of the First Ward Pasture?

A No sir, it was not.

Q Those lands down in the First Ward Pasture there are very wet and sub irrigated where that would go, aren't they?

A part of it is, part of it is not.

Q Part of it is very wet?

A Yes, part of it is very wet.

Q Drainages through it from waters arising above?

A Yes, part of it is, yes sir.

Q There are eight second feet of water raises in the seepage, water raises in the Mill race?

A Yes, that is, Mr. Wentz and I--

Q From its head to what point?

A Right at the -- where the old tail race comes into the Smoot race.

Q That is all available for use, isn't it, at all times?

A It would be for the First Ward Pasture and the Stubbs farm, yes sir.

Q And if it was going on down into the lake, that eight second feet on any date, it was because it was not being used?

A That is right, yes sir.

Q You say there was no water on the Bullock farm on August 27th?

A No sir.

Q Not a bit?

A Not a bit.

Q What do you base that statement on?

A Because I was there, and it was not his time.

Q Wasn't there running past there.

A Yes, running water past the Bullock farm.

Q Now, the water from above at some point can commingle with the waters of the Bullock Springs, can't they?

A Yes sir.

Q Will you say whether or not any water was running to waste on September 2nd?

A Where at?

MR. THOMAS: Was there any testimony to that on direct?

MR. RAY: I am cross examining him as to his observation here.

A I got to find out where it was at.

Q From the First Ward pasture, fifteen second feet on September 2nd.

MR. THOMAS: Object to this as not proper cross examination, not within the lines of the testimony given.

THE COURT: I don't remember he testified to that.

MR. RAY: Not to this date, it is merely testing his observation.

THE COURT: Objection is sustained.

REDIRECT EXAMINATION By Mr. Thomas.

Q You said there was water running past the Bullock farm, where was that going to?

A Eakins had it on that date.

Q Do any artesian wells find their outlet into the Factory race?

A Yes.

Q About what quantity of water, have you ever measured it?

A I forget what it was. We measured it, I forget, it is not a very great quantity, me and Mr. Wentz measured it, it is not a great quantity.

MR. A. C. HATCH: He didn't ask you anything about the waste of water on the morning of the fifth of July. If I remember correctly Stratton testified as to --

MR. THOMAS I think Mr. Stratton did not testify to that. One of the other witnesses, I haven't that before me, I will ask about it.

Q I will ask you, Mr. Thompson, can you state if on any of these ditches to which I have directed your attention there was any waste of water or any run off on or about the fifth day of July?

A I could not tell that, the hour, I cannot be on the lower end every minute of the day. I am there at certain hours every morning then in the afternoon, and I cannot without there is an hour set, I cannot testify.

Q Let me fix the hour as about four o'clock in the morning about the same hour the other investigations were made, do you recall whether or not on the 5th of July about four o'clock in the morning there was any waste of water along the ditches to which I have directed your attention.

A In the town ditches here?

Q Yes, and on the East Union ditch down by the Bullock farm?

A I would have to look up and see who had the water that morning. I cannot remember without looking. Mr. Nuttall had the water on July 5th.

Q At what hour, Mr. Thompson?

A He had it all night, took it on July 4th in the evening and had it until evening on July 5th.

RECROSS EXAMINATION By Mr. Ray.

Q Did he have all the water in the system on July 5th?

A He had the lower stream.

Q I mean in all the system east and west?

A Oh no.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Just one question, the 5th day of July was a very dry day, wasn't it?

A Which?

Q Fifth day of July was a very dry day in Provo City?

A I don't know.

Q Everybody wanted all the water they could get on that day?

A I don't know.

MR. THURMAN: For drinking purposes.

WILLIAM B. PRICE, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q State your full name?

A William B. Price.

Q Where do you reside?

A Why, just between here and Provo about -- or Springville.

Q You are a farmer? A. Yes sir.

Q How much land have you?

A Well, I have 95 acres of my own, then I am farming 45 of leased land.

Q This last year? A. Yes.

Q From what ditch do you get your water?

A Well, for this leased land I get all the water from the East Union.

Q Let me interrupt you there, does that leased land ~~ix~~ lie above the county road?

A It lies just immediately below the county road and south of the county infirmary, -- or west of the county road, did I say east.

Q You said just below.

A Yes, just below, west of the county road and south the infirmary, that leased land. Then I have about five acres of my own that I water from the East Union ditch it lies immediately below the county road.

Q Where does this other land lie you irrigate?

A All mine, it lies just west, west of this that I irrigate from the East Union ditch.

Q From what other stream do you irrigate your land, ~~isn't~~ some from the East Union and what other ditch?

A I irrigate it from this Bullock or Boardman springs. I always called it Boardman spring, I see you have it in your -- you designate it as the Bullock spring.

Q Bullock spring?

A They are all one and the same.

Q I direct your attention to the tenth day of July, I will ask you if you can recall, if you can state whether on that date there was six feet or eight feet of water going to waste from the Bullock farm and Bullock springs, across the road to the west?

A Well, of course, I could not testify as to dates on anything, but take it in the summer through the way we do down there, the waters that will get into the Bullock spring we carry it on down west and use it on our lands below in order to mingle with this Bullock spring water, waste water of the East Union.

Q What waters, can you tell me what waters have been wasted from the East Union during this summer, during the month of July?

A I don,t know of any, because I have been pretty careful to catch all I could find in the ditch.

Q If there was any water going across the road at this point would it be the water from the Bullock springs only, in your judgment?

A I hardly understand the meaning of that question.

Q The statement was made by Mr. Stratton there was about six or eight feet of water going to waste from the Bullock springs, going across the country and out into the lake, during July 10th 17th and 24th.

A No, we have got a ditch made that we carry that water around into what we call the old levy ditch. We use it to water lands just east of the San Pedro track and west of the San Pedro track down to the lake.

Q What quantity of land is there in there, what area.

A Probably five or sixhundred acres, something like that.

Q And the water that comes then from the Bullock springs and such other water as may be got there is put to beneficial use below the road.

A Yes sir.

Q That you would say was the custom during the dates mentioned, July 10th, 17th and 24th of this year ?

A Yes, on that ditch we have a schedule, and we each take it every two weeks, and that water is either used or supposed to be used continually night and day through the irrigating season.

Q Do you know of any instance where that water is not used during the irrigating season?

A Not unless be sometime when there is a storm and there is no need of irrigating, or else it is used continually, it is used all the time.

Q What is your custom there as to night irrigation?

A Why--

Q Do you irrigate at night?

A I most assuredly do, when I take the water to irrigate I keep it night and day until I get through.

Q Do you know if that is the custom throughout that area, do people generally in that district irrigate night and day, whenever their turn for water comes?

A Why, yes, because, now there is my neighbor Ralph Bullock, his turn commences at ten o'clock at night, I think it is along about ten or eleven, and there has been several times this summer he come to me to get the water from me, he would take it from me, you know; he has come to me to get the water in the daylight so that he could get it started to irrigating, so that he could handle it better at night.

Q Do you know of anybody else who irrigates at night down there besides you and Mr. Bullock?

A The county infirmary does.

Q Do you know of any other people who irrigate at night?

A Well, the supposition with me is they all do. Of course, I don't know, I am not there to see them only when I am irrigating.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Price, not being there to see them, you wouldn't know whether or not they did irrigate at night, and wouldn't know whether or not at four o'clock in the morning the water which would be distributed to them was going to waste in the lake, would you?

A Well, they are all-- there is no one of them got a surplus of water.

Q That is not what I asked you; I asked you if you know whether they were letting their night water go into the lake, whether you know anything about it yourself?

A Why, no, of course I don't; I wasn't there to see at four o'clock in the morning.

Q I thought so. Now, do you know whether or not on July 27th, 29th, 30th and 31st of this year there was a stream going out of

the south end of the East Union and running for three days continuously on some grass land just above the Bullock springs? and then draining down into the Bullock springs?

A Grass land above the Bullock spring?

Q Pasture between the infirmary and Bullock's old home?

A There is no grass land where they could turn water. - There is some pasture or grass land just bordering the spring, and it goes down just on each side, but there is no ditches where it could carry water down on to this grass land.

Q Isn't there an old pasture just south of Bullock's house there?

A South of his house?

Q Yes. A. No sir.

Q North of the infirmary and south of his house?

A South of the Bullock house, no, there is some grass land or pasture land just bordering the Bullock spring and that is north and west of the Bullock house.

Q Are you able to say there wasn't a stream running on there on those grass lands and into the Bullock spring on July 29th, 30th and 31st of this year?

A No, I am not prepared to say whether there was or not.

Q Well, there is a little alfalfa in this pasture, I don't know whether you understand what I mean pasture, or about five acres, grass and alfalfa mixed together there.

A East of the road?

Q Between the infirmary and Bullock's house ?

A Oh yes, there is an alfalfa field there, used to be, but the alfalfa is run out.

Q Now we understand what land we refer to, are you able to say there was not a stream running on that for three days continuously, on July 29th, 30th and 31st of this year, and draining from there down into the Bullock spring?

A I could not, as to date I could not say.

Q You don't know whether there was or was not.

A No, if there was water running there I am pretty apt to see it

But I don't remember ever seeing it run there like that, because it is in front of my house, just across the road.

Q Would you say it didn't run there?

A I don't say it didn't or did, but think if it did I would have seen it, and I didn't see it.

Q Isn't it three or four hundred yards north of your house, that pasture?

A No sir, it is right across the street from my house, right across the street.

Q You don't know whether there was a stream running there or not?

A I couldn't say there was, no, or was not.

Q If there was a large stream running there for that length of time, it wasn't necessary to irrigate that pasture, was it, three days?

A Oh no, not three days in one place.

Q You refer to five or six hundred acres over west of the railroad track.

A No, west of the county road.

Q How much of that is under irrigation?

A It is all under irrigation.

Q How much of it is sub irrigated?

A I don't know, we irrigate that field, all of it.

Q How much of it is sub irrigated?

A I don't know that there is any part sub irrigated, of course, the water is close to the surface in some parts of it.

Q Very close, isn't it?

A Yes, I have to drain some of my land.

Q . Boggy?

A Yes, I drain it and then irrigate it. No, not boggy, it is not boggy.

Q Most of it is underlaid with hard pan, isn't it, that country in there?

A Occasionally there is spots, that hard pan it goes in streaks. There will be a little probably, a little place as large as this

Building be hard pan and right around it there would not be any.

Q How close is the ground water there on most of that land?

A Ground water?

Q yes, where you have not drained?

A It varies all the way from probably a foot to four or five feet, someplaces more than that.

Q Haven't they had to put extensive drains all through there to get any use of the land, Uncle Jesse Knight and other owners down there, the infirmery?

A Jesse Knight, that is not included in this, Jesse Knight's farm.

Q It is higher land, isn't it?

A Jesse Knight is farther south, it doesn't come under this stream at all.

Q Same character of land, isn't it?

A His land?

Q Yes.

A He has springs forming on his land.

Q How much of this five or six hundred acres is drain?
done

A Well, I don't know, I have some draining.

Q How much?

A Well, let me see. Well, I could give you better proof that I drain I have put in out of the amount of land -- you see, there is places where it was low. Now, in one piece of land there would be a low place where it needed draining, or there would be maybe another place where it would have alkali and I would draw alkali off, and another place I would drain because water was near the surface. I have put in one piece, in a piece of eleven acres I have put in, I think it is about eighteen hundred feet of tile. Then there is another place in another eleven acre piece I have put in some three or four hundred feet of tile, a low place.

Q Well, a great deal of the lands need draining, do they not, today?

A yes, they should all be drained, that is in places, need draining, some for alkali and some for excessive moisture or wet.

Q The infirmery has put in a drain there on some of the very highest lands in order to use them, haven't they?

A On the best land they have put in a drain, yes.

Q What crops are planted on that land, meadow grasses.

MR. THOMAS Object to this as improper cross examination.

MR. RAY: He said they irrigated five hundred acres down there.

THE COURT: I think it is cross examination of that.

A Most every kind of a crop you can down there, alfalfa, there is fruit, vegetables, beets, grain, potatoes, in fact all kinds of crops that I can think of.

Q How many irrigators have you there?

A Irrigators?

Q Yes.

A Let me see, I don't know, approximately fifteen, maybe more, fifteen or eighteen. That is people that have land they irrigate you mean?

Q Yes.

A Yes, some fifteen -- oh, I guess it ~~was~~ would run up to eighteen probably twenty, I don't know.

Q You don't know the total acreage actually tilled there?

A No, I don't, just approximate.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Do you hold stock in the East Union canal?

A Yes.

Q For all your land ?

A No, just for this land by the county road.

Q How many acres?

A Five acres.

Q And the balance of your land is irrigated from the Bullock spring?

A Yes.

Q Then when there is large quantities of water coming down from the East Union Canal into the Bullock spring, it is an excess of water for the users from the Bullock spring, is it not?

A Well, of course it increases our stream, and while I irrigate the rest of my land partly from the Bullock spring, but some of it from this other stream that is formed by ^{what} they call the Thomas spring and runs into the Levy ditch, and we take this water, whatever water we can catch that comes as waste water, we catch that in the Bullock spring and take it on down to water these lands that we use the Bullock spring on, and also this other stream known as the Thomas spring, I believe.

Q That Thomas spring has no connection with the East Union canal, has it?

A No, it springs up down at the D. & R. G. track.

Q About how much land do you estimate is irrigated by this waste water from the East Union canal?

A Just by the waste water.

Q Yes, the additional quantity that you irrigate by reason of this waste water from the East Union canal?

A Well, the only way we get the benefit of this waste water is just by whenever it comes down we catch it in with out other water, and makes our stream that much larger.

Q It ~~was~~ comes down almost continuously too, doesn't it?

A No sir, it does not.

Q Doesn't it add materially to your irrigation water?

A No, not very materially.

Q About how often would you say this waste water finds its way into the spring, Bullock spring?

A Well now, whenever they irrigate that Bullock land just east of the county road and then this Bullock pasture that he speaks -- he was asking me about, this Bullock grass land, whenever they

irrigate that, and sometimes when Eddenburg and Gray irrigate there would be the waste waters that run from their land. It will come on down in there, but of course whenever they irrigate and there is any waste water comes from their land, we get the benefit of that.

Q Who is irrigating when the waste water from the East Union finds its way into the Thompson, or Thomas spring?

A Well, that's it, it mingles in with the Bullock spring, and we have a ditch where we can divert this spring around into the other ditch.

REDIRECT EXAMINATION By Mr. Thomas.

Q Just a moment, you stated that in this land that you still drained which you put to cultivation you still had to apply water on to obtain a crop?

A I irrigated every two weeks during the irrigation season.

Q You refer to a strip of grass or pasture land around the spring, how wide is that strip?

A Well, I couldn't say, some places just a few rods wide, other places -- that is on either side?

Q Yes.

A Other places be probably four or five rods. I don't know, I never made any estimate.

Q Just an irregular piece of grass land that grew near the spring itself?

A Yes, you see that ground is boggy, and the water it runs down into a kind of a channel that the spring has formed, that is how it is.

Q Do you know anything about the Upper East Union?

A yes.

Q Can you state whether there is any run off from the Upper East Union into the East Union?

A Yes, whenever Lon Bullock waters his land above there, and also Boardman, it is very steep, it is bench ground and very steep,

and water in a very short time after they turn it out at the head, it runs off into the East Union ditch.

Q The runs are very short on that Bullock and Boardman land, are they not?

A In some places they are short, yes.

Q And the ground very steep?

A Steep, yes.

Q And it is unavoidable that some waste shall go off into the lower ditch?

A Oh yes, I have caught waste water over there and irrigated when I could not get it out of the East Union.

REGROSS EXAMINATION BY Mr. Ray.

Q Just one question, what becomes of the water from your drains down there?

A My drains; why, we have a drain that we have out clear down into the lake, and it runs into the lake, this seepage water that runs out of my farm.

Q They ^{could} ~~can~~ take it out and use it for irrigation if they wanted to, couldn't they?

A No, they would have to pump it out; it is down so low, it is on a level with the lake.

CROSS EXAMINATION By Mr. Thumman.

Q About what percentage of the water from the Boardman land, turned on the Boardman land from the Upper East Union gets into the East Union?

A That would depend on how often they changed it. It would pretty near all get in there if it was let run any length of time on a certain place, on any one place.

Q There is quite a percentage of the water usually turned on the Boardman ~~and~~ and Bullock land that reaches the East Union, isn't there?

A There is-- well, sometimes there will only be a very small stream

come and other times, why, there would be quite a big stream come off of their land and get into the East Union.

Q There is no allowance made for that any place in the distribution of the water to these ditches?

A No, only that the water master has told me that whenever I could catch that I was at liberty to do so if I needed it for my crops.

Q Then there is, there is that much extra over and above the amount allotted to the East Union ditch at the head?

A Oh yes.

REDIRECT EXAMINATION By Mr. Thomas.

Q Mr. Price, is there any certainty about that flow?

A That Boardman?

Q Yes, and that overflow?

A Oh my, no.

Q Could you at any time depend upon it with any certainty for irrigation?

A No, I might see some come down, pretty fair stream say now, and go and take it and in an hour may be all gone.

ANDREW KNUDSON called by the defendant Provo City, being first duly sworn, testified as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q Give your full name?

A Andrew Knudson.

Q Where do you live?

A Provo.

Q Do you hold any official position in this county?

A Yes sir.

Q What is it?

A Superintendent of the Utah County Infirmary.

Q just a little louder?

A Superintendent of the Utah County Infirmary.

Q As such superintendent is it your duty to see to the irrigation of the farms?

A yes sir.

Q From what ditch do you get water for your county infirmary land?

A From the East Union ditch and also the Upper East Union ditch, and what is known as the Bullock or Boardman springs.

Q From the three sources?

A Yes sir.

Q Can you state if during the morning of July 10th from about four o'clock on, there was any amount of water running to waste from the Bullock springs, amounting to about six or eight second feet?

A No sir, I could not.

Q Were you there at that time?

A I may have been there, but I could not testify as to that.

Q Can you testify as to any water was running to waste during your turn of irrigation?

A No sir, there would be no water run to waste.

Q When was your period of irrigation?

A On the 17th of July.

Q Did you irrigate on the 10th of July?

A No sir, I did not.

Q Did you irrigate on the 24th of July?

A Not that I remember of.

Q On the 17th of July?

A I think we did.

Q From what ditches did you get water, from the Upper East Union?

A From the East Union.

Q From the East Union?

A. Yes sir.

Q Was that water running across the road at that time?

A Part of it, yes sir.

Q To the west? A. Yes sir.

Q Was it being put to beneficial use at that time?

A Yes sir.

Q Who was immediately in charge of the irrigation?

A Charles Cedarstrom.

Q Would you say that at that morning there was six feet of water running to waste down to the lake, unused by anybody?

A I would say there wasn't six feet running to waste.

Q Did you ever have a night time -- would you say that at any time during-- do you irrigate at nights on the farm down there?

A yes sir.

Q Frequently? A. Yes sir.

Q Whenever your turn is so fixed?

A Yes sir, either night or day.

Q Do you know whether other people in that territory, that neighborhood irrigate at night?

A Yes sir, that is generally understood, they use the water when their turn comes, night or day.

Q Was there any amount of water running to waste that day, July 17th, coming from the Bullock springs, or from the East Union and running down to the lake?

A It is possible that in the morning, early in the morning.

Q How early?

A Oh, about day light. Be possible that there would be an increase of water about that time, and it would run over our board and go into what is known as the Bullock spring, the ditch that crosses the road from the Bullock springs, running north from the infirmary.

Q You yourself, or rather the county infirmary, irrigates some land from the Bullock spring?

A yes sir.

Q Then that water that would go over your dam into the Bullock spring wouldn't be going to waste, then, would it?

A Not necessarily, no sir.

Q And it would not be going down to the lake and the bull-rushes and going to waste?

A No sir.

Q Do you recall whether at that time you had a plentiful supply of irrigation water?

A I don't think we had sufficient from the fact we were under the necessity of watering nearly three days.

Q How much land were you irrigating during that period?

A About fifteen acres, and that would also include the night.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Knudson, you do the irrigation personally down there?

A No sir.

Q How would you know then --

A Not always, I do at times.

Q How would you know whether on July 17th at four o'clock in the morning water was running to waste?

A I didn't testify I knew it did run to waste, I said possibly in the morning when there is a freshet of water it may run over our dam.

Q And it may have been running over your dam to waste down into the Bullock spring out to the lake at four o'clock in the morning of July 17th?

A It may have, but not necessarily.

Q Wouldn't have to? A. No sir.

Q But whether ~~it did~~ did or not you don't know or pretend to know?

A No sir, I don't pretend to know.

Q How big a stream did you have for fifteen acres when you watered three days and nights?

A I couldn't tell you, I didn't measure it.

Q Have you any judgment as to the size of the stream.

A I should judge there was perhaps three second feet of water.

Q You consider that necessary for proper irrigation?

- A Yes sir, and more.
Q It was not sufficient?
A That is hardly sufficient.

REDIRECT EXAMINATION By Mr. Thomas.

- Q I will ask you if in your judgment any of the water that was going across the road from the gullock springs on the morning of July 17th went to waste in the bull-rushes and lake?

MR. THURMAN: We object to that as a matter of judgment, if he knows the fact he can testify to it.

THE COURT: I thought he had asked for the fact, read the question.

(Question read)

THE COURT: Objection is sustained.

MR. THOMAS: Exception.

J. E. DANIELS, recalled by the defendant Provo City, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q State your name-- you were sworn before, weren't you. You testified in this case before?

A Yes sir, I did.

- Q Mr. Daniels, do you have land in the southern part of the city under the East Union? A. Yes sir.

- Q Do you get water from the Upper East Union as well?

A No sir.

- Q From the East Union only?

A From the East Union only.

- Q Do you get any water from the Bullock spring?

A No sir.

- Q Can you state if on the tenth day of July you had assigned to

you a certain use of water from the East Union?

A No, I could not state.

Q Was ^{it} on the 17th of July?

A I could not state as to the date.

Q Do you recall having had any water for use upon your land under the East Union this last summer?

A This last summer I had my land rented to another man.

Q You were not there yourself?

A I was not there myself.

Q Who was it, Mr. Daniels.

A Harold Oberg.

Q I was misinformed as to that, that is all.

N. B. JOHNSON called by the defendant, Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q Your name is N. B. Johnson?

A It is Nels B. Johnson.

Q You reside in this city?

A Yes sir.

Q You are a farmer? A. Yes sir.

Q Where is your land located?

A Fruit grower.

Q Where is your land located?

A In the southwest from here.

Q Under what ditch do you get your -- through what ditch do you get your water?

A We used to call it the Stephens ditch, I don't remember the number of the ditch.

Q Is it sometimes known as the Jones ditch or Dalhquist ditch?

A One of my land is Jones ditch and one is Stephens ditch. What

is the number of that ditch?

Q Can you state if on the tenth day of July you had any water running to waste past your place, during your time of use?

A Is that Monday?

Q That was Monday.

A No sir, my day was Monday.

Q These two ditches from which you get your water, the Jones ditch and Dahlquist ditch empty into the 10th West ditch, do they not, Mr. Johnson?

A They empty into my ditch there.

Q These two ditches of yours Jones Ditch and Dahlquist ditch run down and empty into what is known as the ditch on 10th West?

A I don't know the name of that ditch.

Q South Pasture ditch?

A Yes, it runs in there.

Q That is down about 10th West?

A Yes sir.

Q You know it is the South Pasture ditch?

A Yes sir.

Q I want to direct your attention to the Jones ditch and the Dahlquist ditch, on the 10th day of July, about four o'clock in the morning, can you state if any water passed by your place at that hour?

A It could not, I had my dam in.

Q What do you say as to the 17th of July?

A Is that Monday too.

Q That was the following Monday.

A No sir, it is my turn to water out of them two ditches.

Q The week following on July 24th?

A Is that Monday too?

Q That is Monday.

A The dam was in.

Q No water passed by your place?

A No sir, I got a cement dam.

THOMAS S. JONES, called by the defendant Provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q Your name is Thomas S. Jones?

A Thomas S. Jones.

Q You reside in this city? A. Yes sir.

Q Farmer. Mr. Jones? A. Yes sir.

Q You get water out of what is known as the Lundberg ditch?

A Yes sir.

Q That ditch empties into the South Pasture or Tenth West ditch?

A Yes sir.

Q I call your attention to the 10th day of July, 1916, ask you
if any water passed by your place in the morning of July 10th?

A No sir, it did not.

Q Is there anything that calls that day especially to your mind
with reference to the irrigation of your land?

A Well, I take the water at six o'clock at night, keep it until
seven in the morning.

Q At six o'clock Sunday night until the next morning?

A Seven O'clock Monday morning, yes sir.

Q Were you watering beets all the day of July 10th?

A Yes sir, I didn't finish up and David Klings' turn come and he
let me have part of his water until I finished up.

Q On that day?

A On that day.

Q Did any ~~an~~ of the water which had come down the Lundburg ditch
pass by your place and go down to the South Pasture and Tenth
West ditch and go to waste?

A No sir, did not.

Q What would you say as to the 17th of July?

A I was watering on the 17th.

Q Was there any waste at that time?

A No sir.

Q Was there any waste on the 24th of July during your period of

irrigation?

A. No sir.

CROSS EXAMINATION By Mr. Ray.

Q Where is your land, Mr. Jones ?

A Why, it is on 11th West, about 9th South. There is no street running through there, it is on that long lane.

Q How far from Johnson's place is your land?

A It joins right next to Wilberg Johnson's piece.

Q Now there are ditches which could go into the Tenth West ditch below you, aren't there, and do go into it south of you?

A South of me?

Q Yes.

A Why yes, that Dahlquist ditch and all them empties into the same ditch.

Q There are a lot of them south of you, aren't there?

A No, there is just the one ditch.

Q South of you? A. Yes sir.

Q Did you see anybody on the morning of the tenth of July along that ditch in an automobile?

A Why, lots of people along there in automobiles.

Q Four o'clock in the morning are there lots of them down there?

A Four o'clock in the morning, no, there isn't any.

Q Did you see any around four o'clock in the morning on the tenth of July?

A I don't know if I did.

Q Do you remember seeing any?

A No.

Q On the 17th of July?

A I don't remember seeing anybody.

Q Or the 24th or any other date?

A Why no, not that early in the morning.

Q You don't sit up all night to water, do you?

A Any time you water beets, you come pretty near staying up all night.

Q Do you?

A Certainly I do.

Q Stay up all night, that is all.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q Do you know whether the ditch from which you irrigate is the ditch that Stratton testified to as having water flowing to waste?

A There has been no waste water come down that ditch all summer.

Q Do you know whether or not it is the same ditch to which one Stratton testified in this case?

A It is the Lundburg ditch, that is all I know; Lundburg ditch I water out of.

Q What is the number of your ditch?

A Number of it?

Q Yes.

A Lundburg ditch.

Q Where is it situated?

A Runs right through my place.

Q On what street?

A On 11th West, or about 10th West.

Q 10th West?

A Yes sir, if there was a street through there it would be 10th West.

Q What south is it?

A About 9th South.

Q Is it 9th South or 10th South?

A Well, there is no street running through there, I don't know what you would call it.

Q Is it opposite -- what street is it opposite, 9th or 10th South?

A Well, 9th.

W. F. DeLONG, called by the defendant, Provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q Your name is W. F. DeLong? A. Yes sir.
- Q You reside in Provo City? A. Yes sir.
- Q You are a farmer?
- A Fruit raiser.
- Q You take your water out of the ditch that is known as the DeLong ditch, do you not?
- A Yes sir.
- Q This is one of the ditches which empties into the South Pasture or the Tenth West ditch?
- A Yes sir.
- Q I want to direct your attention to July 10th and ask you if you were irrigating your land at that time?
- A Was that on Sunday morning?
- Q July 10th was Monday?
- A No sir, I was not.
- Q You began irrigating on Four A. M. Sunday.
- A Yes sir.
- Q I am in error as to the date, Mr. DeLong, it is my error, I want to direct your attention to August 27th, I will ask you if you were irrigating from four A. M. Sunday to two P. M. Sunday?
- A Yes sir.
- Q On that date? A. Yes sir.
- Q I will ask you if there was any waste or run off beyond your place during your period of irrigation?
- A No sir, there was not.
- Q Was there a second foot or two second feet or any other amount of water running past your place?
- A No sir. I shut it off as tight as we can, sometimes dam leak a little, you know, but not to amount to anything.

CROSS EXAMINATION By Mr. Ray.

- Q You don't know on that date of August 27th how much water was in

the ditch going into the South pasture and down into the lake,
do you ?

A No sir, I wasn't down there.

Q Or in the South Meadow ditch?

A No sir.

Q running down into the lake; that is all.

MR. THOMAS: We will show these various ditches were all contributing to the South Pasture or 10th West. If there is none in either there could be none in the whole.

THE COURT: This South Pasture ditch same ditch referred to by Mr. Stratton as the South Ward pasture?

MR. RAY: yes.

MR. THOMAS And these several ditches are those that contribute to make that one ditch.

THE COURT: I understand Mr. Stratton testified to waste in the South Ward Pasture and you refer to the South pasture, and I was wondering if it was the same one.

B. F. SLATER called by the defendant provo City being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Thomas.

Q Give your full name?

A B. F. Slater.

Q You reside in Provo? A. Yes sir.

Q You are a farmer? A. Yes sir.

Q Under what ditch do you get your water?

A Number 5.

Q That is the ditch, that's one of the ditches that empties into what is known as the 5th West ditch, is it not, your outlet is in to the 5th West.

A All I know it is the 5th West ditch.

Q I want to direct your attention, Mr. Slater, to the 25th day of

July.

THE COURT: Let me understand, he gets water from the 5th West ditch on Number 5.

A No. 5, Fifth West.

MR. THOMAS: Ditch No. 5, Fifth West.

Q Do you lease the Ed Harding land, Mr. Slater?

A Yes sir.

Q What time do you get your water?

A Four thirty Monday morning.

Q Don't you get it four thirty P. M. Monday to ten thirty A. M. Tuesday?

A That is the correct time, that is when I take it, Monday morning.

Q Monday afternoon?

A Monday morning.

Q I am directing your attention to the Ed Harding land?

A Yes.

Q Didn't you just tell me in the office you were taking your water four thirty P. M. Monday and use it until ten thirty A. M. Tuesday?

A Sure.

Q Then you get it Monday afternoon and use it until Tuesday morning, what do you understand P. M. to be, four thirty P. M.?

A I take it four thirty in the morning and keep it until ten thirty Tuesday forenoon.

Q You have it all day Monday and until the following Tuesday morning?

A. Yes sir.

Q Then you have -- this is the land then, the water you are using for the Ed Harding land?

A That is the two pieces of land, I use six hours on the Lewis land.

Q And have your one irrigating ~~per~~ period? A. Yes sir.

Q Directing your attention to ~~the~~ the 25th day of July, during the time that you were irrigating and had the use of this water, did any water go to waste from you down into the lake?

A No sir.

MR. A. C. HATCH: If the court please, at this time we move to strike the testimony of this witness as not being rebuttal of any testimony.

MR. THOMAS: It was direct rebuttal. Mr. Stratton stated he saw certain water wasted on 5th West.

MR. RAY: On the 24th of July.

MR. THOMAS: On the 25th of July.

MR. A. L. BOOTH: Before the hour you mentioned.

THE COURT: On the afternoon of July 25th, that is the note I have, testified through the 5th West ditch there was three second feet running to waste. So that you may have a record, the motion to strike is overruled.

MR. A. C. HATCH: It is withdrawn.

MR. RAY: My notes and memory are the 24th, and both Mr. Stratton and Mr. Knight are the 24th.

THE COURT: I didn't look at Mr. Knight.

MR. THOMAS: I have a transcript of the testimony here, I know it was the 25th day of July mentioned specifically.

MR. THURMAN: What day of the week?

MR. THOMAS: Tuesday.

MR. THURMAN: He never testified to anything before Monday.

MR. THOMAS: For counsel's information I am reading from page 10 of the transcript, Mr. Stratton's testimony.

"Q. Was that the last visit you made? Answer. Yes sir.

Question. Now, during all of these visits, how many men did you see out irrigating at four and five o'clock in the morning?

Answer. Just one man. I had went on July 25th, 1916--

Question. What did you observe then?" and it gives the observation.

MR. RAY: It should be the 24th.

THE COURT: Now, possibly might save sometime and some useless rebuttal if Mr. Stratton desires to change his

evidence as to the day so that you may be informed of it and it ought to be done.

MR. THOMAS: I think so.

THE COURT: I understand from Mr. Ray it was Mr. Stratton's evident intention to refer to the 25th-- to the 24th and--

MR. RAY: The original memorandum of the date was the 24th, both witnesses in my notes show the 24th. Mr. Wentz shows the 25th and Mr. Evans shows the 24th.

THE COURT: My notes show the 25th.

MR. COLEMAN: A^d reporter's notes show the 25th.

THE COURT: This witness may stand aside a moment and I will permit you to put Mr. Stratton on the stand to correct the evidence, or you may have time to investigate to introduce rebuttal as to the 24th.

JOHN H. STRATTON recalled by the defendant Provo Bench Canal and Irrigation Company, testifies as follows:

DIRECT EXAMINATION By Mr. Ray.

Q Mr. Stratton, have you a memorandum as to the date when you visited the South Ward Pasture and ditches there?

THE COURT: I might suggest the order in which this comes upon my notes, and it might refresh your recollection. Mr. Stratton testified in detail as to the examination which he made and result of examination on July 24th, he then testified as to July 29th, then as to July 30th, July 31st; and then August 27th, and after you had completed with the August 27th examination he ~~ask~~ then testified as to a visit on July 25th in the afternoon of that day.

MR. RAY: Now, I will have to examine his notes with that in view, that is the order in which he testified. I did not go back to the first of it. He testified as to the tenth and seventeenth.

Q Did you go on the afternoon of the 25th, do your notes show?
A I haven't mine in order here, don't remember, and all that I could remember would be from consulting those notes. I find, turning further in here July 25th.

MR. RAY: Then we have no correction, that is all.

THE COURT: I thought possibly if I gave the order in which it came it might refresh his recollection.

12:00 Noon, Recess to 2:00 P. M.

OMISSION.

Discussinns as to matters in Wasatch County.

LARS L. NELSON called by the defendant provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q State your full name?
A Lars L. Nelson.
- Q You reside in this city? A. Yes sir.
- Q Farmer? A. Yes sir.
- Q Under what ditch do you take water?
A ditch on 5th West, I believe Ditch No. 2, it is called Ditch
No. 5.
- Q Directing your attention, Bishop, to the 10th day of July, 1916,
I will ask you if you were using your water during the entire
period of your allotment?
A Not all day.
- Q When does your time begin?
A Sunday evening, at nine o'clock P. M.
- Q And continues to what hour?
A Until Monday morning at ten A. M.
- Q On the day of the tenth of July during what period did you not
use that water ?
A I think from one o'clock A. M. until five A. M.
- Q What was the occasion of your non use at that time?
A I had sufficient time to complete my irrigation so I did not
work in the dark of the night to finish it.
- Q Had you crops in at that time that ~~were~~ required irrigation?
A No sir.
- Q What land did you have planted that did not require irrigation,
and to what was it planted?
A Into sugar beets.
- Q Were they of sufficient height and in such condition at that
time they needed irrigation?
A No sir.
- Q And from one A. M. until five A. M. of that day you didn't use
the water? A. No sir.

- Q Directing your attention now to the same land and same water to the 17th of July, I will ask you if you used the water during that period?
- A Yes sir.
- Q The whole of it?
- A Yes sir.
- Q Did any go to waste beyond your point of use during the time you had it?
- A Not very much, just a small portion that would naturally go through the dam.
- Q Well, was that any appreciable amount?
- A No sir.
- Q You would not regard that which passed through the dam as an irrigating stream? A. NO sir.
- Q Coming now to the 24th of July, what do you say as to the amount of water you used at that time?
- A I used the entire stream.
- Q State if any went to waste?
- A None at all.
- Q Beyond your point of use?
- A No sir.
- Q Would you say that -- that covers it -- take the witness.

CROSS EXAMINATION By Mr. Ray.

- Q How far are you from the South Meadow, Pasture, the gate of the South Meadow Pasture?
- A On a straight line be about fourteen or fifteen rods, I think.
- Q You didn't need your water on the morning of July 10th, or you didn't use it?
- A No sir.
- Q Where is your farm, just below 6th South or 5th West?
- A Yes sir.
- Q Where is the gate to the South Meadow?
- A The gate to the South Meadow is at the lower end of the street

on 5th West.

Q How far below your place?

A Almost three quarters of a mile.

Q So that the gate -- then wouldn't the gate from the South Field be three-quarters of a mile from your place?

A Not this place in question.

Q Oh, you have land farther down?

A I have land farther down, yes sir.

Q Your own land or rented land is that?

A My own land.

Q Just one further question, where did you take the water on 5th West out of the stream onto your land, at what point?

A At the head gate.

Q Right next to your land?

A Yes sir.

Q How far would that be above the Pasture gate or South Meadow gate?

A That would be about three-quarters of a mile.

THOMAS S. FARRER called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q State your full name?

A Thomas S. Farrer.

Q Where do you reside, Provo?

A Provo.

Q You are a farmer? A. Yes sir.

Q You own land near the cemetery? A. No sir.

Q Is your land -- are you familiar with the ditch, irrigation ditch?

A I am farming the ground there that belongs to an estate.

Q That is what I mean, that is near the cemetery in this city?

A Yes sir, joins on the west.

Q You are familiar with the ditch, irrigation ditch that runs on the north side of the cemetery that takes water from the East Union?

A. Yes sir.

Q Carries it to your land?

A Yes sir.

Q Who built that ditch

A We built it, my brother and I.

Q Did you have water running in there on the tenth day of July, 1916 , or the 24th of July?

A Yes sir.

Q How much water was running there? about a second foot?

A I am not acquainted with measurements.

Q You had water running in that ditch?

A Yes sir, a small irrigating stream, it was not what you would call a regular stream.

Q A small stream of water, you got it from the East Union?

A Yes sir.

Q And carried it onto your land?

A Yes sir.

Q State if that water was put to beneficial use upon your land?

A Yes sir.

Q Did that water run into the drain or into the bull-rushes?

A No sir.

Q Into the lake? A. No sir.

Q Can it?

A No sir, not from that point.

Q Could it from any point there without making a special water way for it?

A No sir.

Q How often xxx have you used that water through that ditch on your

land and put it to beneficial use this year?

A I believe it is five times.

Q And you used water through that ditch on the same land last year, did you? A. Yes sir.

Q Let me ask, your time for watering is in the morning?

A Yes sir.

Q From four o'clock on? A. Yes sir.

Q Did you have any water on the tenth of July?

A Yes sir,. I believe it was the tenth.

Q Did you have any on the seventeenth that you can remember?

A No sir.

CROSS EXAMINATION By Mr. Ray.

Q That ditch, Mr. Farrer, is on the north of the cemetery, you say?

A Yes sir, that is, it would be on the north side of the street.

Q And the water can go down through it and into the waste ditch, can it.

A There is no waste ditch there. Is that on the north side of the street or on the street north of the cemetery?

Q It is on the street north of the cemetery.

A It runs down, part way down the cemetery and then cuts through the corner of the cemetery into our ground. That is the only way we can water, get the water onto the ground, because have to run the water both ways from that point.

Q Then there is an old ditch that is not kept up that runs straight west from there, isn't there?

A No sir.

Q Never has been?

A Straight west from there?

Q Yes.

A Not that I know of.

DIRECT EXAMINATION By Mr. Thomas.

- Q You were sworn before in this case?
- A Yes sir, David S. Kling.
- Q You take water out of the DeLong ditch, do you not?
- A Yes sir, 8th West.
- Q That is one of the ditches that runs into the 10th West ditch?
- A Yes sir.
- Q What is your time for watering?
- A On two P. M. Sunday until two P. M. Monday.
- Q And that is your time each week?
- A Each week, yes sir.
- Q I direct your attention to the Monday of July 10, 1916, ask you if you irrigated during that period?
- A I irrigate every time when my turn comes and then I keep my dam in until my neighbor below me exacts some waste water.
- Q That is, takes the water from you?
- A Yes sir.
- Q Did you have any water running to waste during the time of your irrigation period on the date of July 10th, on the morning of July 10th?
- A No sir.
- Q Monday morning? A. No sir.
- Q Did you have any water running past your point of use on the morning of July 17th?
- A No sir, unless it was a mistake, unless the rats dug around my dam.
- Q Can you say whether or not they did dig around your dam?
- A I don't believe they did, because I had some dam boards in. That is, I had ~~some~~ some -- well, blankets in, never did, never a drop that I could prevent.
- Q Did any water pass by your point of your use, by your dam on the 24th of July? A. No sir.

Q You are certain of that?

A I am.

Q Has that been your custom throughout your time and period of irrigation?

A Yes sir, whenever I needed it, yes sir.

Q You saw and took measures to prevent any waste water going past your dam?

A I did.

Q Do you ever irrigate at night, do you stay up nights and irrigate?

A Yes sir.

Q Take care of your water? A. Yes sir.

Q And see that it is put to proper and beneficial use?

A I did.

CROSS EXAMINATION By Mr. Ray.

Q How far are you from, how far is the point of ^{the} diversion of water to you from the South Meadow gate?

A How is that?

Q South Pasture gate?

A Excuse me.

Q How far is the point of diversion where you take the water from the South Pasture gate?

A From the South pasture gate, I don't know that exactly.

Q At the foot of 10th West Street.

A I irrigate on the 7th West or 8th West mostly.

Q Do you know where the South Meadow gate, South Pasture gate is/

A Yes sir.

Q How far is it from the point where you take your water to that gate?

A I don't know.

Q You don't know? A. No.

Q Have you any judgment?

A Yes, about three-quarters of a mile, I should judge.

Q How much ground have you that you irrigate, and did have during

the past year?

A On the 5th West ditch, you mean?

Q Yes.

A About fifteen acres.

VERNIE C. JOHNSON, called by the defendant Provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q Your name is Vernie Johnson?

A Vernie C. Johnson.

Q You reside in this city?

A Yes sir.

Q You are a farmer? A. Yes sir.

Q And you are irrigating land in the city?

A Yes sir.

Q You take water out of Ditch No. 4, do you?

A I don't just remember, it is on 5th West.

Q And runs into the 10th West ditch?

A Yes sir.

Q I want to direct your attention to July 10th, 1916, and ask you
if you were using irrigating water at that time on your land?

A I don't just remember that date, but only been twice I have not
used my water and then I gave it to my neighbors.

Q Your time for irrigation is what?

A Sunday at seven o'clock until Monday at six, I think.

MR. RAY: P. M. or A. M.?

A A. M.

Q From Sunday P. M. to Monday A. M.?

A Sunday A. M. to Monday A. M.

Q Will you say that there was eight feet of water running to
waste through the 10th West ditch at four o'clock A. M. on

the morning of July 10th?

A I have not measured water myself, but from what I can learn of other people that tells me how much water there is, I don't think the ditch would quite hole that much.

MR. RAY: I move to strike that out as strictly hearsay from what other people tell him. He hasn't any judgment himself, he says.

MR. THOMAS: We won't argue that, the question may be withdrawn because the witness did not grasp my point.

Q I again direct your attention to this irrigating ditch of yours and ask you if on the 17th of July, 1916, you were using this water? A. Yes sir.

Q Did any go to waste down the ditch into the 10th West ditch past your point of use on that day?

A No sir, not to speak of.

Q you say not to speak of, just what do you mean by that?

A You cannot shut the ditch off perfectly dry.

Q Was there sufficient quantity to do any irrigating with?

A No sir.

Q With reference to the date of July 24th, what would you say as to that, did any water pass by your point of use there?

A No sir.

Q Going back to the tenth of July are you certain that you did or did not use the water on that date?

A I could not be certain to that date.

Q If you didn't use the water can you say if that amount of water was used by someone else? That is, your water was used by someone else at that time?

A Yes sir.

Q Above or below you?

A Below.

Q Who is below you?

A Douglas farm and Clay farm.

Q You are the lowest water users on that ditch, are you not?

A Three of us are.

Q Mr. Johnson, do you have any ~~na~~ run off or waste water going from the end of your runs that goes off into the ditch or has the others wasted any?

A No sir.

Q You are able to utilize all the water you turn upon your land?

A Yes sir.

CROSS EXAMINATION By Mr. Ray.

Q Where were you at four o'clock on the morning of July 10th?

A I should judge I would be in bed, about that time.

Q So that you don't know what water was running through the South Pasture gate at that time in the morning?

A I do from the part that I was using. I could not say that date.

Q D^o you know on the 17th what quantity of water was running through the South Pasture gate at four or five o'clock in the morning?

A Wasn't any to my --

Q I ask you if you know what water was running through, what quantity of water?

A There wasn't any.

Q What is your basis for the statement there was no water running through the South Pasture gate at five o'clock in the morning of July 10th or 17th?

A I was down there at seven o'clock, and my dam was still in.

Q The South Pasture gate?

A From where I took the water.

Q I am talking about the South Pasture gate?

A I didn't get to the South Pasture gate.

Q So you don't know what quantity was running through there?

A No sir.

Q Do you on any date?

A Yes.

Q Any of the dates mentioned, the 10th, 17th or 24th of July at

five o'clock in the morning?

A Not at five.

Q At four? A. No sir.

Q How far is the place where you use your water from the South Pasture gate?

A About eighty rods along the ditch.

Q Quarter of a mile, that is all.

JOSEPH L. STUBBS, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q What is your full name?

A Joseph L. Stubbs.

Q You reside in Provo? A, Yes sir.

Q Were you using irrigating water August 27, 1916?

A Yes sir.

Q In ditch No. 4? A. Yes sir.

Q What is known as the Dahlquist ditch?

A Yes sir.

Q Your timewas from four A. M. to seven A. M.

A Four A. M., yes sir; four A. M. in the morning until seven at night. Not on the Dahlquist ditch.

Q Is that the Dahlquist ditch?

A No sir.

Q That should be corrected, that is not the Dahlquist ditch, that is known as Ditch No. 4, is it not?

A Yes sir.

MR. RAY: What day of this week was this turn, four A. M. to seven A. M.

A Sunday.

Q During your time of irrigation did any water go to waste past

your point of use? A. NO sir.

Q Any water run past or off your land down into the 10th West ditch? A. No sir.

CROSS EXAMINATION By Mr. Ray.

Q Where is your point of diversion from the South Pasture gate?

A About three blocks.

Q That would be about half a mile?

A No, it would not be half a mile.

Q How many rods are those blocks? O don,t know the length of them?

A Be about 120 rods.

REDIRECT EXAMINATION By Mr. Thomas.

Q there is one question I should have asked on direct examination with reference to the Dahlquist ditch, with reference to the date July 25th. A. Yes sir.

Q Do you take water out of the Dahlquist ditch also, do you not, from eleven A. M. Monday to eleven A. M. Tuesday/

A Yes sir.

Q State if on that date, July 5th, any water went to waste past your point of use and down into the ditch below?

A No sir.

MR. RAY: That was from eleven A. M. until when?

MR. THOMAS: Eleven A. M. Monday until eleven A. M. Tuesday. This is on another ditch, Mr. Ray, the Dahlquist ditch.

MR. RAY: That doesn,t cover any period I think when water was claimed to go to waste?

MR. THOMAS: On the 25th of July, yes.

MR. RAY: That would be in the afternoon, Monday was the 24th, so that it would be Tuesday afternoon, Mr. Stratton was there, and water turn would have been over some hours before that time.

CHARLES DAHLQUIST called by the defendant Provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q Your name is Charles Dahlquist?
A Yes sir.
- Q Speak a little louder? A. Yes sir.
- Q You reside in Provo? A. Yes sir.
- Q You are a farmer? A. Yes sir.
- Q You use water from the Dahlquist ditch?
A Yes sir.
- Q Your time for use of water is from four A. M. to six forty-five?
A Yes sir.
- Q A. M. On Sundays? A. Yes sir.
- Q Directing your attention to the 27th day of August.
A Yes sir.
- Q State if any water went to waste past your point of use and
down into the 10th West ditch?
A Yes sir, I passed the water over kind of -- I have hauled my
hailed my grain and set my grain in the stack and could not use
the water on the 27th of August on account I flood my grain.
I have my potatoes to use it, but account of my grain I let it
go.
- Q If you had used it it would have ruined your grain at that time?
A Yes sir.
- Q So you let the water on that date go down the ditch?
A Yes sir.
- Q State if you allowed any water to pass by your point of use
any other time during the year 1916?
A No sir.
- Q You have one half of the stream of water that is allotted to the
Dahlquist ditch, do you not? A. Yes sir.
- Q Can you state in second feet about how much that is?
A I never measured them and the water, I don't know how much water,
the water stands very deep, the ditch is deep.

M. M. LUNBERG called by the defendant Provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q Your name is M. M. Lunberg? A Yes sir.
- Q You live in Provo City? A. Yes sir.
- Q You are a farmer? A. Yes sir.
- Q You take water for use upon your land from what is known as
the Lunberg ditch, do you?
- A Yes sir.
- Q Directing your attention to August 27th of this year, which was
Sunday, state if you used the water on that morning?
- A I believe I do.
- Q Your time was from four A. M. to nine A. M. Sunday, was it not?
- A Yes sir.
- Q Did you use the water on that day and at that time?
- A I guess I do, I use it all the time Sunday when I have my
water.
- Q State if any water went to waste past your point of use on that
day.
- A No water goes to waste when I water for I need it all and take
it all.
-

LAWRENCE W. JONES, called by the defendant Provo City,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q Your name is Ed Jones?
- A No sir, that is my father.
- Q What is your name.
- A Lawrence W. Jones.
- Q You live with your father Ed Jones?

A Yes sir.

Q And you were irrigating, were you, Mr. Jones, on the 27th day of August, 1916 on your father's land?

A I believe so.

Q The right to the use of water upon that land out of the Jones ditch is from four A. M. to eleven A M Sundays?

A Yes sir.

Q Have you been irrigating every Sunday this year?

A Yes sir, while I have been home. I was off working for a while and had a man do it for me, and know he used all the water.

Q Did you do the irrigating yourself on the 27th of August?

A Yes sir, I am right sure.

Q You say you are pretty sure, are you certain about it, were you working there at home or away from home in August?

A Yes sir, I was home.

Q Then you would be doing the irrigating there, would you?

A Yes sir.

Q Did any water go to waste?

A No sir.

Q Past your point of use on that day?

A No sir, not if I could help it I had a good dam and everything.

Q Canvass?

A Yes sir, and stopped all we possibly could.

Q When you say all you possibly could, did any amount of water pass by sufficient to do any irrigating with ?

A No sir.

CROSS EXAMINATION By Mr. Ray.

Q When did you go away to work Lawrence?

A It was in July.

Q How long did you work away from home ?

A About a month and a half.

Q What time in July did you go, after the 4th or 24th?

A I think it was the 17th?

- Q You stayed away about a month and a half?
- A Yes sir.
- Q You left the 17th and stayed away a month and a half?
- A yes sir.
- Q So you would not be at home on August 27th, would you?
- A I wasn't there a month and a half, I come home a little before then, I come home just before the -- let's see, I think I was home on the 23rd.
- Q Do you know you were on the 27th?
- A Yes sir, because I was home on the --
- Q You left on the 17th? A. Yes sir.
- Q Where did you work?
- A Soldier Summit.
- Q What at?
- A In the mine, in the mill.
- Q How much a month?
- A I got two dollars and seventy-five cents a day.
- Q How many days did you work?
- A I could not remember just exactly what it was.
- Q Isn't it your best judgment you were away a month and a half, six weeks?
- A No sir, I wasn't, now I can remember.
- Q Do you know anything about when you did come home, the date?
- A No sir, I don't remember just the date.
- Q So you cannot say whether you were there the 27th or not, can you?
- A Yes sir, I know I was there on the 27th.
- Q How far is the point of diversion where you use the water from the South Pasture gate?
- A Right close on to a mile.
- Q About a mile away?
- A Yes sir.
-

JOHN PAY, called by the defendant provo City being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

- Q Your name is John Pay? A. Yes sir.
- Q You reside in this city? A. Yes sir.
- Q You are a farmer? A. Yes sir.
- Q You are a lessee of the Albert Jones land are you not?
A Yes sir.
- Q The time for irrigation allotted to that land is from two thirty P. M. Monday until six A. M. Tuesday?
A Yes sir.
- Q Directing your attention to the 25th day of July, 1916, will you state if any water was going to waste thereat your point of use on that day during the time you were irrigating?
A No sir.

MR. RAY: Where is this point of use?

- Q What ditch do you get water from, Ditch No. 4?
A Yes sir.
- Q On 5th West? A. Yes.
- Q It is one of the contributory ditches to the 10th West ditch?
A Yes sir.

CROSS EXAMINATION BY Mr. Ray.

- Q How far are you from the gate of the south Ward Pasture?
A Three-quarters of a mile.

REDIRECT EXAMINATION By Mr. Thomas.

- Q You are familiar with that ditch, however, all the way from your point of use down to the south Ward Pasture, aren't you?
A Yes sir.
-

A. J. DURANT called by the defendant Provo city,
being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q Your name is A. J. Durant?

A Yes sir.

Q You live in Provo City?

A Yes sir, just over the border, Lincoln.

Q You are a farmer? A. Yes sir.

Q You have land under what is known as the Scott ditch?

A Yes sir.

Q You take water out of that ditch?

A Yes sir.

Q That ditch known as the Scott ditch empties into what is known
as Little Dry Creek, does it not, old Dry Creek, that is true?

A Yes sir.

Q Directing your attention to the 25th day of July, can you tell
me at what time on that date you used the water for irrigation?

A If that date is on Tuesday at two A. M. I had the water.

Q And for how long a period do you have it ?

A Until twelve.

Q Of the same day? A. Yes sir.

MR. RAY: What date?

MR. THOMAS 25th

THE WITNESS: That is if it is Tuesday -- I don't
remember the date.

Q The 25th was Tuesday.

THE COURT What hour do you have it?

A From two A. M. until twelve.

THE COURT: Until noon.

Q Did any water go to waste from your point of use down into the
old Dry creek at that point?

A Not intentionally, no sir.

MR. RAY: No cross examination, this doesn't cover
any period testified to as I understand it.

MR. THOMAS: At this time, may it please the court, I want to call attention to the testimony of Mr. Stratton on Page 10 of the transcript. "Question. Now, during all of these visits, how many men did you see irrigating at four and five o'clock in the morning? Answer. Just one man; I had went on July 25th, 1916-- Question. What did you observe then? Answer. Why, five second feet in Old Dry Creek dumping into the bull-bushes. Three at Second Ward Pasture; three at the bottom of Fifth West going down through City creek; and three town streams east of Academy Avenue; twenty-nine second feet. This was on July 25th." There is nothing to indicate the time and I submit the testimony introduced covers the time period because there was no afternoon or morning fixed as suggested by counsel.

CHARLEY CEDARSTROM, called by the defendant Provo City, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas.

Q Give me your full name, Mr. Cedarstrom.

A Charley Cedarstrom.

Q You are a farmer? A. Yes sir.

Q Live in Provo?

A No, I live with the infirmary.

Q You work there all the time?

A I have been working two years.

Q Were you irrigating there on the 17th of July last?

A Yes sir, on the 16th I took the water in the evening and I don't remember what time it was, the evening sometime.

Q Did you use the water during the whole of the day of the 17th?

A Yes sir.

Q And part of the 18th?

A Yes, until ten o'clock in the forenoon.

- Q Until ten o'clock in the forenoon?
- A Sometime like that.
- Q State if you were using the water during the night?
- A Yes sir.
- Q And used it continuously? A. Yes sir.
- Q Did you stay up nights to irrigate?
- A yes sir.
- Q Were you up on the morning of the 17th of July, Monday morning?
- A Yes sir.
- Q You were there irrigating at that time?
- A Yes sir.
- Q Did any of that water go to waste past your point of use and down into the lake?
- A Well, there may be little seepage run over the gate, of course in the night big stream come over, but not more than half an inch.
- Q Not more than half an inch? A. Yes.
- Q If it came over the headgate. A. Yes.
- Q Did you get that later? A. Yes sir.
- Q What time in the morning did you go and get that?
- A About six o'clock. I don't remember the time, just after doing my chores, after I come from the chores -- I have to do the chores.
- Q Would you say there was more than half an inch that went to waste during the night?
- A There wasn't a drop in the daytime.
- Q There wasn't a drop in the daytime?
- A Because we don't have water enough so that we can water the lucern.
- Q You don't have water enough so that you can water the lucern?
- A No sir.
- Q You are familiar with the Bullock springs, are you, Boardman springs? A. Yes.
- Q Was there six or eight second feet of water going to waste from

those spring on that Monday morning?

A No, I don't think there was that much water there the whole summer.

CROSS EXAMINATION BY Mr. Ray.

Q Mr. Cedarstrom, the water comes up considerably during the night in those streams, doesn't it, down the East Union?

A Sometimes there is more water in the night than there is in the day time.

Q Quite a bit more isn't there?

A No, not a great deal.

Q And usually in the early morning some of that goes to waste until you get your chores done, doesn't it?

A Not when we use it, because we use mostly all the water. If we don't use it they use it and Mr. Price takes it. I don't think bane any water there.

Q That that runs over the head gate goes to waste until you get up in the morning and get it.

A What goes over the head gate we usually take it below.

MR. THOMAS Mr. Cedarstrom, ever seen any of your neighbors down there irrigate at night?

A Yes sir.

PETER JENSEN called by the defendant Provo City being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Thomas .

Q Your name is Peter Jensen? A. Yes sir.

Q You reside in Provo? A. Yes sir.

Q You are a farmer? A. Yes sir.

Q Are you a lessee of the Knudson land?

A Yes sir.

Q That is under the Lunberg ditch?

A Lunberg ditch.

Q Your time for watering is from twelve fifteen A. M. to twelve noon?
A. Yes sir.

Q On Tuesday?

A Eleven hours and forty-five minutes.

Q I want to direct your attention to the 25th day of July and ask you if you recall using the water that day?

A No, I don't remember just when it was.

Q That was Tuesday?

A Tuesday,

Q You used water on that Tuesday?

A I don,t know whether I used it that Tuesday. There is a turn come after that, last part of July or first part of August, I don't know just which it was, I know I watered sometime in there, I watered my wheat.

Q You watered your wheat?

A Yes sir.

Q Didn't you just tell me over at the office you didn't water your wheat that day?

A I didn't know just when it was I was telling you, but I watered the wheat of course about three weeks before I out it.

Q When did you out it, best of your recollection?

A About last part of August.

Q Then that would bring ~~it~~ this the last day of July, would that refresh your memory any?

A Yes, I believe it would.

Q Then this would be about the time then you irrigated your land?

A Yes sir.

MR. RAY: I insist that is rather leading, your honor.

MR. THOMAS: It is rather leading.

MR. RAY: He says he don't know when he watered the land.

MR. THOMAS: The witness told me over at the office just the reverse.

MR. A. C. HATCH: We object to the counsel testifying unless put on oath, unless he goes on the stand and be cross examined.

MR. THOMAS: I will do that if it will suit you .

MR. A. C. HATCH: It would certainly give me great satisfaction.

MR. THOMAS: You shall certainly have that opportunity.

Q Now, going back to the 25th day of July, can you say now that was the date you used the water?

A No, I won,t say for certain whether it was that day or not.

Q Do you know when you did use the water?

A I used it nearly every time my turn come. Of course, wheat, don't have to water that every time your turn come. I had potatoes to water.

Q Did you use the water for potatoes on that day .

A Yes sir, used it every week for potatoes.

Q Can you say you used that water on that date, July 25th?

A I am sure I did.

Q Then that is all right. At the time you used it then did you allow any water to go to waste and run down the stream during your time of use?

A I could not make use of all of that water.

Q On that time?

A On that size, it does not require as much.

Q If you did use the water then for potatoes only on the 25th day of July and did not use any for grain it is possible you allowed some to run down the ditch?

A Yes sir.

Q And if you did use it for potatoes and grain at that time then would any water run to waste?

A No sir, it would not.

Q But you cannot state now positively whether you used the water for potatoes and grain on the 25th day of July?

A No, I cannot.

Q Do you sometimes change, exchange water with your neighbors when

you don,t use it?

A Yes, do that lots of times.

Q Can you state if you did that this time on the 25th day of July?

A No sir, I cannot.

THE COURT: Anything further.

MR. THOMAS Not at this time. May it please the court, Mr. Goddard reminds me if counsel contend Mr. Stratton visited these ditches during the afternoon of the 25th, it would necessitate our getting the users, five water users upon those respective ditches to cover that particular hour. The testimony does not say afternoon, and I so read it. If, however, they contend it was in the afternoon, we will ask to put on five other witnesses, but they could not be had this afternoon.

THE COURT: As I have it my notes he testified it was in the afternoon. I may be mistaken. That is the way I have it.

MR. THOMAS: The transcript does not so state.

THE COURT: Have you got the transcript on that subject?

MR. THOMAS On the 25th.

MR. RAY: I will stipulate they will all testify the same as Mr. Jensen as to the 25th.

MR. THOMAS: I hate to be outdone in courtesy. I will stipulate that and also will stipulate they will testify as some of the others have testified so we won't get very far on that. I would like to know whether counsel contend Mr. Stratton visited on the afternoon or not.

MR. RAY: You have the record, I have not. The visit was made in the afternoon. I don,t know what the record shows. I think if you read the complete record you will find the visit was made in the afternoon.

MR. THOMAS: I have got the record that has to do with the 25th with Mr. Stratton.

MR. RAY: There might have been some cross examination

on it that fixed it.

MR. THOMAS: Then we have not concluded your Honor, I will say.

THE COURT: Anything further now.

HENRY J. W. GODDARD recalled.

DIRECT EXAMINATION By Mr. Thomas.

- Q Mr. Goddard, you have been sworn before.
- A Yes sir.
- Q I wish to direct your attention to the Exhibit 58, and show on the map how these various ditches, the Lunberg and other ditches find their outlet into the 10th West ditch?
- A This is supposed to be 10th West ditch, Jones ditch runs direct south on 10th West to South Pasture gate and Lunberg ditch takes over through here across the field and connects here on DeLong Avenue with 10th West ditch. The DeLong ditch is a little farther east, takes through the fields that way and connects in this cross ditch here that leads to 10th West.
- Q In a southwesterly direction?
- A In a southwesterly direction. The Dahlquist ditch the same way, goes a little farther over and connects.
- Q You say little farther over, little farther to the east?
- A To the east, and the ditch No. 4 takes out on 5th West, takes out right below the track, runs west about forty rods then south and southwesterly and comes in within about forty to sixty rods of the gates of the Second Ward Pasture or South Pasture gate we call it.
- Q Let me interrupt you there and ask you if that pasture is sometimes known as the South Pasture?
- A Yes sir.
- Q And Second Ward Pasture? A. Yes sir.

THE COURT: It was referred to at one time as the south Ward pasture?

A I never heard that before Mr. Stratton.

MR. THOMAS: I think Mr. Stratton referred to it as South Ward Pasture.

A And the Scott Ditch takes through the field still farther west, that is the farthest west ditch that the city has jurisdiction over and that runs south and comes over and runs into Old Dry creek. There is quite a stream of water that runs in Old Dry creek that raises from springs and intercepted down here, and the city has no connection with that.

Q Nor any jurisdiction over it?

A Nor any jurisdiction over it. The Scott Ditch takes out of Old Dry creek just west of the railroad crossing, the railroad crosses Dry Creek.

Q Could you tie that to some street, that last point, near what street?

A That would be on 2nd South and 10th West, between 10th and 11th West.

Q Have you connected all of these ditches now with the 10th West ditch or Second Ward Pasture that was described by Mr. Stratton?

A Yes sir.

Q There are no other ditches that find their outlet into that pasture stream or pasture ditch?

A No sir, except little artesian wells that people have got.

Q Could you state what amount of water would go from those artesian wells?

A No, I could not, they are something you could not depend on because the people use them in the day time and turn them loose at night and let them run into the ditch.

Q Would you say then the flow into this ditch, into the pasture ditch would be intermittent as far as the wells are concerned?

A Yes sir.

Q Now, directing your attention to what is known as the 5th West Ditch.

A 5th West ditch runs straight south from about 8th West or 8th North on 5th West to the railroad, supposed to be two streams there; one goes straight south on 5th West, the other is ditch No. 4 or 5th West, ^{as} has been testified to.

Q That goes into what?

A That goes into 10th West, the other goes direct to the lake, direct south.

Q But from the 5th West street, both streams, both the ditches No. Five or four, which is it?

A Four.

Q Four, as well as the 5th West street ditch proper carried water for the irrigation of a large area of land below 5th West?

A Yes sir.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Goddard, all of these streams that you refer to, these ditches, find their way into the Second Ward Pasture ditch, do they not.

A There is five of them. The South pasture ditch is the outlet or drainage ditch for all those ditches, all join with it.

Q There are cross ditches every forty rods, are there not, along there which go west, all of them.

A Unless they are private. Every man has a head ditch in his field I suppose.

Q I mean the ditches --

A No city ditches, no sir.

Q No city ditches, but there are private ditches going through the field connecting with that South Pasture ditch, are there not?

A I suppose there is, yes.

Q And all of the water above that ditch in all these streams if it were left to flow would find its way into the South Pasture ditch, would it not? A. Yes sir.

Q The city has control over the Tanner Race, hasn't it?

A Yes sir.

Q Doesn't the Tanner race, the waste water of Tanner race, wouldn't that go into Little Dry Creek? A. No sir.

Q Would it go into Old Dry creek?

A Yes sir, at the end of the Scott ditch.

Q So that water coming from the Tanner Race, and Old Dry creek would go into the South Pasture ditch, wouldn't it?

A No sir.

Q And thence on into the lake through Old Dry creek?

A No sir.

DIRECT EXAMINATION By Mr. Corfman.

Q Mr. Goddard, you heard Mr. Stratton testify on July 29, 1916, he saw 65 second feet passing through Provo City, and among the ditches mentioned was one going past the Carter farm?

A Yes sir.

Q As I understood you the city has no jurisdiction of that ditch?

A No sir.

Q Where does the water, from what irrigation company is the water in that ditch supplied?

A Little Dry Creek Irrigation Company.

Q And do you know whether that water is taken beyond the Carter farm for the purposes of irrigation?

A Yes sir, it is.

Q Do you know what persons irrigate beyond the Carter farm?

A I know part of them. There is Carters, some of the Carters, Vincent, S. S. Bailey and Knudson.

Q Large area down there past the Carter farm?

A Yes sir.

Q Taking the water from the Little Dry Creek Irrigation system?

A Yes sir.

DAVID S. KLING recalled .

DIRECT EXAMINATION By Mr. Thomas.

Q Mr. Kling, you are located on the ditch below Mr. Jensen who just testified, aren't you?

A On the same ditch.

Q If, as he stated, he did not use all ^{of} the water allotted to him on the 25th day of July, state if your ditch or your dams were in position to have caught all that water?

A They were.

Q And did you get it?

A I got it unless my neighbor on the west side got it before me.

Q Is he above you?

A No, really he is below me, but then he would put in his dam anyhow, Tom Jones.

Q Would the dams which you and Mr. Jones have in prevent that water if it was turned down by Mr. Jensen from going on into the 10th West ditch?

A They would, yes sir.

Q Have you had that condition arise before where you did catch any water Mr. Jensen didn't use?

A Yes sir, I was watching for that too.

CROSS EXAMINATION By Mr. Ray.

Q Did you keep your dam in all the time?

A Yes, unless my neighbors below me kicked.

Q You don't know whether Mr. Jones watered on this occasion or not, do you?

A How is that ?

Q You don't know then whether your dams was in ^un this occasion?

A Yes sir, because my neighbors come up and pulled my dam out.

Q And it was out then on this occasion, was it?

A Oh, I wouldn't say that. Mr. Lunberg can answer you that question

Q You don't know whether it was out or in on July 25th?

A It was generally in.

Q On July 25th, not generally.

A Lord bless you, I wouldn't swear to that, but I done had it in, my dear boy.

OMISSION.

Testimony of Harold C. Best on behalf of Stewart
Ranch Company.

THE COURT: Now, Mr. Cluff, you may proceed.

C. S. CONRAD, called on behalf of the defendants Charles Conrad and A. M. Conrad, being first duly sworn, testifies as follows:

DIRECT EXAMINATION BY Mr. Cluff.

Q What is your name?

A C. S. Conrad, way I generally sign it, Charles Conrad.

Q How old are you?

A Thirty-nine years old.

Q You are a son of Charles Conrad?

A Yes sir.

Q Who is now dead? A. Yes sir.

Q You may state whether or not you and your brother are interested in any land in the South Fork of Provo canyon?

A Why, I have had charge of the property of the estate for the last twenty-two or three years and then we have bought the Hooks place in addition to that, right above there.

Q What is your brother's name?

A Arthur M.

Q You two have those two properties, old Charles Conrad land and J. R. Hooks ranch?

A The Conrad belongs to the estate still, but I have an undivided half interest in the Hooks place. My brother has the other half interest, but the property of the estate still belongs to the estate, and we have made preparations for to buy the place, and is to be turned over to us when we get the thing settled in court. That has to be settled, however.

Q It is half to be yours and your brothers, entire estate?

THE COURT: I didn't understand the name.

A J. R. Hooks.

Q Do you remember the amount of water that was decreed to J. R. Hooks and Charles Conrad under the Chidester decree?

A Yes, to a certain extent; I think Hooks was allotted about water for thirty acres, and I think my father's was something similar to thirty or forty acres.

Q You are the successors in interest now to those two interests?

A Yes sir.

Q As they were decreed under the Ghidester decree?

A Yes sir.

Q To refresh your memory I will ask you if the two don't amount to 80 minute feet.

A The two?

Q The Charles Conrad and J. R. Hooks under the Ghidester decree?

A That is the way I understand it at the present time.

Q 80 minute feet. How many acres of land do you own there in the South Fork?

A Why, there is two quarter sections. My father's quarter section runs short of being 160 acres. It is 169 acres and a fraction, and Hooks property goes 159 and some fraction, I don't remember exactly the fraction.

Q Have you used any water aside from the 80 minute feet for irrigation of lands there? A. Yes sir.

Q Just state to the court to what extent you have used water on those lands?

A Well, we have six ditches on it, and when the first part of April comes we fill all the ditches full of water and water the timothy and short runs, and a little farther away from the canal, some gets back into the ditch fifteen or twenty minutes after we turn it on the head. Others on the bench lands takes two to three weeks, nearly four before it seeps back into the creek. There is some seepage water under the bench there still running in the creek at the present time, and water has been shut off about six weeks where before there never used to be any water there, before we started irrigated.

Q So in the early spring of the year you spread water over this other land, about how many acres?

A Oh, I haven't measured it accurately. I should judge we water something over a hundred acres, quite a bit over a hundred acres, one hundred twenty-five acres, mostly in timps timothy, hay and grain, and some runs on the unbroke up land makes pasture for the stock.

Q What part of that hundred acres would you be able to irrigate during the entire season with the 80 minute feet?

A Well, that 80 minute feet wouldn't water twelve acres we have in pasture, on accoedt of the nature of the soil we have there. We have a gravelly place there, you can turn on half of the South Fork creek, and it runs just as far in thirty minutes as it will in thirty days, because it settles and comes out next to the creek, formation there that leads the water right back into the creek. Gravelly and porous and doesn't run over the surface.

Q And it springs slopes right into the creek?

A It slopes right into the creek, it is all the way from twenty feet to quarter of a mile from the creek, this pasture ground.

Q This land you speak of on the bench where you say the seepage water is still running from, about what time in the year do you begin putting water on that?

A Oh, generally about the fifth of April, fifth to tenth, as quick as we can get the water out.

Q At that time is there any water seeping into the South Fork creek you noticed?

A No, those places dry up, they are drying up now.

Q And about what time after you begin putting water on that land does the water begin coming into the creek?

A Oh, generally takes from three to four weeks before we notice it to any extent.

Q And then continues all summer?

A And then continues all summer right along. There was land that we used to have to irrigate, now we have to drain it, because of the seepage coming off the bench ground.

- Q For how many years have you been irrigating these lands?
- A I first started irrigating that land when I as fifteen years old, and I will be forty years old the seventeenth of next March.
- Q And you have been irrigating in this manner in that canyon ever since?
- A Well, when I was fifteen just started to break it up, that was the first breaking up we done.
- Q You say you spread the water now in the spring of the year over about a hundred acres, how many years have you been doing that?
- A Well, that has been about sixteen years. From the time I was married, I went away to the mine to work for a year or two and come back, I worked there in the summer, worked in the mines in the winter.
- Q What crops do you raise?
- A Timothy hay, mostly; sometimes little grain, few potatoes, little garden stuff.
- Q Have you been familiar with the other lands in the South Fork of Provo Canyon all these years?
- A I think so.
- Q And the parties that have irrigated the lands up through there?
- A Yes sir.
- Q Have you observed the irrigation of those lands in the spring of the year same as you have been irrigating your lands, by the other parties?
- A I don't understand your question exactly?
- Q Have those other parties, Mr. Thomas and Giles and South fork Trout company and Mr. Ercanbrack, have they turned water on their land in the spring of the year, high water, similar to you?
- A Yes sir.
- Q Have you noticed the South Fork Creekstream later in the season, increase any?
- A Well, as far as my memory serves me, I believe it is higher in August than it is in June, way it appears and looks to me. lots of times. Of course, there is account that will tell, I know

there is an account kept at the mouth of South fork of the river and creek, but I have not been familiar with the accounts, I could not say for sure, that is the way it looks to me, and what we have taken out, all the water we use, I cannot see it diminishes the creek scarcely at all, gets right back.

Q Finds its way immediately back?

A Finds its way immediately back. Of course, that we use farther back in the creek it takes longer to come in.

CROSS EXAMINATION By Mr. Thurman.

Q Is your land covered by what is known as the Morse decree?

A I think so.

Q How much did you get under the Morse decree?

A I think it is the Chidester decree.

Q You say you got 80 minute feet under the Chidester decree, you remember the Chidester case?

A I think it was Morse, if I ain't mistaken.

Q Chidester, Morse decree doesn't reach up to that point.

A Excuse me.

Q You remember the case, the trial of the case?

A Yes sir.

Q Were you a witness?

A No sir, I was in Baker City, Oregon, at the time of the trial.

Q You don't know why you didn't get more than 80 minute feet if you have used the water you say you have used?

A Well, since that decree, since that, I have used -- we have increased, breaking up more land and used more water during the high water season.

Q That is just what I wanted to get at, now, when did you do that?

A Well--

Q Morse decree was in 1902, when did you take more water, or when was the Chidester decree-- 1907, the Chidester decree -- when did you take more water since then?

A Early part of the season we have taken a little more water each year.

Q Kept adding to it.

A Kept adding every year.

Q Did you make an application to the State Engineer for it?

A No sir.

Q You just used it?

A Well, during the early season, as long as the water is high and it is there, from what I can understand, we are as much entitled to it as anybody else, and it is a reservoir, act s as a reservoir; it is really a benefit to the people below than here rather, a detriment.

Q We are not finding any fault with your having used it, we are trying to get at what you are entitled to use in the future?

A All right.

Q That is all.

CROSS EXAMINATION By Mr. Ray.

Q Mr. Conrad, you say you are familiar with the lands and irrigators up there, do you know the Sprague land?

A Yes sir.

Q There are being farmed now by Mr. Sprague and Mr. Egan?

A Farmed, you say?

Q Being used, are they?

A Pasture.

Q Irrigate them now just the same as they always did, do they?

A Little bit different.

Q Use just about as much water, do they?

A Well, I don't know whether it takes any more water or not.

Q Does it take up as much water?

A I cannot say when there is rocks and sticks in the ditch, just backs up in the xxxk creek and sub irrigates it.

Q And they are doing that now, flooding the whole land, are they?

A That is the way I look at it. I went over there the other day to turn the water out of the road, but the conditions were--

Q What I want to know whether or not on the Sprague land there is being as much water used as ever in your memory?

A They don't take it out and irrigate it and use it for agricultural use as they did before. They just went up there threw those rocks and brush in the ditch, flooded it over the ground, just flooded the ground, that is all, saturated the ground early and late and it stays there, that is the way it looked to me this summer, I passed there every day or two all summer.

Q You were not able to say whether that uses as much water as they used to use?

A It may be a reservoir use by putting the water on there.

Q I wish you would listen to my question and answer whether they diverted as much water from the stream as they used to?

A They don't pretend to divert any from the stream, I don't believe.

Q They just make a reservoir out of the stream to sub irrigate their land?

A Those rocks, stick and brush in the creek, looks to me like that would be the object in view.

REDIRECT EXAMINATION BY Mr. Cluff.

Q Mr. Conrad, you answered counsel that you had been bring^{ing} some land under cultivation since the Morse or the Chidester decree, about how many acres extra additional land have you applied the water to since 1907 more than you had before that time?

A About twelve acres.

Q Any more than twelve acres?

A That is on the Hooks place.

Q The Chidester decree speaks of course of Class B Waters; as I understand you ever since you can remember you have applied the early year waters upon your land?

A Yes sir.

THE COURT: Did you say class B Water?

MR. CLUFF: The Chidester decree speaks of class B

water, yes, everything in Provo river above seventeen thousand and some odd cubic feet spoken of as class B water.

THE COURT: This is class A water awarded to this.

MR. CLUFF: The 80 minute feet is class A water.

Q So that prior to the Chidester decree you had applied all the early water in the spring of the year water covering about how many acres?

A Covering something over a hundred acres, around one hundred and twenty-five. We have only had the Hooks place for the last nine years.

Q Only had the Hooks place for the last nine years. Since 1907 you have only brought about twelve additional acres under cultivation? A. yes sir .

Q And applied the water and all the balance had been water prior to 1907? A. Yes sir.

RECROSS EXAMINATION By Mr. Thurman.

Q When did you commence to bring this additional land under?

A Why, we brought some additional land under about -- let's see, nine or ten years ago.

Q Then is when you commenced to bring in additional land, nine or ten years ago. A. yes sir.

Q Would you say about 1906?

A 1906.

Q What is ten years ago.

A No, it has been since then I think.

Q Now, up to that time all you had was your old right of 80 minute feet which is class A right?

A I think so.

Q Is that true?

A Well, we always took the benefit of water as I understand it, always take all the water we needed and all we could use on this timothy land, hay land.

Q What we want to get at is the truth of it, how much land did you

Q For each month during the year? A. Yes.

Q I wish you would give to the court the total for each month during the year 1916?

MR. A. C. HATCH: Just a moment, is it in your annual report made to the court?

A I didn't include the South Fork stream separate from the main river; it appears as a total in the river.

MR. A. C. HATCH: I didn't want to duplicate it, that is all.

A Do you want to file these?

MR. CLUFF: If counsel wants those admitted. Just give the totals, all I care for, each month.

MR. JACOB EVANS: That is all we want.

A Which month do you desire, just the summer months.

Q I would like for the entire year, I want to show how the stream holds itself along during the entire year, and I will ask you to state first where these measurements were made.

A These measurements were made at the mouth of the South Fork, just above the confluence with the Provo river. They are daily gauge readings and showing the discharge record for each day. At the foot of the months, the acre feet is given, the maximum and minimum. I think it would be best to file these sheets, just as they are, tabulation for each day.

MR. CLUFF: All right, if that will help the court I will have the sheets marked then and offer them.

(Exhibits 137 and 138)

MR. CLUFF: I will offer Exhibits 137 and 138 for the years 1915 and 1916.

THE COURT: If there is no objection they may be received.

MR. A. C. HATCH: If the court please, I would now like to renew my offer of this exhibit 136, tabulation by Mr. Tanner. It was offered this morning.

MR. RAY: I haven't had time, your honor, to examine

this in toto, but very brief examination of it I feel certain that it is not competent. It is not merely a tabulation, it has a lot of observations and conclusions findings of facts. I am not familiar with what he testified to, but comments upon facts and the report. Now, it seems to me that is not competent evidence, report of that sort at this time. It is very long tabulation and witness has testified to the experiments contained in it. I don't think these written observations, what those observations what those observations prove or their value are at this time competent in this case.

MR. A. C. HATCH: I submit it to the court for examination.

THE COURT: Your objection will be overruled pro forma. I will examine it and I can indicate whether all or any part of it is to remain in. I take it from what you have stated and suggested, there are portions of it to which you have no objection.

MR. RAY: So far as it is for the convenience of the court in the tabulation of his testimony I don't object to it, but there is comments in it which I do object to.

MR. A. C. HATCH: I take it the court would not accept any comments made in it, as not being in evidence.

MR. RAY: Then they should be rejected.

MR. A. C. HATCH: Then let them move to strike out the portions they object to.

MR. RAY: That is not our remedy at all to move to strike out.

MR. A. HATCH: I understand it is admitted?

THE COURT: It is admitted for the purpose of examination. If there are any parts the court finds incompetent, the court will not consider them. Now, are there some further matters to be presented this afternoon?

OMISSIONS.

Introduction of Exhibit 139 as to Wasatch county lands.

Discussion as to appointment of special judge.

Amendment of pleadings by Mr. Willis.

5:00 P.M., Recess to 10:00 A.M. December 11, 1916.

OMISSION.

Application to amend as to Wasatch County parties (Willis).

Discussion as to entering of default.

Application by Mr. Huffaker to file answer on behalf
of Nephi Huber et al.

Stipulation as to rights of Stewart Brothers Ranch Company.

Discussion as to pleadings on behalf of Heber Light &
Power Company, et al.

Evidence on behalf of the Sege Irrigation Company.

A. F. PARKER, called by the defendant,
being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. Story.

- Q Mr. Parker, state your name, residence and occupation.
- A A. F. Parker; my residence is Ogden, has been for twenty-five years.
- Q What is your occupation?
- A Occupation, civil engineer.
- Q How long have you followed that profession?
- A Something over thirty years.
- Q How did you get your--obtain your technical education?
- A I never had any university training, graduated from the High School at Jamaica Plain, Boston. All the education I have gotten since then has been practical.
- Q You have followed the profession, you say, thirty years?
- A Yes, sir.
- Q What official position do you hold, if any?
- A I am consulting engineer for Ogden City; I am consulting engineer for the Davis & Weber County Canal Company.
- Q In the course of your professional career have you had any occasion to become proficient in the measurement of water?
- A I have.
- Q And have you been accustomed to design flumes?
- A Yes, sir.
- Q In designing flumes, has it been necessary for you to determine their capacity?
- A It has.
- Q In advance as well as after by actual measurements?
- A Yes, sir, both in designing and measuring after construction.
- Q Have you during the course of your professional career constructed many flumes?
- A Considerable number.
- Q ~~May~~ Can you give us any estimate of the number?
- A It would be difficult for me to give the exact number.

There were two years I was engaged as engineer for a placer mining company, and I presume we built thirty or forty flumes each year.

Q Did you while you were doing that work determine the capacity?

A Yes, sir.

Q Determine upon the coefficient of friction to be used in determining the capacity?

A I did.

Q I will ask you if you are familiar with what is known as the Olmstead plant which takes its water from Provo river, one belonging to the Utah Power & Light Company?

A I am familiar with it only through one visit to it.

Q When did you make that visit?

A June 14, of this year.

Q For what purpose did you visit it that time?

A For making a measurement of the water flowing in the flume.

Q Did you make measurement that day?

A I did.

Q With whom?

A With Mr. George L. Swendson.

Q About what point in the flume with reference to the sand box, did you make your measurement?

A It was about eight hundred feet below the sand box.

Q What was the condition of the flume at that point, at that time?

A It was full of water.

Q Within what distance of the top?

A Within three inches of the top.

Q Three inches or three tenths of a foot?

A Three inches, twenty-five hundredths.

Q Please explain what you did in the way of measurement at that time.

A Why, we measured up the flume, measured up the water and then took current meter measurements every foot across the

flume.

Q How many measurements did you take in depth?

A Two or three.

Q Each one of these--

A Two-tenths in each station. We took two-tenths depth, sixtenths depth, and eight-tenths depth.

Q Did you make separate readings at that time from those made by Mr. Swendson?

A Yes, sir.

Q Did you make any computations from the readings which you, yourself, made then, as to the volume of water flowing in the flume?

A I did.

Q What did you determine to be the amount of water flowing in the flume at that time?

A 302.13 second feet.

Q Did you after making that measurement ascertain the amount of water which was running in the flume make any investigation of the condition of the flume below the point where you made the measurement?

A I did.

Q What did you do in that respect?

A We went down the flume, measured the depth of water, or the distance from the top of the flume down to the water, from the point where we made the measurement down to station--- flume station 194.

Q Did you from the measurement you made that time determine the average free board in the flume below the point of measurement?

A I did.

Q What did you ascertain?

A Four tenths of a foot.

Q Did you notice any change in velocity of the water in the flume below the point of measurement?

4

A It seemed to accelerate in velocity and flow faster below.

Q Up to what point?

A Seemed to gradually gain until it reached the point about a thousand feet below where we measured it.

Q You say it seemed to gradually increase in velocity, what evidence was there of such increase?

A Why, that there was less depth and there was no loss of water in the flume that I could discover.

Q In other words, the free board was constantly increasing, was it?

A Yes, sir.

Q Up to this one thousand foot point, and from there, from that point down to the lowest station which you have mentioned, what was the condition?

A The free board was about the same from this point of station 28, clear down to station 194. It varied up and down, but the average is about the same.

Q By the way, Mr. Parker, have you any connection at all with the Utah Power & Light Company?

A Not in the least.

Q Have you any interest whatever in this proceeding?

A Not in the least.

Q Did you notice the condition of the flume approximately,-- above the point of measurement and below the sand box; did you go up the flume to the sand box?

A Yes, we walked over the top of the flume to the sand box.

Q Do you remember any point in the flume where there was a flash board below the sand box or a side board, rather?

A I don't remember about a side board, I remember a place where a little water flopped over above there.

Q About how far was that below the sand box, do you remember?

A Oh, some--at a guess two hundred feet or so.

Q Did you notice the condition of the flume at that point with reference to whether it was on grade?

- A I noticed there was a low place there.
- Q Do you recall approximately the distance that the flume was below grade at that point?
- A No, I couldn't say. I attached so little importance to any of those things and did not impress those things upon my memory.
- Q Was it more than a short distance?
- A No, it was only a short distance.
- Q You say that some water spilled over the side at that point; did you form an opinion at that time as to the cause of the water flowing over there?
- A I think there were two causes.
- Q What were those causes?
- A One was the top of the flume was a little low at that place, and another cause was the waves or swirls or uneven surface of water at that point.
- Q Did you make any investigations above that point to give you an opinion, or from which you formed an opinion as to the cause of those--of the waves or swirls which you just mentioned?
- A I didn't make any observations of the flume itself, because it was covered over pretty well, but up at the sand box I did.
- Q State whether or not those swirls and waves were due to the condition of the sand box in your opinion?
- A I attributed it to that.
- Q Physical condition of the sand box?
- A To the condition of the sand box.
- Q Did you make any examination of the sand box at that time?
- A Looked it over, yes, sir.
- Q Did you form any opinion from what you saw whether or not the construction of the sand box had any effect upon the velocity of the water?
- A I did.
- Q Please describe the sand box and state in connection with

your description what effect in your opinion it has upon the velocity of the water.

A The sand box is a concrete construction, at the end of a concrete pipe eight feet and a half in diameter, and after the water leaves the pipe the sand box flares out for a distance, I don't recollect what that distance is, but to a width of fourteen feet; also drops down to form the sand box. Then after maintaining that section fourteen feet in width, and I don't remember the depth, but it is below the grade of the pipe and the flume, then it narrows in again and rises up at the same time to where it enters the flume. Now, the water---

Q Just a moment. I will bring you the exhibit. Please refer to Utah Power & Light Company's Exhibits, I believe they are defendants' Exhibits, defendants Exhibits No. 121 and 122, Mr. Parker, and explain the condition to which you refer.

A On this plan the section shows the end of the eight foot, six inch pipe. Then there is a distance of twenty feet and six inches that is the same width as the diameter of the pipe ⁱⁿ which a Tainter gate has been installed, and from the end of that section in a distance of eleven feet the construction widens out to a width of fourteen feet, and it keeps on that, follows that same width for a distance of nineteen feet. Then it narrows up. That distance is not given here, but it is shown here to the width of the flume, and also the floor ~~exists~~ raises up to the floor of the flume.

Q Now, please go on and explain the effect of these conditions.

A The widening of the section from the eight feet six inches wide to fourteen feet will cause a loss of head. This section being larger necessarily the water flows slower and then in passing from that section where the velocity has been reduced to the section of the flume again, causes still

another loss of head and due to the fact that the floor of the flume rises to a point marked "D" makes a small section here, where the velocity has to increase from a very low velocity in the sand box to a considerable velocity at that point. There is still another loss of head then again. From that point it drops down to this flume and loses some velocity again. Now, all of those use up head. In other words, the main pipe here can bring in a supply of water, but the velocity is checked here in this sand box until it has to take a new intake and acquire a new velocity. In doing that, from the conditions of construction that are there it is very difficult for it to acquire its normal velocity in the flume.

Q What effect does that last drop which you have just mentioned have with reference to the capacity, turbulence of water, and so forth?

A It produces a great amount of turbulence and swirling there.

Q Does it result at all in waves?

A It does, some.

Q Is that condition to which you referred a few minutes ago in connection with the overflow at that point in the flume, short distance below the sand box?

A Yes, sir.

Q You say in the flume below the point of measurement after the water has reached its normal velocity approximately one thousand feet below the point of measurement, there was a free board of three tenths of a foot?

A That was additional free board.

Q That was additional free board. I will ask you whether or not assuming that was the normal velocity of the water in the ~~flume~~ flume, what additional capacity in excess of the measurement which you took would be in the flume, allowing the same free board as that at the point of measurement.

A I take it there is about eight ~~per cent~~ tenths, or about

eight per cent more area, consequently, there would be about eight per cent to add to the three hundred and two second feet on twenty-four feet more, making a total of 326 second feet that I calculate the flume would carry, beginning at that point.

Q With the normal velocity?

A With a normal velocity, yes.

Q In your opinion, therefore, the conditions of the sand box have a direct bearing upon the velocity of water at the point of measurement, do they?

A They do, I think.

Q What further evidence is there, in your opinion, of that fact; will you explain to the court why you connect the two as you do?

A The evidence to my mind is that---there is nothing here that shows it---it is a fact, that for a distance of about eighteen hundred feet the water does not seem to reach its normal velocity, which it reaches and maintains from that point down. In other words, the flume was full at the point we measured and it had a velocity---I don't remember the velocity now, but gave us the amount of three hundred and two second feet. Then when we went a thousand feet below from that point down we found that additional free board which is evidence---and that free board maintains itself to the lower end, that is evidence to me that the normal velocity begins about that point.

Q In other words, the flume with a constant grade of one tenth---

A Yes, sir.

Q ---would accelerate up to that point?

A Yes, sir.

Q Did you that day make any investigation of the pipe line
I mean the pipe leading from the dam into the sand-box?

A I did not make any particular investigation of it. It is all buried up.

Q Did you examine the headworks?

A Yes, sir.

Q Have you from the plans of that pipe which have been introduced in evidence, made any computation as to the capacity of the pipe itself?

A I made computations from plans that have been furnished me.

Q Are these the ones to which you refer, that have been furnished you?

A Yes, I have copies of them.

Q Referring to defendants' exhibits 120, 121 and 122, have you from the data, furnished by those exhibits, made any computation of the capacity of the pipe line?

A Yes, sir.

Q What did you find it to be?

A 356.89 second feet, that is of the concrete pipe.

Q Was the pipe line delivering more when you measured in the flume?

A Yes, sir.

Q At the time you mention?

A Yes, sir.

Q What would become of the excess water?

A Go over the spill-way into the river.

Q Out of the sand-box?

A Yes, sir.

Q It has been testified in this case by---strike that out--- Mr. Swendson has testified in this case, Mr. Parker, and I think also Mr. Buckler, that in 1902 a flume, the upper part of the present flume--strike that out; I will reframe it again. It is in evidence in this case, Mr. Parker, that in 1902 the present flume extended to the dam, and that in recent years the upper portion of the flume was torn out and replaced by the present pipe line and sand box; it is in evidence that the works used to divert the water in the flume as it existed in 1902, consist-

ed of the existing dam, three head-gates, each four feet wide by six feet high, with an intake head in the fore-bay above the top of the gauge and below these gates a tapered section of flume, fifty feet long, tapering from twelve feet wide at the gates to eight feet, wide at the entrance to the regular flume, and that it had an average depth on the tapered section of seven feet---of the tapered section of seven feet. The regular flume section is the same as that which now exists below the sand box. The flume at the upper head works or immediately below the dam had a grade of fifteen hundredths to one hundred feet for the first four hundred and sixty-five feet, and ten one hundredths per hundred feet for the remainder of the flume. I will ask you whether or not, having this data, at hand, you made any computation as to the carrying capacity of that flume, if so, what you determined its capacity to be. I may add that the flume, it is in evidence that the flume, at the head was constructed in substantially the same manner as that which now exists and which you have personally seen.

A I computed the velocity in the four hundred and sixty-five feet of flume at a fall of fifteen hundredths per hundred feet. The conditions at the head works and the taper simply show that there was no difficulty in getting plenty of entry head, and velocity head to fill that flume.

Q What did you determine the capacity to be?

A 367.4 second feet.

Q In other words, you found it had a greater capacity than the present pipe line, did you?

A Yes, sir.

Q What co-efficient did you use in determining that capacity or computing it?

A I used 0125.

Q Why did you use that co-efficient?

A It is the same co-efficient that shows as the result of our measurement below.

Q In other words you determined from your measurement that you actually made in the flume a proper co-efficient, did you?

A Yes, sir.

Q And used that same co-efficient in estimating the capacity at the old head way?

A I did on that section.

Q What free board did you allow in making your computation?

A I took the same depth that we had on the flume where we measured it.

Q Did you while you were visiting that day see a flume which was pointed out to you by Mr. Swendson as what is known as the temporary flume?

A I observed a piece of old flume up near the dam and was told it was used at one time.

Q And was it a temporary flume?

A That is my recollection.

Q The evidence introduced in this case shows that this temporary flume had three intake gates each three feet wide and six feet high. The sill of the gate, each gate was 8.3 below the flash board of the dam.

MR. A. C. HATCH: Just a moment. The gates three feet wide and six feet high.

MR. STORY: I think that is wrong; they are four feet wide.

MR. A. C. HATCH: Just a moment, that we may understand the question, and ask that it be withdrawn and re-stated.

MR. STORY: All right; I was trying to rehearse the testimony with reference to this

temporary flume is all, and base it for his opinion.

Q The evidence introduced in this case, Mr. Parker, shows that this temporary flume which you have mentioned had three intake gates, each four feet wide and six feet high, the sill of each being 8.3 feet below the flash board on the dam, and taper section 47.4 feet long with a fall of sixty-five one hundredths feet, emptying into a flume 5.8 feet by 7.6 feet, and having a grade of one-tenth of a foot per one hundred; have you made any computation of the carrying capacity of that flume based upon the figures which I have just given you?

A I have.

Q What do you determine the carrying capacity of that flume to have been?

A 264.1.

Q 264.1?

A Yes, sir, eighteen hundred, pretty near two tenths.

Q Second feet?

A Second feet, yes, sir.

MR. A. C. HATCH: I don't understand that; is that the original flume?

MR. STORY: No, Judge Hatch, you will remember that the square flume was constructed in 1902. That flume was continued to the Olmstead station about 1904. In 1907 a snow slide took out the upper portion of that flume and a temporary flume was first constructed which has just been mentioned in the testimony, and shortly thereafter an auxiliary flume was constructed from the dam down to the point where the flume had not been taken out. We are simply getting the capacity of these two flumes which were constructed in 1907. He testified as

to the capacity of the temporary flume which was not as much as the old one, and across the river from where the old one had been. Does that answer your question?

MR. A. C. HATCH: I think so; but I didn't understand any connection it had with the present---the capacity of the present flume below your sand box.

MR. STORY: I am showing what the capacity of the head works were under the old conditions and showing what they are at the present time, and have also shown the changed conditions.

MR. A. C. HATCH: All right; proceed. I didn't want to interrupt.

Q Now, in making your computation which you have just given, what co-efficient did you use?

A I used 0.12.

Q Why did you use that co-efficient?

A Because I was informed that it was a temporary flume and probably put up in not as good shape as a more permanent flume.

Q You also saw the remnants of it?

A Saw the remains there, yes, sir.

Q Based upon your experience in flume building and measuring capacities of flumes, was that a reasonable and fair co-efficient to use in determining a flume of that character?

A I considered it so.

Q What free board did you allow?

A Six-tenths of a foot.

Q Did you also on that day see what is known as the auxiliary flume? It is in evidence, Mr. Barker, that there was also an auxiliary flume leading from the dam to about the location of the present sand box where an entry into the--what has been mentioned as the

temporary flume, intake of that auxiliary flume was eight feet wide. The flume was itself 6.5 feet wide, and by three feet deep. Have you made any computation as to the carrying capacity of that flume, based upon the figures which I have given you?

A Did you give me the size of the flume?

Q I did; the flume at the intake was eight feet wide, at a distance, short distance below, it was six feet and five tenths wide, by three feet deep.

A Yes, I did.

Q Grade of one tenth to one hundred.

A Yes, sir.

Q What did you determine it to be?

A 81.2 second feet.

Q What co-efficient did you allow in that instance, did you use in that instance?

A 012, same as in the other flume.

Q And for the same reasons?

A Same reasons.

Q What free board did you allow?

A Five tenths.

CROSS EXAMINATION by Mr. Hatch.

Q If there were a batten placed along on the inside of the flume to cover the cracks in the temporary flume, would you make any difference in the co-efficient used?

A Not if the battens were put on in good shape and smooth, but it would make a reduction in the area.

Q You mean by "smooth" planed, or just rough/ tongued?

A Smooth as the rest of the flume

Q What difference would it make as to whether the inside of the flume were planed lumber or rough/ lumber? if any?

A I take it that on smooth lumber that the co-efficient or the co-efficient of roughness is about 011 for well

planed lumber and O12 for unplaned lumber.

Q In making your estimate as to capacity, did you figure it with batten or without?

A I figured without.

Q Did you see the flume?

A I saw that piece between.

Q Did you look at the inside of it?

A I cannot remember now. I saw it that once on the 14th of June; I can't recall the exact condition of that flume.

Q I understood you to say that you gave a co-efficient in the regular flume that is what you used as the co-efficient at O125, is that correct?

A Yes, sir.

Q Why do you use that figure for the regular flume?

A Because it was the co-efficient that I determined from the measurements that were made as being the co-efficient ~~xxx~~ of the old flume at that point where we measured.

Q But you don't begin to say that would be the co-efficient for the entire length of the flume?

A No, I think it would be considerably less.

Q Did you follow the flume from the sand box down to where it enters the funnel just above the power plant? Its entire length?

A Went to station 194, that is not quite to the tunnel.

Q How far is that from the tunnel?

A I could not tell you just how far from the tunnel it is.

Q How far is it from the head?

A Why, it would be 19,400 feet from the head.

Q Do you know the length of the entire flume?

A No, sir, I do not.

Q Did you find only the one low place in the flume?

A The flume has settled until it is uneven in places, it is a little up and down.

Q At different places along its course?

A At different places along its course.

Q It is up and down?

A Yes.

Q For its entire length?

A Yes, sir.

Q Now, would increasing the capacity or decreasing the capacity of the intake or the head-works, have any tendency to increase or decrease the capacity of the balance of the flume?

A The flume can only carry so much, no matter what the head-works will bring in.

Q And when a flume is full to overflowing, its capacity cannot be enlarged without enlarging the flume, can it?

A Evidently not.

Q And this flume at the place where you measured it, was overflowing?

A No, sir.

Q Was it not?

A No, sir, there was no sign of overflowing where we were measuring for three hours there.

Q What did you do to prevent the water from overflowing at the point you measured?

A Nothing.

Q What did anyone else do?

A Nothing.

Q Was there any side boards put up on the flume at that point?

A No, sir.

Q Just above where you measured?

A I didn't see anything of the kind.

Q Between that and the sand box?

A I didn't see anything of the kind.

Q Mr. Swendson testified there was.

A I didn't see any.

Q Now, did you see any water seeping over at or near the point where you measured?

A No, sir, not where we measured.

Q Or above where you measured, between there and the sand box?

A Up couple of hundred feet below the sand box some spilled over.

Q How much?

A I don't know, got a great amount, small amount.

Q About how many second feet?

A It was not a second feet at all.

Q Just a small amount?

A Yes, sir.

Q Now, you say at points along the course there was between the sand box and station 194 there was four inches of free board?

A There was an average of four tenths excess free board over what there was at the point we measured.

Q Four tenths of a foot excess?

A Yes, sir.

Q What would be the measurement of the free board?

A I don't catch your meaning.

Q At its greatest point?

A I don't catch your meaning.

Q What was the full free board? You say it was four tenths in excess of what it was?

A It was twenty-five hundredths at the point where we measured, an average twenty-five hundredths plus four tenths. That was the average, it would be sixty-five hundredths.

Q Of a foot free board?

A Of a foot.

Q Was it some places less than that?

A Yes, sir.

Q What was the lowest you found?

A The lowest one was thirty-eight hundredths. The lowest, you mean the least; that was the least. The lowest one was

eighty-eight hundredths.

Q That is the greatest free board?

A Greatest free board was eighty-eight.

Q And the least free board was---

A Thirty-eight.

Q How many measurements did you make?

A Fifty-one.

Q In what distance?

A In the distance of station 194---oh, three miles and a half, roughly.

Q Now, where you had a free board of thirty-eight what was the capacity at that point of the canal?

A It would not be as great right at that point as it would where the free board was greater.

Q Can you give me the capacity there at the point where you measured and found it thirty-eight hundredths of a foot free board?

A No, I could not without calculating it.

Q Calculate it please.

A That would give an excess, thirty-eight hundredths would be an excess of twenty-five hundredths, and thirteen hundredths.

Q Just a moment; I didn't understand you or you didn't understand me. I am asking the total free board---thirty-eight.

A That is the total free board.

Q You mentioned an excess.

A I was taking it at the same depth that it would be where we measured, but it is impossible to state what it was because I don't know the velocity. I am satisfied the velocity was more than it was where we measured it, consequently I cannot tell you what it is.

Q Assuming that it was the same velocity.

A Well, that would be--that much difference in the area if it was the same velocity and we would take the same free board--

Q You can compute it in a moment, can't you?

A It is a little complicated to get that straightened around.

- Q I understood you to say that the average was four-tenths excess?
- A Yes, sir.
- Q You mean by that more than the free board at the point where you measured?
- A Yes, sir, that is what I mean.
- Q Now, where your measurement showed thirty-eight hundredths free board you had it eight per cent?
- A No, that was the average.
- Q That was the average?
- A Yes, sir.
- Q If you added it to this how much free board would you have?
- A What is that?
- Q If you added eight per cent to the flume how much free board would you have where there was only thirty-eight hundredths free board?
- A You wouldn't have any.
- Q Sir?
- A You wouldn't have any.
- Q It would be overflowing?
- A Yes, sir.
- Q How many points along the canal did you find that thirty-eight hundredths?
- A One point.
- Q Now, between that measurement and the last one above, what was the distance, or the first one above that on the flume, what was the distance?
- A Now, I will have to search through the notes here a minute to find that. That station was at station 58 plus 40, and I have a note here "low place in flume."
- Q That is the next one above?
- A Sir?
- Q That is the next one above where you found thirty-eight?

A That is the point I found thirty-eight.

Q Now, the next point measured above that on the flume?

A That was at station 58.

Q What is the distance?

A Two hundred and eighty feet.

Q What was the free board there, the entire free board?

A Forty-four hundredths.

Q Now, give us the distance at the first point below the thirty-eight hundredths measured where the free board was measured by you?

A Down the stream?

Q Down the stream.

A Fifty-eight plus eighty-five.

Q What is that?

A That is five feet farther.

Q Sir?

A Five feet farther down.

Q Within five feet of the thirty-eight hundredths?

A Yes, sir.

Q What did you find it there, the free board?

A Seventy-one one-hundredths.

Q What is the next point below where you made the measurement down stream?

A 60 plus 75.

Q Feet?

A No, that is station 60 plus 75.

Q What distance is that below the last measurement of free board given?

A 190 feet.

Q What is the total free board at that point?

A Fifty-eight hundredths.

Q Now, between the points five feet below or down the stream from the thirty-eight hundredth free board, you have fifty-- what is it, fifty-seven?

A I will have to look at that again. I cannot remember, have

to go through the notes to find it.

Q Look at it again. Within five feet then, you find thirty-eight--or they are fifty-eight, or seventy-one hundredths?

A Thirty-eight and seventy-one.

Q How do you account for that difference?

A Simply measuring from the top of the flume to the surface of the water, is all, low place there.

Q It is a low place in the flume?

A Yes, sir.

Q There is no break, no knock in the top of the flume?

A No, the blades had settled down, measured there purposely to find what the condition was.

Q The flume is covered, is it not?

A Yes, sir.

Q The entire length?

A Yes, sir.

Q You have to raise the boards up in order to make these measurements of the free board?

A Sometimes, but sometimes found a place a board was broken away.

Q That you could measure without?

A Yes, sir.

Q The flume, in fact, at that time, was very irregular as to grade its entire length, would was it not?

A It was somewhat irregular, yes, sir.

Q And the figures you have made or best estimates you have made are upon a flume that is on perfect grade?

A No, sir, we have tried to make allowances for that---tried to determine just as near as possible what the average free board would be, and I used my very best judgment in detecting points and tried to determine that.

Q But the difference in free board wouldn't make any difference in capacity if the bottom and sides of the flume were regular would it?

- A Why, the less the area of the water flowing through the flume, the greater must be its velocity.
- Q By that you mean the less the cross section?
- A The less the cross section, same thing.
- Q You didn't understand my question, I guess, as I intended it. The top of the flume might be notched its entire length in saw shape where the high points were, the free board would show greater?
- A Yes, sir.
- Q And where the low points were it would show less?
- A Yes, sir.
- Q And those uneven places would have nothing to do whatever with the carrying capacity of the flume if the sides and bottom were regular and the sides and bottom were regular, and the bottom was on a regular grade, would they?
- A No, they would have nothing to do with it at all.
- Q Now, in making your computation, did you allow for the inequalities in the bottom of the flume--do you know what they were?
- A No, I don't.
- Q Then you could not allow for them, could you, if you don't know what they were?
- A No, sir.
- Q And you say that the flume is very irregular?
- A Some irregular, yes, sir.
- Q Now, what basis have you then for computing three hundred and fifty-six second feet as the capacity of that flume?
- A I did not compute that.
- Q What did you compute it?
- A Three hundred and twenty-six.
- Q Upon what basis did you make that computation?
- A Because it is evident to me from my experience going over that flume that that much more could be put into that flume and flow the whole of that distance without over-

any more than it did where we measured with the exception of one or two little low places, very few, exception of a very few places which might drop down.

Q You say one or two little low places?

A Yes, sir.

Q Now, how many of those little low places are there?

A I don't know, very few.

Q There may be a hundred as far as you know, may there not?

A No, sir, not as many as that or I would have made note of it.

Q How could you when you could not see the water flowing any place without tearing up the boards?

A You could tell the low places by following the line on the top of the flume.

Q By walking along the top of the flume?

A Yes, sir, you could see the top of the flume, see whether it ~~is~~ is up and down.

Q You could tell without putting an instrument upon it, approximately the amount?

A No, we measured.

Q Sir?

A You cannot tell the amount but you can measure it.

Q Did you measure every low place?

A No, sir.

Q Did you estimate the number of low places when you were passing along the flume?

A No, sir.

Q Or the number of inequalities in the grade or the flume in any way?

A No.

Q Then how could you estimate the capacity of that flume from having looked at it, if you don't know the inequalities in the grade?

A I think after making the measurements that we did that my

judgment is good enough to form the opinion that I have of that flume.

Q If it were put in good condition, what would be its capacity put on a regular grade, and not increasing the size of the flume, its present size, nor increasing the intake?

A If that flumw are put in good condition I figure its capacity would be 340.2 second feet.

Q Without increasing the size of the flume?

A Yes, sir.

Q Now, what free board would you allow?

A I am taking then the same depths and free board as we took at the point we measured.

Q At the point you measured, the water was splashing over, wasn't it?

A No, sir.

Q What free board did you have there?

A Twenty-five hundredths, three inches.

Q And that would be its capacity without any inequality in its grade?

A Yes, sir.

Q What the alignment be the same or would it be made more perfect under your---

A I didn't see anything wrong with the alignment, nothing that I can recall now.

Q Is it a straight or crooked flume?

A What is that?

Q Is it a straight flume or crooked?

A It is on curves, tangents are not very long. When you get around there run a little ways straight and then turn and and then then turn the other way.

Q And each of those tangents retards the flow, don't it?

A I think the tangents accelerates the flow.

Q You think they do?

A Certainly they do. Straight portion flows better than in

a curved portion.

Q It will flow faster where it strikes up against the side and falls back?

A You said tangent, did you not?

Q Sir?

A You said tangent, did you not?

Q I didn't use the word tangent.

A I understood you so.

Q I didn't intend to use it if I did. In getting the measurement of the free board, how did you determine what the free board was?

A We measured with a stick that we would put against the cross piece, the under side, measured from the underside of the cross piece down to the water. We had no rule with us and made the marks on the stock and after that got to the rule we measured those marks.

Q Now, the water does not run on a level; that is the top of the water is not smooth in the flume, is it?

A No, not entirely.

Q It oscillates up and down?

A It does some, yes.

Q And back and forth, from one side of the flume to the other, does it not?

A I don't know about it oscillating from one side to the other. The thread of the current stays pretty well in the same place in the flume.

Q That is where the flume is straight.

A Then where it curves it stays pretty well to the same spot, it may throw pretty well to the outside of the curves going around it but does not oscillate very much.

Q Doesn't it, as a fact, isn't it higher on the outer edge of the curve on the curve?

A Slightly, yes.

- Q An inch or two?
- A Might be on a short curve.
- Q And in making this measurement, did you take the top of the water, the very top point that the water would reach, or did you average it?
- A We used our best judgment and hunted for the lowest placed in the flume where the flume had sunk the lowest.
- Q I was not asking as to that. I am asking how you did it.
- A That is what I am giving you.
- Q Tell us, in giving us your judgment whether you measured the highest point of the flow of the water or whether you measured at the lowest point; which did you do?
- A We took the mean wherever there was any searching or rising or falling water we took pains to take about the mean of that, so it was not the lowest of the highest.
- Q What was the lowest and what was the highest at this thirty-eight hundredths?
- A I cannot tell you because we didn't make any record of it, that was the measure we determined, thirty-eight hundredths.
- Q Do you know whether you measured the highest or the lowest point at that particular place?
- A We took the mean of it, best we could observe as we did every place.
- Q Did you measure both sides and the center, or did you just measure the center?
- A We measured the different places. I cannot remember now which side we measure.
- Q At this particular point.
- A I could not tell you.
- Q Did you take your measurement at the side or at the center?
- A I could not tell you whether we did or not, which we did.
- Q The flume is covered?
- A Yes, sir.

- Q Why was the difference in the depth of the water greater on one side than the other of the flume?
- A I attributed it to the fact that the flume had settled out of level a little transversely; that is the way I could account for it.
- Q At the point of measurement?
- A Yes, sir.
- Q And one side had settled and the other had not?
- A That is what I think.
- Q Don't you know, didn't you examine it to determine whether the bottom of the flume at that point was level?
- A No, sir, I just took the surface of the water for it.
- Q What?
- A Just measured from the surface of the water to the bottom of the flume.
- Q Why didn't you in making this measurement select a place where the flume was level?
- A I measured it at a place where Mr. Swendson said all the measurements had been made and wanted me to make it there.
- Q So you were not there to use your own judgment as to the place you should measure to determine the flow of water in the canal at that particular time?
- A I had no objections to offer to the place, and the place looked good to me.
- Q Then, do you mean us to understand that at the place where there is a sink in the flume where it is one-sided or is not level is as good a place to determine the capacity of the flume as would be a place where the flume was level and straight?
- A I don't think the difference there was enough to make any difference in the measuring.
- Q It was ten hundredths of a foot difference in the surface of the water, wasn't it?
- A No, the difference in depth was one-tenth of a foot.
- Q Difference in depth?

A Yes.

Q Did you measure the free board on both sides and the center of the flume at the point where you measured the flow?

A I don't remember now whether I did or not. All the notes I have here that was the free board and that is all the recollection I have of it. I made that note.

Q And you don't remember whether a measurement on one side of the center

A No, sir.

Q ---or from the three points?

A No, I don't remember.

Q Can you say as to any measurement of free board that you made whether you took both sides ^{and} ~~of~~ the center to determine the mean?

A We did not on the measure below, nor the one up there. I don't remember how many times we did measure it, but I know we exercised a great deal of care with that measurement.

Q Do you know whether or not the point where you did measure was the highest point of the water flowing in the canal or the lowest point at the particular place of measurement?

A No, sir, I don't.

Q You were there, were you not, to make the capacity of that canal as much as you could consistently make it, in the interest of your employers, the Utah Power & Light Company?

A No, sir, I was there to make correct measurement.

Q Now, the low point in that canal or flume is---that is the maximum capacity, would give the maximum capacity of that canal or flume at that time, wouldn't it?

A Evidently, because when it reached that point it would begin to overflow.

Q You didn't look for a low point in that flume; that is the point of least capacity in the flume to determine its capacity, did you?

A How do you mean by that?

Q Select a point where the flume would carry the least water and measure it?

A Certainly not.

Q To determine the capacity of the flume?

A Certainly not.

Q But you recognize that would be the maximum capacity of the flume at the time, don't you?

A At that time it would, yes.

Q Then why did you use averages in getting the capacity of that particular flume and the free board; what was the purpose of taking averages when you were asked to determine its capacity of the canal at that time?

A There is only one capacity that is absolute, and that is the amount of water that we found flowing determined by the meter measurement at the point stated. That was the only one that is absolute. Now, the others are based largely upon judgment, backed up by those measures to the best of our ability to determine.

Q And the amounts to nothing so far as the fact of the actual capacity of the canal or flume is concerned?

A Yes, sir, they beat a guess all out and out, pretty close to the fact.

Q But the actual measurement is the fact that determines the question after all, isn't it?

A Yes, sir.

Q The increasing capacity of the head would not in any manner tend to increase the capacity, carrying capacity of the flume at its lowest point, would it?

A No, sir, it would not.

Q Were you up to the head-works prior to making this measurement in June this year?

A No, sir.

Q Do you know what quantity of water was flowing back into the

river through the spill at the sand box?

A No, sir, I don't.

Q Do you know whether or not the pipe line was filled to its capacity at that time?

A I don't know.

Q And you say you don't know whether the canal was repaired between the point of measurement and the sand box just prior to your measurement, making your measurement?

A No, sir, I don't.

Q By putting side boards up on the flume in order to keep the water from spilling?

A No.

Q But you made the measurement only at the one point?

A One point is all.

Q Don't curves in a canal or in a flume retard the flow?

A They always do to a certain extent.

Q Now, in estimating the capacity of this flume, did you allow for the curves or did you make your estimate on a straight flume?

A We made our estimate, as I say, from the very best judgment I could bring to bear, looking it over with that idea at the time and studying the situation on the ground there.

Q You used the word "We" in answer to my last question. With whom did you confer in forming your judgment?

A When I used the word "We" I referred to Mr. Swendson; we made these measurements together.

Q And Mr. Swendson is the engineer, one of the engineers for the Utah Power & Light Company, is he not?

A I think he is.

Q And you deferred somewhat to his judgment?

A No, sir, I never do that with anyone, if it goes against my own too strong.

Q You conferred together?

A Yes, sir.

Q And arrived at a conclusion that you could both agree upon?

A Yes, sir.

Q This flume is built upon mud sills, isn't it, the sills are frame put upon the ground?

A I think it is.

Q Now, is it possible to keep a flume of that kind and with that quantity of water flowing as that does, in alignment all the time?

A Oh, it is possible, but it takes considerable work, have to keep after it all the time.

Q Take a man at each sill, wouldn't it?

A ~~Oh~~ no.

Q About how many would it require to keep that flume in alignment?

A Oh, I haven't any idea; gang of three or four men on there all the time ought to do it.

Q But it would require three or four men all the time?

A Yes, I think it would.

REDIRECT EXAMINATION by Mr. Story.

Q Mr. Parker, in giving the free board concerning which you have testified at these various points, did you refer to the free board of the lowest side of the flume?

A We looked for the lowest side.

Q In going down over the flume after making the measurement did you endeavor to find the lowest places in the flume?

A We did.

Q And make your measurements there?

A Yes, sir.

MR. A. C. HATCH: To determine the free board?

MR. STORY: Yes.

Q Referring to the point of measurement, it is in evidence that the flume is five feet, nine-tenths inches deep, 5.9 deep.

you say that the measurement on one side was 5.54?

A That is the depth of the water.

Q That is the depth of the water. Then what is the free board on that side?

A I will have to see if I have got it in my notes; I cannot remember whether I have got it here.

Q If 5.9 feet was the depth of the flume and 5.54 was the depth of the water the free board would be the difference between the two, wouldn't it?

A Yes, but the depth of the flume there measures 5.8, as I record it here and the depth of the water 5.54, would be twenty-six hundredths.

Q Then, on the other side?

A On the other side it was 5.88, and the depth of the water only 5.64, that would leave twenty-two hundredths free board. One was twenty-six and the other twenty-two. We called it twenty-five. That is the actual measures we made there.

Q Twenty-four and twenty-six, would it not average twenty-five?

A Twenty-four and twenty-six?

Q Yes.

A My mistake.

MR. STORY: That is all the evidence we have,

Your Honor.

OMISSION.

Applications to set aside defaults.

Evidence as to claims of Samuel E. Lewry and George P. Jorgensen, Abram Hatch, Mrs. E. L. Hanks, et al.

5+10 P.M., Recess to 9:30 A.M., December 12, 1916.

OMISS ION.

Evidence as to varies parties in Summit county (Thomas)

Evidence as to washington Irrigation Company.

B. B. RICHMOND, called by the defendants William Cluff and Alice Rambaud, being first duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. Cluff.

- Q what is your name?
A B. B. Richmond.
Q Benjamin B? A. Yes sir.
Q Where do you reside?
A I live at Provo.
Q Do you own any land north of Provo, or have you in the past?
A Yes sir.
Q Where?
A About three miles and a half from here north.
Q In what is known as the river bottoms?
A Yes sir.
Q How many acres?
A About thirty-five.
Q Have you irrigated these lands from the waters of Provo River?
A Yes sir.
Q For how many years?
A Oh, forty years.
Q Will you state to the court just what your use of water has been and the arrangement that you have had since the Morse decree was entered in this court?
A Well, I have used it to the best of my knowledge for all the ground -- that is where I could get the water on, some of it I cannot water.
Q I will ask you do ~~has~~ you have a private individual ditch of your own?
A Yes sir, on part of it.
Q How much?
A Well, it is what you might call mine. I made it all in the first place. It is on my land. The other land I sold.
Q I understand you water the whole thirty-five acres from the

individual Benjamin Richmond ditch?

A Yes, two ditches on each side.

MR. JACOB EVANS: I don't understand that is his testimony. He said there was some he could not get the water on.

Q How many acres do you water from -- through the Benjamin Richmond ditch?

A I water the all of it.

Q And where do you take the water from into that ditch?

A From City creek.

Q Have you watered the whole thirty-five acres you say?

A Yes sir.

Q From that ditch?

A Oh, might be a rod or two I don't have water on there.

Q Mr. Richmond, what is the character of your land, the soil?

A Well, it is a gravelly, sandy soil, same as the rest of the bottoms.

Q What periods have you used the water ~~and~~ during the irrigation season to irrigate your land, what days?

A What days-- well, I have generally taken it from Saturday until Monday morning. I choose that time on account of benefit of the company, that is, Wentz uses the water below, wanted the water the rest of the week.

Q How long have you used -- first, I will ask you how large a stream you take out in that ditch?

A Well, I most always take all I could get.

Q How much will the ditch carry, do you know?

A Oh, it will carry, I guess, two and a half second feet.

Q You take the ditch full when you irrigate?

A Full as I can get it.

Q And how long do you use that stream of water to irrigate the 35 acres in doing one irrigation?

A Well, I hardly ever water both at a time. Of course, when I owned the land individually, I did years ago, when water was not measured off so close as it is, use two streams at once, but now

I take one stream out, use it and then the other. I use it my thirty-five hours as near as I can. Sometimes it is longer.

Q What do you mean by thirty-five hours? Does it take you thirty-five hours to water the thirty-five acres?

A Oh no.

Q How many hours do you use that stream of water to irrigate the thirty-five acres, how long does it take you to irrigate the thirtyfive acres?

A You cannot water this land two hours per acre.

MR. JACOB EVANS: We cannot hear what you are saying.

A I say I cannot water this land two hours per acre there on that ground, no no other man.

THE COURT: Seventy hours to water the thirty-five acres?

A Yes sir, and there ain't a man that has had it since that waters it that way.

Q How often is it necessary.

A Every eight days.

Q Have you used that much water for the last forty years?

A Well, pretty near it.

Q Now, Mr. Richmond, you have lately sold that land, haven't you?

A Yes sir.

Q To whom?

A Sold some to Will Cluff, some to Miss Alice Rambaud.

Q Well, how much did you sell to William S. Cluff?

A Well, somewhere in the neighborhood of seventeen acres, I think.

Q Seventeen acres?

A I should think.

Q And how much to Mrs. Rambaud?

A About sixteen.

Q So they are now the successors, your ~~success~~ successors in interest to that water?

A. Yes sir.

Q And that land?

A. Yes sir.

CROSS EXAMINATION By Mr. A. C. Hatch.

Q You said you didn't irrigate all the land at one time?

A I could not.

Q Did you have the water more than once each week?

A No sir.

Q You had it only thirty-five hours?

A I don't think I have --

Q When you had it, is that right?

A How?

Q You had it only thirty-five hours on the turn when you had the water?

A Yes, on each piece on each side of the creek, each ditch.

Q You said to Mr. Cluff you irrigated it all from the Benjamin Richmond ditch?

A Well, I made them both, but my individual ditch now is Mr. Cluff's. The other one, of course, Stewart or Boyce and Andrew Jack Stewart, they have some of my old farm there they water in the same ditch.

Q How much water did you have when you were irrigating the land?

A When I was irrigating?

Q Yes.

A Well, I don't know the exact feet. When Thomas was measuring water we got so many hundred feet for the stream. Now then it is so many second feet.

Q How many hundred feet did you get when Thomas watered?

A Claimed, I think, it was four hundred feet for irrigating stream allotted to each one.

Q Your ditch wouldn't carry four hundred feet, would it?

A I guess it would, it always has done.

Q You say you filled it and it only makes two and a half second feet?

A That there is that east ditch on the east side of the river?

Q Yes.

A Now then, that is up to Mr. Wentz, he has measured it there, I

Never saw him measure it.

Q What water was in the West ditch?

A The West ditch is the larger ditch.

Q How much water was in it?

A Well, all it could hold.

Q Do you have any idea how much?

A I suppose we have our four hundred feet in it.

Q So you would have eight hundred feet in the two ditches?

A That other one won't hold it, the other one, I got my water out of City creek, this out of the old irrigating ditch of the East Union, they have abandoned that and got one of their own, and they rented it to me, and since the railroad went up there they put a box in there only two -- I guess two foot wide and about a foot deep or a little more, and I have to force that water through that in order to get my allowance of water. I raise the water, I guess three feet on the opposite side to force it through the box.

Q You don't know anything about the quantity of water you use, only what others told you, as to its measurements, do you?

A No, I never measured it myself.

Q Thomas and Wentz would be the ones who knew the quantity?

A Yes.

Q And the time that you irrigated? A. Yes.

Q Is this whole 35 acres under cultivation?

A Yes sir.

Q What kind of crops are raised upon it?

A Well, hay and orchard, some farming land.

Q No portion of it included in the river bed?

A It is all the river bottoms.

Q I mean the river channel?

A River channel.

Q Yes, the river runs right through it, doesn't it?

A No, City creek goes right through it, yes.

Q How wide is City creek?

- A Oh, pretty near a rod, I guess.
- Q And then brush on each bank?
- A Very little.
- Q And trees?
- A Very little.
- Q Cottonwood trees, aren't there?
- A Very little, some along the creek within a foot or two or three
- Q foot of the bank.
- Q Is there any portion of the thirty-five acres that is not plowed or has been plowed?
- A There is a piece of about half an acre. Well, it is a rock bed, little knoll there that has never been irrigated nor plowed.
- Q That has trees growing on it?
- A No, there is nothing on it, nor plowed.
- Q That has trees growing on it?
- A No, there is nothing on it, there was a grove on it, all taken off.
- Q How much of the tract is covered by city creek?
- A Covered by?
- Q Yes, that the creek occupies in its length through the land.
- Q How wide a space, you mean?
- Q How many acres?
- A I don't understand what you are getting at.
- Q The area of the creek is within the boundaries of the land?
- A Yes sir.
- Q The creek and brush on the banks of the creek?
- A Oh, it won't average over a rod all the way through.
- Q How much is it?
- A About sixty rods.
- Q It isn't a straight channel, is it?
- A No.
- Q Crooked?
- A Little crooked.
- Q And have you ever measured this land, or are you just guessing

at the quantity?

A Which, the cultivated land?

Q Yes.

A Yes sir, it has all been measured a dozen times.

Q How much land is there in the entire tract?

A Under the --

Q That you are testifying about?

A Well, it is supposed to be thirty-five acres.

Q Doesn't some of it reach up onto the bench?

A Well, not much of it.

Q How much.

A Might be a rod on the section line there.

Q Is there any road through it?

A No.

Q Is there any other canal running through than the City creek?

A There is the East Union.

Q How much of the ground does that occupy?

A Oh, probably six feet, five or six feet.

Q Have you, as a matter of fact, thirty acres that is actually cultivated and irrigated within the thirty-five acre tract?

A Thirty?

Q Yes.

A Oh yes, more than that. I don't think there is an acre of waste land on the whole thirty-five acres.

Q That is including the road?

A Including creeks and all.

Q Union Canal, brush and City creek and half acre of rock?

A The road follows by the section line. It is on the east side of it, on the Stewart, just out across the north corner of mine, and that belongs to the city now, don't cover any of this at all.

Q Do you know whether or not this tract of land was included with in the land of the East River bottom in the Morse decree?

A Yes sir.

Q And is it not a part now of that East River Bottoms Irrigation

Company and is included within it?

A I ain't in the company, I had a reason to stay out of that, they wanted to cut off my water at the time this decree come out. The boys got together there and formed a company there and went to measuring ground from Nuttals down to me, and come and wanted me, wanted to know what I had of tillable land, and I told them, and they would not -- didn't want to give me no water for my timber land and pasture land. It was all under pasture at the time, and they stuck and hung for it, so I told them I would stay out of the company, let them go, and take care of my own land, so I come down and seen Mr. Corfman and he give me advice to go ahead and use my water, same as I have always used it, and I have done it right along.

Q And you have been under no regulation since, have you, except the water commissioner.

A That is all.

Q Did the water commissioner distribute the water to you each time you used it, or did you just go and take such quantity?

A He told me when my time was set to go and take my water at a certain time.

Q Did he measure the water to you?

A That I couldn't say. I never saw him there when the water was in.

Q And you just went to the City creek and turned out what water you wanted?

A Yes sir, would have turned more if I could have got it there.

Q And used it as long as you wanted it, did you?

A I used it my time is all. Every Monday morning it was shut off.

Q Why couldn't you turn more in?

A That box wouldn't carry it, I could have raised it for ten or fifteen feet, I could have got more.

REDIRECT EXAMINATION By Mr. Cluff.

Q I didn't quite understand you, you answered counsel you have two ditches now, do you irrigate from two ditches?

A I do on the thirty-five acres.

Q On the thirty-five acres, that is what I want to get at. The private ditch that you call your own through which the water goes to the pastures through this box?

A Yes.

Q How many acres do you water under that ditch.

A I water about sixteen or seventeen acres.

Q I see, and --

A The other waters the other.

Q And the other ditch is west of that, is it?

A West of City creek.

Q You water the balance from that ditch?

A Yes.

Q Now, which one of these parties owns the land that you water through the east ditch?

A Mr. Cluff.

WILLIAM C. CLUFF, called by the defendants William Cluff and Alice Rambaud, being first duly sworn, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q What is your name?

A William C. Cluff.

Q Where do you reside.

A Pleasant View.

Q That is about three and a half miles north of Provo City?

A Yes sir.

Q Have you recently purchased from Benjamin B. Richmond any land and water? A Yes sir.

Q How many acres of land?

A My deed calls for 17.92 acres.

Q How long have you had that?

A One year.

Q You have irrigated that land this last season, have you?

A Yes sir.

Q From what source did you obtain the water?

A I took it from Mr. Richmond's old private ditch, about, probably fifty rods above my field, forty rods.

Q That is taken out of what is known as City creek, is it?

A No, I don't know-- yes sir, out of City creek, yes sir.

Q Do you know how large a stream you can carry through that ditch?

A No sir, not by measurement I don't.

Q Has the water commissioner measured the water to you this year?

A No sir, not that I know of.

Q When did you water, what period?

A I took the water Saturday afternoon, somewhere between four and five or six o'clock, along there, not earlier than four.

Q How long would you use it?

A I kept it until the following Monday morning, I turned it off somewhere between twelve and five in the morning, just whenever I said could get through with it.

Q Would it take you that long to irrigate your land with the stream you could get through that ditch?

A Yes sir.

Q How long have you been farming?

A Oh, I have farmed off and on all my life.

Q How old are you?

A Thirty-eight.

Q The stream that you carry through that ditch, what would you say as to its being a good size irrigation stream?

A Well, where I take it out it is fairly good sized irrigation stream, but the land is so porous by the time I get in on some of my ground I lose a third of it.

Q Have you experimented to determine about how long it will take you to water one acre of land with the stream you carry through

that ditch?

A No sir, not particularly on one acre.

Q Have you tested on your entire eighteen acres?

A Yes sir.

Q How long?

A Well, thirty to thirty-five hours, best I could do.

Q For the entire --

A Entire tract, yes sir.

Q How often is it necessary to irrigate that land?

A Well, it depends on the crop. My hay and grain I have to water week. My grain, I believe, during the season I missed one week, let it go two weeks, Outside of that I watered it every week.

Q What crops have you raised on that land this year?

A Little hay, grain, potatoes, vegetables, fruit.

Q Do you irrigate and farm the entire eighteen acres?

A With the exception of City creek goes through one little corner of it, probably for ten rods, and East Union goes through a little strip of it.

Q What is the character of that soil?

A Well, it is streaked gravelly, top of it, some of it has got a coat of soil and then streaks of gravel, fine gravel and coarse gravel.

Q Do you know what becomes immediately of the seepage water off from your land?

A I suppose it would go right back into City creek.

Q The land lies right adjacent to City creek?

A Yes sir.

HYRUM F. THOMAS, recalled by the defendants William Cluff and Alice Rambaud, testifies as follows:

DIRECT EXAMINATION By Mr. Cluff.

Q Mr. Thomas, are you acquainted with the private ditch of Benjamin

B Richmond?

A. Yes sir.

Q D^o you know what size stream of water that ditch carries?

A Well, I measured it several times, it had various sized streams in it.

Q And what would you say?

A I would say average about two second feet.

MR. CLUFF I believe that is all.

SIDNEY BELMONT, recalled by the defendant Provo Pressed Brick Company, testifies as follows:

GROSS EXAMINATION By Mr. Jacob Evans.

Q Mr. Belmont, you are the president, I believe, of the Provo Pressed Brick Company?

A. No sir.

Q You testified for the Provo Pressed Brick Company, didn't you?

A I am vice president.

Q You are an officer of the company?

A Officer of the company, yes sir.

Q How long has the company been engaged in business at its present location?

A Fourteen or sixteen years, I could not give you the definite --

Q Have you been connected with it all the time?

A Yes sir.

Q During the time that you have been connected with the Provo Pressed Brick Company have you ever made any complaint about the Provo Reservoir Company using water to which you claimed you were entitled until the year 1916?

A Until the year 1916?

Q Yes.

A I don't know that we have made a definite complaint against the Provo Reservoir Company, but we have made complaints we were short

of water.

Q And when you did that you complained to Provo City, did you not?

A During '15 and '16-- I didn't complain, our foreman has charge of the plant, foreman Mr. Curtis who testified here, and I asked him why he didn't get more water, and he had complained to Mr. Wentz he was short of water.

Q That was during what year?

A '15 and '16.

Q '15 and '16, that was the first time any complaints were made so far as you know, about shortage of water?

A I don't know how far back of that since Mr. Wentz has been in charge of the water, we have asked him, we didn't know where the water was going to until very recently, didn't know who had it.

Q prior to '15 and '16 you made no complaints at all?

A Prior to that I made complaint to Mr. Thomas personally.

Q Isn't it a fact you had an engine there?

A Yes sir.

Q And in low water season, during these last eight or ten years when the water got scarce you fired up your engine?

A Yes sir.

Q And used that engine whenever the water was scarce.

A It made up the deficiency.

Q You have the engine there now?

A No sir.

Q When did you take it away?

A The engine broke during 1915.

Q And that was the cause of your complaining then about the shortage of water, was because of the broken engine, was it ?

A No sir, that was not because, but of course we would notice it a great deal more when we didn't have something to take up the deficiency to keep our plant going.

Q You knew of the existence of the Provo Reservoir Company since about 1908, didn't you?

A I knew there was a Provo Reservoir Company, yes.

Q Knew that was building canals?

A Certainly.

Q Spending large amount of money?

A One would actually think they had, I am not acquainted with them.

Q Taking water from the river?

A I didn't know definitely what water they were taking.

Q You knew they were taking water and spending a large amount of money?

A I knew they were using water and spending money, yes sir.

Q And while you knew that and the water scarce you would fire up your engine and run your plant with your steam?

A We always done that after the latter part of July until possibly the first of September, for making certain kinds of brick. We didn't have enough power to make what we call wire cut brick to pull the whole plant with, took up the deficiency with the engine.

Q That was during each and every year, was it?

A That was during each and every year.

Q Commencing what time?
from

A Commencing ~~saxing~~ the time we put in the plant.

Q And you would commence to run your steam plant in July, you say?

A Usually, it would vary according to how the water would hold out.

Q And run it up to--

A Sometimes first of September.

Q First of September?

A After that the water would increase so that we didn't have to run it, probably two months.

Q Now, the water that you have used in your plant there has been the water that was used in the Factory race, the City race and Tanner race?

A I of course don't know the ditches that are named by different parties, different names. The water that we use, principal portion of it was going to the Factory race. The balance would go into the race that goes down to power plant, I have heard it called the Holdaway ditch, and balance go back into Provo river.

- Q In other words, what water you have used has been the water that has been used by Provo City in its irrigation system?
- A I don't know what Provo city used. I don't think Provo city used the Factory race, I know they did not.
- Q Are you quite sure about that?
- A I am quite sure about that.
- Q Don't they use it at night?
- A No sir, not all of it, I live right alongside of the ditch.
- Q It is all used under the city's control, isn't it?
- A I suppose the ditch is. The race has been under the city's control. The water is not all used by Provo City, and we have always understood, ever since we have used the water that is part of Utah Lake water Provo City was not entitled to at all.
- Q But what I am trying to get at --
- A Since I have been connected --
- Q What water you used to run your plant, that was water that run into the Provo Irrigation system?
- A I won't say that; I will say what water we used from the Factory race into the waste ditch or the Holdaway ditch and back into Provo river.
- Q That is the water you used all the time?
- A That is the only water we could use.
- Q That is the only water you could use, and whenever that got short then you started up your steam plant?
- A Whenever that water got short so that we could not pull the whole plant we would make up the deficiency with the engine.

REDIRECT EXAMINATION By Mr. Cluff.

- Q Mr. Belmont, do you have any idea how much deficiency you had to make up with the steam?
- A Only that we could always pull our dry press ~~when~~ plant with the water until the Provo Reservoir commenced. After that we could not, and we could not pull the wire out which I consider takes from one hundred twenty-five to one hundred and fifty horse power to pull the whole plant.

- Q Isn't it a fact, Mr. Belmont, that after the water passes through your plant it is divided into a number of canals, the Upper East Union doesn't it get --
- A We don't get any of the Upper East Union, the Upper East Union, their gates is above our penstock. That water goes on independently of us, that is provo city's ditch, I understand.
- Q How about the East Union?
- A None of the East Union can get into our penstock.
- Q Then the water that goes through your penstock goes to the Factory race?
- A Factory race and turn the balance to the west, I don't know what becomes of it, part of it goes to the river.
- Q You know part of it goes back into the river bed?
- A Yes sir, we have a canal there, that is the way our appropriation calls, what we don't use to go back into the river. Take it out of the river and put it back into the river.
- Q You say you made protests for a number of years to the Water commissioner?
- A Yes sir, whom we thought could remedy it, or had some authority to remedy it.
- Q Did they do anything?
- A Oh yes, Mr. Thomas would come up oftentimes when the water would start down, say latter part of July, and I would go and protest to him, he would say, "I haven't yet made my division, I will come up and make the measurements, see where the water is going to and divide the water up."
- Q And you would get more water?
- A We would get more water usually quite a bit more water as soon as he had made the division. If it started going down we would ask him and he would come and make a change, and we would get more water, always seemed to get more water after division, that is a especial time of high water. In making division there is sometimes week or so until we would go and protest, then we would get more water.
- Q This year what was the condition?

A Condition this year was we could not begin to pull our plant with the water we got.

Q And during what months?

A During August, September.

Q During the month of September you were unable to pull your plant?

A Yes sir.

Q Do you know where the water was ^{at} that time?

A I didn't know.

MR. JACOB EVANS: When was that, 1916?

A 1916 this year. If I didn't know I would ask the foreman if he would take it up with the commissioner whom we supposed was giving us all we were entitled to. We didn't know he was taking any under any particular ruling. We supposed he was appointed by the court and if we could not have any more that was all we were entitled to.

Q You relied on the commissioner?

A We relied on the commissioner entirely, yes sir.

RE-CROSS EXAMINATION BY Mr. Jacob Evans.

Q Now, you say that when you called for a division of water, that is, when complaints were made and division was made, you would get more water?

A Got more water.

Q That was in the spring of the year, was it?

A That was along the latter part of July, usually.

Q In other words, that would be about the time when everybody was calling for a measurement of the water that each of the parties might have what they were entitled to?

A Of course, I don't know when the ditch company would ask. That is when people seemed to be filling their ditches full with high water and still he said it was high water when probably the water had dropped.

Q When the high water dropped? A. Yes sir.

Q And everybody called for a division, then the result generally was that Provo city got more water than they were getting before

the division, and you would get the use of the additional water that was turned to Provo City under this division?

A I don't know anything about what Provo city was getting. We got more water.

Q Yes, but you used only such water as was turned to Provo city, didn't you?

A I don't know that, sir. I say we turned it down the Mill race, and I don't consider the Mill race Provo city's water.

Q Can you name the ditches that the water goes into after it runs through your wheels?

A No sir, all I can tell you it goes into the Factory race.

Q Tanner race?

A I don't know anything about Tanner's race. Goes into the Factory race, and what do you call the one goes by Pierpont's? I know he had complained and had to shut out his water wheel entirely because he could not get enough water to do any good, and put in electric power. He kicked so much, came up so much until he was tired.

Q Then I understand it, every year along about commencing in July, and from that up to September you used the steam plant?

A Not entirely, only to make wire out brick.

Q Whenever it was necessary?

A When it was necessary, yes sir.

Q It was necessary each and every year, wasn't it?

A Some each and every year, yes sir, we would use the plant whenever we was short of power. We would not be fifty per cent all the time between those dates you mentioned.

MR. CLUFF: Judge Hatch, if the court please, you will remember when Mr. Conrad was on the stand you asked him if the Chidester decree gave him any class B water, and asked him why it did not. He didn't remember. I desire to call your attention and the court's attention to paragraph 6 of the Chidester decree, and it reads as follows: "subject to the rights of the Telluride Power Company as hereinafter decreed

George I. Taylor is the owner and entitled to the use of eight
minute feet of the waters of Class B. Charles S. Conrad is the
owner and entitled to the use of ^{twenty-}four minute feet thereof and
the South Fork Cattle Company-- that would be W. W. Ercanbrack
now, that is successor in interest, is entitled to 18 minute feet
of the Class B. water.

MR. A. C. HATCH: We asked sometime ago for the cards and such data as the Utah Power & Light Company had in regard to peak loads and in regard to measurements of the water in the flume.

MR. STORY: Here are the measurements for this year.

MR. A. C. HATCH: Have you any measurements made prior to 1916?

MR. STORY: We have '13, and that is all we have.

MR. A. C. HATCH: Mr. Story, the witness, Brundige, in testifying as to the efficiency of your water wheels stated, if I remember it correctly that he based his estimates or his computations of the efficiency upon the measurements of the water flowing in the flume as given by him for different periods covering other years than 1916, prior to 1916, but this data gives nothing except measurements made in 1916. What we want is the measurements that you have made of the water flowing in that flume from the beginning, no matter where, and that is what I presumed you understood. We would like a list of all the measurements of the flow of water in the canal that you have any record of.

MR. STORY: You understand we haven't a record back of the time the present company got it. Mr. Nunn took those records with him and they have never been available to us. We tried to get them.

MR. A. C. HATCH: When did the present company take the plant over, become the owner?

MR. STORY: In the late fall of 1912.

MR. A. C. HATCH: You have all the measurements since, the measurements which have been made since

tha t?

MR. STORY: I presume you are talking of meter measurements?

MR. A. C. HATCH: Any measurements that were made of flow of water in the canal.

MR. STORY: If you are talking about gauge readings, your water commissioner has a station there and testified to by Mr. Dusenberry, he gets those readings for the commissioner.

MR. A. C. HATCH: Have you those water readings?

MR. WENTZ: No, I have not, the gauge reading on the flume.

MR. STORY: He gives them to you, doesn't he?

MR. WENTZ: No, I got the gauge reading on the river but not the gauge reading on the flume from the company. I have only the gauge reading I have taken myself, and the discharge measurements I have made myself.

MR. A. C. HATCH: We want the gauge readings and all of the data upon which Mr. Brundige gave his testimony.

MR. STORY: I have that so far as Mr. Brundige's testimony is concerned, these original power sheets.

MR. A. C. HATCH: And we would like those gauge readings made by Mr. Dusenberry or by anyone else who took those gauge readings.

MR. STORY: We haven't those with us at the present time. We can get them but I didn't understand you wanted those. I understood they wanted meter measurements; they didn't ask for gauge reading, and so Mr. Swendson understood.

MR. A. C. HATCH: I didn't think I asked for meter measurements, because if I did it was using the word used by some of the witnesses like I sometimes do. What I intended to ask for was all the measurements of all kinds you had made to determine the quantity of water flowing in the flume.

MR. STORY: I suppose the gauge heights taken on the curves would give it to you, the rating curves would give it.

MR. TANNER: The rating curves are in here, but they are not marked as exhibits.

MR. A. C. HATCH: I suppose you can get them and introduce them.

MR. STORY: Before they are introduced I would like to examine them.

MR. A. C. HATCH: Yes, you can mark them and we will discuss that later.

MR. STORY: In connection with Mr. Brundige's testimony, we find on examination of the original report sheets of the output of the Olmstead station Mr. Brundige was in error in regard to the peak load on May 25, 1915. As I remember he testified that it was forty-nine hundred kilo-watts, but as the original record shows that it was forty-six hundred; to that extent we wish his testimony corrected. I may say that the mistake was due to the fact that the memorandum from which he testified was made up by the clerks in the office and this mistake occurred in some way, we don't know how.

MR. A. C. HATCH: When can you get us the other measurements, Mr. Story?

MR. STORY: I was just discussing that matter with Mr. Swendson and I don't know. We will

endeavor to find out, Judge Hatch, just as soon as possible.

MR. JACOB EVANS: We want the meter meter cards from which these records were made.

MR. STORY: The meter cards?

MR. JACOB EVANS: From which these records were made.

MR. STORY: These are the original sheets themselves, original station records, or do you mean the---

MR. JACOB EVANS: I mean the cards.

MR. A. C. HATCH: The cards that were testified to by Mr. Brundige, that you kept.

MR. JACOB EVANS: Don't you have a register card?

MR. SWENDSON: No, they have no automatic gauge. These are taken by the station agent every half hour. They may have one now.

MR. A. C. HATCH: I would like to have the record show then the length of time, duration, of these peak loads, if you can give it.

MR. STORY: We can put these in evidence. They will show they are taken every half an hour.

MR. A. C. HATCH: But the peak load does not continue for a full half hour.

MR. STORY: It may continue for five minutes, may continue for fifteen or twenty minutes. I don't know, or may be for one minute.

MR. A. C. HATCH: The purpose of this is to determine Mr. Brundige's testimony. He said your storage capacity was sufficient to run the machinery at its highest peak load for sixteen minutes, your reservoir of reserve water, and if the duration of

the peak load at the time the peak load was on did not exceed sixteen minutes, of course, the peak loads would relatively have little value in the testimony, and for that reason we wish to get the duration of those peak loads if you have them .

MR. STORY: That is all the information we can give you in regard to the peak loads. Now, so far as the peak loads are concerned, don't overlook the fact that it depends on whether you are using the station as a governing station or merely one in the chain of stations. In other words, there may be--this plant might be used as a station where the maximum out put would be kept continually all the while.

MR. A. C. HATCH: But the testimony is that it is not.

MR. STORY: The testimony is, I think the record will bear me out, that that has been used for the last two or three years as a regulating station. I don't know if it goes behind that, I cannot answer that of my own knowledge.

MR. A. C. HATCH: If that is as far back as it goes, of course, it would not---

MR. STORY: It has been used as a station and maximum output has been used for a good many years; as a matter of fact, a long while before you people ever thought of your installation. Later it has been used as a governing station and in that way the power load necessarily fluctuates. It may require the whole thing for a few minutes, then may go four or five days, four or five weeks without requiring the maximum load.

THE COURT: Mr. Brundige testified this

plant has been used as a governing plant for sometime.

MR. STORY: I think so, I think it was in 1911 and 12. It may have gone back of that particular time. I think it went back to the time the Grace plant was constructed which is the largest plant on their system.

MR. A. C. HATCH: Here are five daily records, one for each year since you have been the present company.

MR. STORY: They commence with 1913, do they not?

MR. A. C. HATCH: Yes, and each of these sheets, I understand, is a daily record.

MR. STORY: Each of these sheets is a daily record and correspond with the testimony given by Mr. Brundige; in other words, they relate to the power load concerning which he testified.

MR. A. C. HATCH: He testified only as to five days.

MR. STORY: He gave the power load on five certain days, as I understand it, and you asked the original records be brought in and these are the records to which he referred.

MR. A. C. HATCH: May 23, 1913; May 19, 1913; January 24, 1913; March 11, 1914; and May 25, 1915. Those are all of the records to which---

MR. STORY: To which he referred.

MR. A. C. HATCH: To which he referred?

MR. STORY: To the best of my knowledge.

MR. A. C. HATCH: Now, you have a daily record since the time that you came into possession of the Olmstead plant, have you not?

MR. STORY: I think so.

MR. A. C. HATCH: May we have all of those records?

MR. STORY: I think I can get them for you. I understand they are not kept in any regular order, but quite a jumbled mass from which these were taken. We will try to get them for you, there will be three hundred and sixty-five for each year.

MR. A. C. HATCH: Three hundred and sixty-five. Well, of course, the purpose for which we want them is for comparison, only, as to those which Mr. Brundige testified to.

MR. STORY: I think those show the highest power loads, if that is what you are after. I think those are selected as showing the highest power loads during that particular period.

MR. A. C. HATCH: During all the period since you have owned the plant, these records show the highest power load?

MR. STORY: Yes, since the late fall of 1912, and those are the only records we have.

MR. A. C. HATCH: And the ones that Brundige testified to were selected?

MR. STORY: They are the maximum during those years.

MR. A. C. HATCH: In order to give the maximum during those years?

MR. STORY: Those are the maximum during those years.

MR. A. C. HATCH: Then, that being admitted, we don't care for the production of the others.

VERNE NELSON, called by the plaintiff,

being first duly sworn, testified as follows:

DIRECT EXAMINATION by Mr. A. C. Hatch.

Q What is your correct name?

A Verne Nelson.

Q Where do you reside?

A In Provo City.

Q What is your occupation?

A Engineer for the Provo Reservoir.

Q For how long have you been in the employ of the Provo Reservoir Company?

A Past four years.

Q What has been your duties in that employment?

A It has been of various natures, such as helping locate some canals and construction work and such like.

Q Have you been engaged in the measurement and distribution of the water?

A Yes, sir.

Q How long were you engaged in that?

A Three summers, three irrigation seasons, past three irrigation seasons.

Q I now hand you Exhibit 142 and ask you what it is, what it represents.

A It is a profile of the Utah Power & Light Company's flume in Provo Canyon, from the gate house to a point ninety-six hundred feet down the flume.

Q You may explain the marks upon it, Mr. Nelson, the horizontal lines and ~~max~~ vertical lines upon the paper, what do they represent?

A The difference between these heavy vertical lines---

THE COURT: A little louder.

A The difference between the heavy lines running horizontal here are equal to one foot in elevation of the flume, the smaller vertical lines here represent twenty-five feet, the station spaces between them.

- Q Twenty-five feet?
- A Yes, sir, or twenty-five feet between these heavy lines.
- Q What do the black lines running lengthwise of the profile indicate?
- A. These---
- Q Irregular, describe the upper line first.
- A That represents the profile of the flume. This is a continuation of this line.
- Q What part of the flume?
- A It was taken---
- Q What part of the flume does that last line represent, the bottom or top?
- A The bottom of the flume.
- Q The bottom of the flume?
- A Yes.
- Q What does the bottom line represent?
- A This line here?
- Q The bottom dark line, yes.
- A That is a continuation of this over here.
- Q It is simply an extension of the flume to the 9600 foot point?
- A Yes, sir.
- Q What do you find is the greatest variation of elevation of that flume?
- A There is one point here---
- Q Where is that? What point on the plat, how far from the sand-box?
- A That is four hundred and twenty-five feet from the gate house.
- Q What is it?
- A It is a rise there of about eight tenths of a foot.
- Q How did you obtain the data from which you made this profile?
- A With the engineer's transit. I run level lines to the gate house on the flume.
- Q Where is that gate house?

- A It is about here, right here is the gate house on the profile.
- Q Where is the gate house from the intake of the flume, intake of the pipe line?
- A It is about a thousand feet, they told me from the intake of the concrete pipe line, from the river, from the dam.
- Q Do you know whether the gate house is the same place referred to in the testimony here as the sand box?
- A No, sir, I don't know.
- Q Describe that gate house, if you can, so that we will be able to identify it.
- A The gate house is a house kind of built over the flume with a place where if there is too much water in the canal they could turn part of it over a spill.
- Q Of what is it constructed?
- A Of lumber and over a concrete base.
- Q At the end of the pipe line?
- A Yes, sir.
- Q Is there a spillway at that point where the water, the excess water flows out of the flume?
- A In the gate house.
- Q At what point is that with reference to what is known as Donan's place in Prove canyon?
- A That is close to Donan's place, houses there.
- Q When did you make this measurement or survey?
- A December 5, 1916 and December 6th.
- Q What were the distances between which you took your observations, distances apart several observations?
- A They were about forty-eight feet, sometimes it varied a little.
- Q What was the greatest distance that you can give it?
- A There was one place where it varied I had to go ninety-six feet before I took an observation.
- Q And did you examine the flume between these points to determine

whether or not there was a rise or fall in between, the bottom of the flume between your points of observation?

A No, sir, I did not examine that very closely.

THE COURT: Let me ask, so that I may understand what is the distance represented between the horizontal lines on this plat, the heavy horizontal line?

A That is two hundred and fifty feet.

Q The horizontal lines?

A That represents one foot in elevation.

Q Between the heavy lines?

A Yes, sir.

Q Those are divided into five sections?

A Yes, sir.

MR. STORY: Those heavy lines are divided into ten?

THE COURT: fifths.

MR. A. C. HATCH: Each heavy line represents one foot.

CROSS EXAMINATION by Mr. Story.

Q Where did you get your engineering education, Mr. Nelson?

A I went to school here in the B. Y. University, and I took in a correspondence school.

Q Do you hold a degree in civil engineering?

A No, sir.

Q Did you run the levels yourself?

A Yes, sir.

Q Who held your rod?

A Frank Healy.

Q Did you tell him where to hold it?

A Yes, sir.

Q How did you determine that point in each instance?

- A I told him to hold---count twelve posts from bent, hold the rod on the top of that bent.
- Q On the top of that particular bent?
- A Yes, sir.
- Q Did you run two surveys over the flume or one?
- A I run one.
- Q Which side did you measure on?
- A On the left hand side.
- Q Going up or down?
- A Going down.
- Q Then the variations which you have given are the variations on one side of the flume, are they?
- A Yes, sir.
- Q You don't know what the variations are on the other?
- A No, sir.
- Q You don't know what the mean variation is between?
- A No, sir.
- Q I thought you said that your lines represented the bottom of the flume, if I understand you correctly now, it is the top. You held it on the top of the bent or is it on the sill?
- A It is on the sill that the flume rests on.
- Q On the top of the sill?
- A Yes.
- Q On the left hand side going down?
- A Yes, sir.
- Q That is the outside?
- A Yes, sir.
- Q You have given the maximum variation, as a rise $\frac{2}{10}$ of eight tenths; how long did that condition continue?
- A It was just a point in between two readings, three readings there, middle one was that high place.
- Q Middle one happened to be the high place?
- A Yes, sir.
- Q You don't know how far that particular grade extended, do you?

A No, sir.

Q Did you make any effort to determine?

A No, sir.

Q You merely drew a straight line in getting your profile to the next point, did you?

A Yes, sir.

Q Now, what was your next highest variation? Next largest variation

A Well, another one here, a little higher than the last one.

Q What is that?

A It is very nearly fourteen hundredths.

Q Nearly fourteen hundredths; what station was that?

A That is about three thousand, nearly three thousand five hundred feet from the gate house.

Q Did you not make a mistake in giving it fourteen hundredths?

A I mean 1.4.

Q How long, for what distance did that variation continue?

A That was just the distance between three readings.

Q And as in the previous instance you merely have drawn the line from ^{that} ~~the~~ ~~other~~ point to the other point?

A Yes, sir.

Q You don't know how far that condition continued?

A No, sir, just the two observations.

Q Where was the next high point?

A Well, the others, several others, about one to two tenths all along the line.

Q What?

A From one to two tenths rise.

Q The variation is from one to two tenths?

A Yes, sir, something like that. They vary.

Q You have given me the two high points on that?

A Yes, sir.

Q Do you designate your points on the car?

A Yes, sir.

Q What is your low point?

A There is one low point.

- Q What is the maximum of that, what is that?
- A About four tenths.
- Q That is the greatest variation so far as getting below the grade is concerned, is it?
- A Well, here is a point over here where it takes a sudden fall of about a foot, in about five observations.
- Q What?
- A There is a place fall in elevation of about a foot in about five observations.
- Q What station is that, or between what stations rather?
- A It is between station 5375 and 5475.
- Q At the time you made the survey did you also make any investigation of the character of the soil or the physical conditions under the bents where--under the sills rather, points where you found these variations in grade?
- A No, sir, I did not make any special observations of that.
- Q Simply ran levels to determine they were low at that particular point?
- A Or high .
- Q You made no observation to determine the cause of being low?
- A No.
- Q How long have you been familiar with this flume?
- A First time I was ever on the flume.
- Q You know nothing about its condition prior to the time that you made this survey?
- A No, sir.
- Q And don't know how long that this condition which you have described has continued in the past?
- A No, sir.

REDIRECT EXAMINATION by Mr. A. C. Hatch.

- Q Mr. Nelson, in reply to Mr. Story when asked as to the greatest rise in the flume being eight tenths, you said there was another that was higher and gave that as fourteen hundredths,

that would be lower.

A. 1.4.

Q 1.4 feet?

A Yes, sir.

Q At what point was that on the flume, how far from the gate house?

A 8950, very nearly.

RECROSS EXAMINATION by Mr. Story.

Q Mr. Nelson, did you in making your survey endeavor to find what the elevation above and below grade would be on a grade of one tenth of one foot per hundred, or did you merely take the grade as you found it without reference to any constant grade per mile or per hundred feet?

A The only place I figured the grade was the two rating stations. I just drew a straight line between the two high points and figured the grade.

Q Drew a straight line between the two high points, where were these two points?

A Between two high points, yes, sir.

Q You did not determine it with reference to any constant grade from the headworks down to the lowest point that you surveyed on the flume, did you?

A No, sir, I didn't figure that.

Q Then, at these high points that you mentioned, the flume immediately below, immediately at one side or the other of the high points may be below grade, the average grade, may it not?

A In places quite a sag in between the high places.

Q For instance when you speak of the eight tenths in your first point being eight tenths above grade, you mean that is above the average grade of one tenth of one foot per hundred feet, commencing at the upper end of the flume and going down to the end of the flume, or was it simply eight tenths above that part of the flume which existed immediately

- prior ~~or~~ adjoining that section?
- A It was eight tenths above that section right there.
- Q You don't know how it was with reference to the grade?
- A No, sir.
- Q In other words, if the part of the flume immediately preceding ~~or~~ immediately above that point had happened to be below grade the high point which you mention would not necessarily be as high, wouldn't be as high above the grade as eight tenths, would it?
- A If the point of head had been a little higher.
- Q If the point of head had been below grade, the point you gave would not be the full eight tenths above grade, would it?
- A No, if the point of head was low.
- Q It is merely the variation between the high and low points in the flume without reference to any constant grade?
- A Yes.
- Q Did you take the grade of the water surface?
- A No, sir.

REDIRECT EXAMINATION by Mr. A. C. Hatch.

- Q You say you took the mean grade between the station house and lower point of your survey, lower point of your survey; you drew ~~the~~ a straight line.
- A No, sir, I have not done that.
- Q What is the total fall in the nine thousand feet, ninety-six hundred feet?
- A I can give you that; it is close around ten feet.
- Q What is the horizontal distance, ninety-six hundred feet?
- A Yes.
- Q Does the profile, as drawn, show the grade of the canal as well as drawn on the---
- A No, sir, just represents the grade on the flume, the way

the flume now is.

Q Between the different points at which you took the observations?

A Yes, sir.

JOSEPH JENSON, called as a witness by
the plaintiff, being duly sworn, testifies as follows:

DIRECT EXAMINATION by Mr. A. C. Hatch.

Q What is your full name?

A Joseph Jenson.

Q Where do you reside?

A My residence is Springville, office in Salt Lake City.

Q What is your profession?

A Civil engineering.

Q Where did you study civil engineering?

A At the Massachusetts Institute of Technology and Harvard University.

Q For how long were you attending those places of learning?

A I was a student at the Massachusetts Institute of Technology for three years, 1891 to '94. I then taught in the Agricultural College of Utah, engineering from 1905--- from '95 to '1901. I then attended Harvard University for one year and resumed my teaching in the Agricultural College up to 1907.

Q Since then what has been your work, if any, along the lines of your profession?

A The practice of civil engineering.

Q Where have you been employed?

A I have been employed at various parts of the state of Utah and to a lesser extent in Idaho, principally the southern part of the state of Utah.

Q Have you had practical experience in the measurement of

the flow of water, capacity of canals?

A Yes, sir, I have.

Q I will ask you if you have made any study of hydraulics and hydraulic motors?

A Yes, sir.

Q Made a special study of that at any time?

A Yes, sir.

MR. A. C. HATCH: At this time, if the court please, we offer in evidence Exhibit 142.

THE COURT: It may be received.

Q We now present to you Exhibit 143 and ask you to explain it, Mr. Jenson.

A This exhibit shows a profile of what has been referred to as a temporary flume, as it appeared on November 22nd, of this year. Beginning at the left hand end we have first the elevation of the top of the second flash board on the bank, on the dam. Then we have the top of the bulk head and the bottom of the gates, or the sill of the gates. Then the various points marked and numbered from Zero, twelve, twenty-four and so on, to the end of the line, representing the elevations on every twelfth sill of the flume---no, on the bottom of the flume, taken inside of the flume. Rod set on the bottom of the flume over each sill. At a point above seventy-two the upper black line represents the top of the flume, referring to the same datum line or elevation.

Q How did you obtain data from which you made that profile? Did you make it?

A I ran the levels.

Q You made the profile?

A Yes, sir, I drew the profile and ran the levels for the profile.

Q Now, describe the flume, that is the material from which it is made and how it is made, and its elevation or its un-

evenness or unevenness, if any, as to the rise or fall of the bottom or sides?

A The size of the flume, the depth of the flume immediately back of the head gates is 8.3 feet. Then, has a rectangular section for thirteen feet; that is the same width for that distance; that width is 11.7 inside of the posts of the flume. Then there is a tapering section thirty-three feet long, ranging from 11.7 inside of the post at the upper end to 7.5 feet at the lower end of the taper. Then the flume itself is rectangular 7.5 feet wide and 5.7 feet. There are three gates at the intake. The total width of the two outside gates are each four feet. The center gate is three feet and a half. The gates lap over on the posts on either side about inch and a half making the gate openings about three inches narrower than the gate width that I have stated. The upper end of the flume has a very rapid grade, the thirteen feet of rectangular flume and the thirty-three feet of taper flume, and the first twelve bents amounting to about forty-eight feet in distance, has a drop of a trifle over two feet. I can give the exact figures from my notes, if you want them. Then the grade becomes more gradual than is shown by the black line, and the slope, the average slope from point twelve to the last point shown on the sheet and indicated by the red line, is one in seven hundred and twenty.

MR. STORY: What?

A One in seven hundred and twenty.

MR. THURMAN: That means one foot in seven hundred and twenty?

A Yes, sir.

Q Describe the material from which the flume was constructed and how constructed?

A The flume rests upon a series of cross sills, a bout four feet

apart. The bottom and sides of the flume are built of common lumber. The bottom was covered with water, I did not examine the thickness of that lumber, but the sides were inch lumber. The joints between the different tiers of boards on the sides were covered with battens. The battens were about three and a half inches wide. Bottom also was covered with batten.

Q Did you note how the boards were placed, whether they were placed evenly end to end, same width of board, so that the battens were regular or irregular as placed upon the cracks?

A Of course, this was an old flume, been out of use for some time and very irregular. I assume it was built under better conditions than it showed at this time, but being built of inch lumber would indicate it was a temporary structure, and probably not very great care taken in the construction.

Q Now, at the intake of the flume did you determine whether or not there was any screening or any obstruction of any kind?

A I observed a portion of a screen that had been wrecked some distance down from the head gate in the flume.

Q Could you by your observation of that flume when you saw it say whether or not it was in the condition as to elevation of the bottom of the flume that it was when used, any change in it?

A The lateral alignment seemed to be fairly good. If there had been any settling it was practically the same on both sides. The profile would indicate, of course, there had been some settling.

Q If it was originally---

A If it was originally built on true.

Q Regular grade?

A Yes.

Q When did you say that settling would take place?

- A That would take place sooner after the first loading than any other time.
- Q About how long after the first loading, when the settling?
- A The first settling would occur probably within the first month of its operation.
- Q Now, as to the ground upon which this flume is placed, is it practically level ground or is it upon a hill side?
- A No, it is in the bottom of the canyon, practically fairly flat.
- Q What did you find as to the variations in the grade of that flume, if any?
- A As shown in the profile from the point marked 12 in the profile, to the end of the line, it shows a rather long, gradual sag from the true slope line and that sag, maximum point occurring at point 72, is seventy-six hundredths of a foot.
- Q Now, does that sag extend to both sides of the flume, did you examine both sides of the flume?
- A The elevations were taken as near the center of the flume as the gang-plank on the center of the flume would allow us to place the rod, representing practically average conditions.
- Q Did you determine the capacity of that flume?
- A Yes, sir, I calculated the capacity.
- Q Assuming that it was in the best of condition for carrying water---

MR. STORY: Just a moment, have you finished the question?

MR. A. C. HATCH: Yes.

MR. STORY: I object to that as not being proper foundation for the opinion of the witness. It is unintelligible to me whether he means the present condition of the grade he has described or on a perfect grade. The only evidence what its conditions was at the time it was constructed

long prior to the witness knowing anything about it, was given by Mr. Buckler, and he testified it was--that he personally went over it at the time it was constructed and it was on an even grade. Now, asking the witness to give his testimony what the carrying capacity of that flume would be as it was shown to be by evidence now introduced, of course, there is no objection, but I would like to know to just what he is testifying.

MR. A. C. HATCH: What I mean is, assume that the workmanship of the flume was in good condition; that is, that the battens were all laid in place, and that the flume was so that it would carry water. Probably now has cracks open where the water would get out in large quantities, but if it were in good condition on its present grade.

MR. STORY: Now, I object to that question as being irrelevant and immaterial. It is shown in evidence here this flume has not been in use for years. The only relevant evidence would be the carrying capacity of that flume at the time it was used by the defendant.

THE COURT: Yes, I think that would be true, yet, I am inclined to think the witness may make his answer what the carrying capacity on the present grade is, because it might be some importance if it were followed by evidence showing that the grade when it was originally used is the same as it is now.

MR. STORY: I would have no objection if they will connect its present condition with the condition at the time it was used.

MR. A. C. HATCH: We will show it never was on a regular grade.

MR. STORY: Just to make the record, I will

make the objection it is incompetent, irrelevant and immaterial, and no proper foundation has been laid for the question.

THE COURT: The objection is overruled, and if it is connected the court will receive it.

A I calculate the capacity of this flume on the grade as as I found it , with fair workmanship, with the kind of material that was used, taking into account the batten on the inside, capacity would be 194 second feet.

12:00 NOON RECESS TO 1:30 P.M.

MR. RAY: Your Honor please, may I take up a question of a further proof in this case. I understand from talking with Judge Hatch and the attorneys for plaintiff in this case that it is probable the Telluride Power case may consume to-day and a large part of tomorrow. Mr. Huffaker has the Vance- Wagoner case and likely some of the Wasatch county claims that will take up until Wednesday night. As I understand it, the court has engagement which will necessitate his being in Salt Lake part of Thursday at least. I wondered whether or not plaintiffs could advise me as to any matters which would come up to-day or tomorrow affecting the rights of Provo bench or the Timpanogas. I am not interested in the Wasatch County settlement or the Summit county settlement and only incidentally in the Telluride, just part of the Telluride testimony.

MR. A. C. HATCH: There was some data which was to be furnished with regard to the time of use and use by the different irrigators under the Timpanogas Canal.

MR. RAY: Was that something Mr. Bagley was to have furnished?

MR. A. C. HATCH: I have forgotten who it was now.

MR. RAY: If you will advise me what it is, and while that is being done, may my name be entered as counsel for the Timpanogas?

THE COURT: Yes.

MR. A. C. HATCH: That data that was to be furnished was the tickets and time of use under the Timpanogas.

MR. RAY: All of the tickets?

MR. A. C. HATCH: For the year--three or four years, '12, '13, '14 and '15.

MR. RAY: I did not hear such demand. As I understand it those tickets are given to the private user.

MR. A. C. HATCH: But the company retains the stubs and duplicate, as I understand it.

MR. RAY: If they have such stubs.

MR. A. C. HATCH: I have forgotten the names of the witnesses.

MR. RAY: The president is here, Mr. Jones. And they will know where it is and I will furnish that to your office at the earliest possible date. Now, to-day or tomorrow will there be any rebuttal to the right of the Timanogas or Provo Bench?

MR. A. C. HATCH: I don't anticipate we can go into the general rebuttal, just rebuttal to this one defendant. There are quite a number of parties who have to offer proof yet in support of their claims which will take, I think, at least a day, probably two or three days.

MR. RAY: That is the Wasatch county, Midway

people. I will arrange to be notified by counsel.

THE COURT: If it is thought feasible, the court may return on Friday and proceed with the evidence. Are your engagements such---

MR. RAY: I could not be here again until after the 18th, sometime after the conclusion of my case on the 18th. Judge Johnson gave me a special dispensation by continuing the case a week in order that I might be here to-day.

JOSEPH JENSON---

DIRECT EXAMINATION by Mr. A. C. Hatch, continued.

- Q You may give us your calculation as to the flow of water in the temporary flume of which you were testifying before adjournment. Did you give that?
- A I gave you the capacity of the flume.
- Q Will you state how you determined that?
- A I determined that by selecting what I considered the section of minimum flow which was the section shown in the profile at the point 72. There is a general sag below the line which I assumed to be the true slop line, and virtually the bottom of the net area of the cross section of the water prism. That sag below that line is seventy-six hundredths of a foot. I assume a free board at that point of eight tenths of a second foot. I assume a slope, as stated, one in seven hundred and twenty. I assume a co-efficiency of rugosity, velocity of .015. Then the application of these conditions to the cutter formerly give me a discharge, as I have stated, 194 second feet.
- Q Now, what do you call the free board; how do you determine that?
- A The free board in a smooth ~~is~~ running stream, would be the distance from the surface of the water when the flume is running at its capacity to the top edge of the side of the

flume.

Q In a rough and rugged stream, how would it be determined accurately?

A I would take the free board as the distance between the surface of the sill well connected with the flume and the top edge of the flume.

Q Define that sill well.

A Sill well is a column of water outside of the channel, connected column of water proportionately large area connected with a smaller tube at or near the bottom of the channel carrying the water.

Q Why do you make your co-efficient of rugosity eight tenths?

A The co-efficient of rugosity?

Q .015.

A The co-efficient is given by the authorities for flumes of this kind with battens, is given as from 14 from .014 to point 020, and I selected 15 as a conservative co-efficient.

Q That--batten flumes as this is, ranges from 14 to 20; that is point .014, to point 020?

A Yes, sir.

Q Why do you give a free board of eight tenths?

A Every engineer constructor must have a co-efficient or factor of safety. In a flume that varies in the alignment as this flume has, I mean the vertical alignment--

Q I didn't hear the word.

A The vertical alignment, the water surface naturally oscillates very considerably and a free board must be taken so as to divide these oscillations of the surface with a factor of safety to provide from slopping over the edges of the flume, and I assume in this case that eight tenths would be a conservative free board to allow.

Q Where was that screen in the temporary flume?

A I cannot give the exact location, it was some distance, probably a hundred and fifty feet or such a matter below the head-

gates, I did not measure the distance or attempt to locate definitely.

Q The screen was in the flume itself, and not ~~in~~ at the intake.

A In the regular section of the flume, before the taper section.

Q What effect would that have, if any, upon the flow of water?

A That would act---

Q In the flume itself?

A That would act as obstruction and produce some loss in head at that point; that is, the water would be somewhat deeper on the up/^{stream} side of the stream than it would be on the down stream side of the stream.

Q Have you the data as to the auxiliary flume as testified to by Mr. A. E. Buckler?

A Yes, sir.

Q Have you made any computation as to the capacity of that auxiliary flume taking as your data the measurements testified to by him?

A Yes, sir, I have.

Q And you may state what you have determined as its capacity from your calculation.

A I did not calculate the full capacity. I calculated the capacity of the flume running half full. I believe that was the testimony that was given.

Q What is that?

A It is forty-one second feet.

MR. STORY: I don't think, Your Honor, that is a correct statement of the testimony. Mr. Buckler said that he had seen it half full but didn't say that was the fullest it had ever been and there is no testimony to that effect.

THE COURT: What is your objection to this evidence?

MR. STORY: That is not the proper basis of

the capacity of that flume.

THE COURT: Double the amount he has stated here, if it carried so much at half full, multiply it by two.

MR. STORY: That seems to be the theory of the plaintiffs in this case, but as a matter of fact, volume of water flowing in a flume does not vary in direct proportion to the height.

THE COURT: Possibly there will be some evidence what the variation might be.

MR. STORY: If it is just simple testimony as to the capacity half full I have no objection to it.

THE COURT: That is the only thing that has been suggested.

MR. A. C. HATCH: If the court please, we assume Mr. Buckler---

THE WITNESS: Mr. Pharis' testimony, I think.

MR. A. C. HATCH: Mr. Pharis and Mr. Buckler both testified, I think, in regard to that.

MR. STORY: I think you are mistaken. Mr. Buckler, if I remember, was the only one testified to the water in the auxiliary flume and he said he had not seen it a great deal, but he had seen it one time at least half full.

MR. A. C. HATCH: We assume, if the court please, it was the auxiliary flume only, and that the temporary flume having been built to supply water to the flume below that the auxiliary flume never carried any greater quantity of water than was necessary to fill the flume below, in addition to that carried in the temporary flume, and that Mr. Buckler, in his testimony, gave the greatest

quantity he had ever seen in that flume.

MR. STORY: I think that is true, what he had seen, but he had not seen it very much.

MR. A. C. HATCH: That is the greatest amount of water ever showed to have been in it, and that is what we are going to meet.

THE COURT: He may answer the question as to the computation he made based upon the assumed quantity of one-half full.

A Forty-one second feet.

Q Have you the data given by the witness, Pharis, as to the 1902 flume?

MR. STORY: Mr. Pharis did not testify to that. Mr. Buckler gave that testimony.

THE COURT: I have the notes Mr. Pharis gave testimony as to the re-construction of the flume in 1909.

MR. STORY: That is the pipe, that is when he began his survey for the present pipe at the head.

Q Do you know what the testimony of Mr. Buckler was with regard to the dimensions and elevations of the intake of the 1902 flume?

A Yes, sir.

Q And you may state what those measurements were.

A The elevation of the top of the second flash board was given as 514.87. The elevation of the water surface below the screen between the screen and the head-gates as 512.99. The elevation of the bottom of the intake was given as 508.27. There were three gates each four feet wide and six feet high. There was taper below the gates thirteen feet wide and eight feet deep at the upper end, 8.05 feet wide and 5.9 feet deep at the lower end, a distance of---two figures on that in the note I received, one was fifty feet and the

other was a hundred feet. I don't know which was the right figure.

Q What was the actual distance, one hundred and twenty-five feet?

MR. STORY: What was the actual distance?

THE WITNESS: Fifty feet. That the taper reach was built on a flat slope; that is, had no grade. That the regular flume, regular section was the same as the lower end of the taper, namely 8.05 feet wide, 5.9 deep, and in the first four hundred and sixty feet, had a slope of 1.5 to one hundred feet. After that the slope was ten---.10 in one hundred feet.

Q Did you make a computation of the capacity of that flume at the head works?

A Yes.

Q What would it be?

A It would be 275 second feet. I made some assumptions in that, Mr. Hatch, that I had better state here.

Q I don't hear you.

A I made some assumptions in that, I ought to state, probably.

Q I wish you would state them.

A The depth of the water below the screens as shown by the elevations is 4.72 feet. I assumed this same depth continued throughout the taper section, notwithstanding ~~that~~ that it passed through the gates in the meantime, that at the lower end of the taper section the velocity would be the same as that in the flume, due to the slope of 1.5 in a hundred feet. The reason I did that is because we had no data to show what the elevation of the water surfaces were at those two points, and the bottom of the flume being level, I made these assumptions as being on the safe side. The elevations could not be higher than those assumed, nor the velocity any greater. Under those

assumptions I made the calculation, and the discharge would be two hundred and seventy-five second feet.

Q Did you make any measurements of the present flume?

A I made some calculations as to the capacity of the present flume.

Q Upon what data were those calculations based?

A The flume is eight feet wide, 5.9 feet deep, it has a slope of one in one thousand. I assumed a free board of eight tenths of an inch.

Q Eight tenths of what?

A Eight tenths of a foot.

Q I thought you said "inch".

A I believe I did. I selected as my co-efficient of rugosity a coefficient which ought to come somewhere between thirteen-- .013 and 15. The matter of selecting this coefficient in this flume is a matter of considerable difficulty on account of the extreme agitation of the water flowing in the flume. It surges very considerably, both laterally and vertically, and while the construction is of a better form than that in the temporary flume, I assume that on account of this surging and constant loss of energy due to this surging, that the coefficient must be considerably higher than that for a perfectly plain,, ~~perfectly~~ smooth, continuous timber, and a ~~flat~~ flume in perfect alignment, ~~both~~ both vertically and laterally.

Q You saw this flume.

A I did.

Q With the water in it?

A Yes, sir.

Q And based your judgment as to the coefficient upon the conditions you found existing at the flume?

A Yes, sir.

Q You may proceed.

A I calculated then with both coefficients, both point 013 and point 015. With the point 013 I got a discharge under the conditions stated of two hundred and fifty-seven second feet. With a coefficient point 015, I got a discharge of two hundred and twenty-two second feet.

THE COURT: What was the slope?

A One in one thousand.

Q You assume, you gave a free board of eight tenths in the flume as it now is?

A Yes, sir.

Q Why do you do that?

A Because the conditions, same as I stated in the temporary flume, on account of the surging of the water, the necessary factor of safety. I observed on the sides of the flume at the time I made my observations a small rim of ice, came about four tenths of a foot over the top edge of the flume in the places where it appeared to me to be the nearest to the top. It varied considerably. I found the water would oscillate between that point and the lower point somewhere about seven or eight tenths of a foot.

Q What are the conditions of the present flume as compared with the temporary flume, as to creating the oscillation with the water flowing in them?

A The alignment is considerably more irregular, both laterally and vertically.

Q In the present flume than they are in the temporary flume?

A Yes, sir.

Q I will ask you whether or not a three tenths free board in this flume would be sufficient to retain the flow of water?

A In my judgment, it would not.

Q Sir?

A In my judgment it would not. It would slop over the sides of the flume.

Q And what would be the effect of that slopping over?

- A It would injure the structure built upon a soil foundation, be in danger of washing out the flume.
- Q You may state what items are included within the term rugosity as used by you?
- A The term "rugosity" as I have used it here, is an empirical coefficient which takes into account the resistances to flow in the channel, including not only the resistances of the water column against the sides and bottom of the channel, but also the resistances due to eddies, surges, oscillations in the flume. That is referred to usually by writers on hydraulics as the internal energy of the water column, and losses of internal energy in the column or prism.
- Q You made no actual measurement of the water yourself?
- A No, sir, I did not.
- Q Did you make any actual measurements of the flume, the present flume at any place?
- A No, sir, not the 1902 flume.
- Q Were you at the intake of the present pipe line of the Utah Power & Light Company?
- A Yes, I went ~~me~~ up there.
- Q You didn't take any measurements or observations?
- A I took no measurements, only the observations in a casual way.
- Q Have you the data of the description given by Mr. Buckler in his testimony as to the head-works, present head-works?
- A I haven't it, except in my memory. I did not make a note of it.
- Q Sir?
- A I did not make a note of it; I remember what it was.
- Q You do remember?
- A I remember he stated that the pipe was eight and a half feet in diameter inside, and had a grade or slope of one in one thousand.
- Q Which would have the greater capacity, the works as they were

as described by Mr. Buckler in 1902, or the present works?

A I made no computation of the capacity of the pipe line, but at the time of my visit there on the 22nd of last month I observed that the flume was running practically full capacity, and that there was considerable stream of water going over the waste way at the end of the pipe line. From that I would assume that the pipe line has a capacity considerably in excess of that of the flume below.

Q And it also, does it not, have a capacity greater than the former flume as described by Mr. Buckler?

A I should say that the capacity of the former flume was the same as the present flume below the intake.

MR. A. C. HATCH: That is all at this time.

I would like the privilege of recalling Mr. Jenson later as to the wheels and power developed by them but I wish to confer with him in regard to it.

THE COURT: You may cross examine, Mr. Story.

CROSS EXAMINATION by Mr. Story.

Q You say you hold a degree, Mr. Jenson?

A Yes, sir.

Q What degree is it?

A S. B. in engineering.

Q You don't hold a degree of civil engineering?

A No, sir.

Q Did you not specialize in mechanical engineering?

A I did in the Massachusetts Institute of Technology.

Q What did you specialize in Harvard?

A In general engineering, I was in the post graduate school.

Q Did you specialize in hydraulics?

A Yes, sir, both schools.

Q How much?

A I had the regular course in hydraulics in Massachusetts Institute of Technology, laboratory course including experiments in hydraulics, regular course in the design and general properties of hydraulic motors.

Q What flumes have you constructed?

A Oh, I have constructed a good many flumes.

Q Where?

A On the Sevier River in the reclamation project.

Q Just name some of them and just describe them in general?

A I constructed flumes over what is called the Butler Wash.

Q How long was that?

A Above Panguitch, I don't recall the exact length of it, neighborhood of four hundred feet.

Q What were its dimensions?

A I think it was sixteen feet wide, four and a half feet deep, as nearly as I recall. I have my notes of that.

Q What other flumes have you constructed?

A I have constructed a number of flumes on the lower canal in Sevier and San Pete counties, on the State Canal.

Q They were short sections, were they not?

A Some washes vary in length from thirty to forty feet to possibly one hundred and fifty. I don't think there was any over one hundred and fifty feet long.

Q Have you constructed any very long flumes for power plants?

A Not any flumes as long as these flumes testified to here. Constructed smaller flumes of considerable length, however.

Q Can you give us some more?

A Yes.

Q The long ones.

A I have designed and constructed metal flumes, smaller metal flumes.

Q I am speaking about wooden flumes.

A Wooden flumes; I think those were the only wooden flumes I have constructed.

Q Those are the only ones you have designed?

- A No, I designed some flumes for the Hunting^{ton}/Canal & Irrigation Company, Huntington Canal & Reservoir Company, Huntington Utah.
- Q How long were they?
- A They have not been constructed. I think one of them was approximately five hundred feet, I don't recall.
- Q What experience have you had personally in determining coefficients in flumes?
- A I have had to check up on these flumes I have constructed myself, good many years ago, I made some measurements on the Hercules flume in Logan canyon. I have checked up on flume capacities in other parts of the country, in the Bear Lake country, Rich county.
- Q In which you had to determine coefficients or did you assume coefficients?
- A Where measurements were made, actual measurements were made, we may determine the coefficients by making the calculations. There is not a measurement made we select our coefficient.
- Q As a matter of fact, where you have the volume and the velocity in a cross section you can get the coefficient, can't you?
- A Yes, sir.
- Q Get it accurately that way?
- A Yes, sir.
- Q The other is assumed?
- A Yes, sir.
- Q But when you are working back the other way, such as you have to do in making your calculations, you get the grade---where do you take the grade in getting your--in working out the coefficient?
- A The grade of the flume.
- Q No, the grade on which you base your coefficient.
- A The grade of the flume is given in the data.
- Q What?
- A The grade of the flume is given in the data.

- Q Then in arriving at the--in determining the coefficient you would take the grade at the bottom of the flume, would you?
- A If it is a channel of uniform flow.
- Q You are positive of that?
- A Yes, sir.
- Q Positive that in arriving at the coefficient you don't take a surface grade?
- A In a uniform flow the surface has the same grade as the bottom.
- Q That is where the free board is constant and there is no acceleration?
- A Yes, sir.
- Q But in a section of a flume where there is acceleration, where do you take the grade?
- A The surface of the water.
- Q In making these computations of yours, you merely assumed the grade, did you not?
- A In the flume I have testified to here except the temporary flume I took the grade that was given in the testimony.
- Q That was at the bottom of the flume?
- A Yes, sir.
- Q You said that you had--that some authorities gave the coefficients of flumes of this character referring to the temporary flume, to what authorities do you refer?
- A I referred to Mr. George.
- Q Have you his work with you?
- A No, I have not. Mr. Bellasis, I believe I have his treatise here on the desk.
- Q You simply assume what they had said in the matter, did you?
- A Well, as a result of study of a good many experiments, made by investigators. That is the way any engineer gets at his coefficient.
- Q You assumed your data, however, from the experiments of others in that matter?

A And my own judgment and experience.

Q I would like to have you in the course of time before you testify again show me the George work where he gives coefficients of this kind. I just mention it now.

A Yes, sir.

Q Did you ever see the temporary flume concerning which you have testified prior to the recent trip there, I think it was on November 22nd, this year?

A I have never made any observation of it; I may have seen it; I have been through Provo canyon time or two.

Q If you did it was simply going by it on the road?

A Yes.

Q Never made a study of it?

A No.

Q Know nothing about its original condition, do you?

A No.

Q Do you know how long it has been unused?

A No, sir, I don't definitely.

Q Well, assuming that it has ~~been~~ not been used or had any care for four years, approximately, would you say that in your opinion its present condition is such that as it was four years ago?

A Oh, no.

Q You would think in all probability there was very much of a change, would you not?

A The timber in the flume is warped now, sides are open, bottom is fairly tight, because there is a small stream covering the bottom.

Q I am speaking of the grade as much as the other?

A The grade has probably changed since the construction.

Q It is quite probable that it has changed a good deal, is it not?

A The probability is that the changes would occur when the loading--when the first loading occurs in the flume.

- Q Assuming, however, that the flume is kept in condition, kept up to grade, as it is possible to do, is it not, by care?
- A This flume is built on trestles and there is no indication of any blocking up between the top of the trestles and the flume. Of course, it is quite out of the question to raise the trestle after the flume is built.
- Q Where was your low place with reference to the river where the flume crossed the river?
- A I think it was right at the farther edge of the river, as near as I recall.
- Q Where there was a constant stream of water running under it?
- A Yes, there was water running under it at that point.
- Q Would that not have a tendency to change the grade of the flume at that point?
- A The flume at that point was built on a crib filled with rocks. The material upon which it was built is the regular river bed, coarse gravel and if there is any settlement occurring there it ought to occur soon after the first loading of the flume.
- Q Those conditions change with floods, do they not?
- A Not unless it washes the structure out, doesn't cut under those piers.
- Q Haven't you seen rock cribs change with floods?
- A Yes, but they are usually but of plumb when they are changed.
- Q This was not out of plumb?
- A The flume didn't show it. The flume was practically in good alignment laterally.
- Q You are speaking of the alignment; there was, however, a sag in the flume at that point?
- A Yes, vertical sag.
- Q Why do you say that would be more apt to occur a short time after its construction, say a year after it was constructed?
- A Because those things, as a rule, settle down after the early

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